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OBSTETRIC EMERGENCIES



Vol. 35 No. 10

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October, 1941

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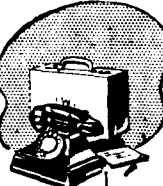
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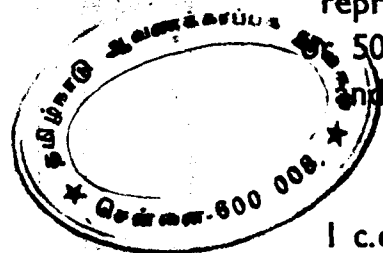
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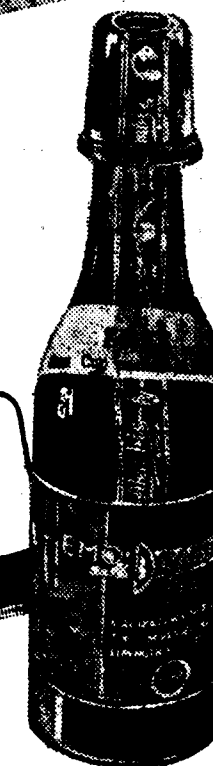
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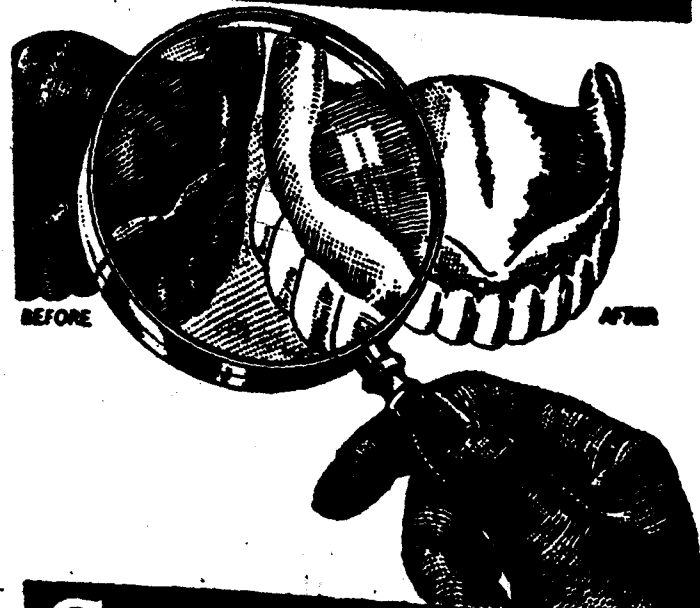
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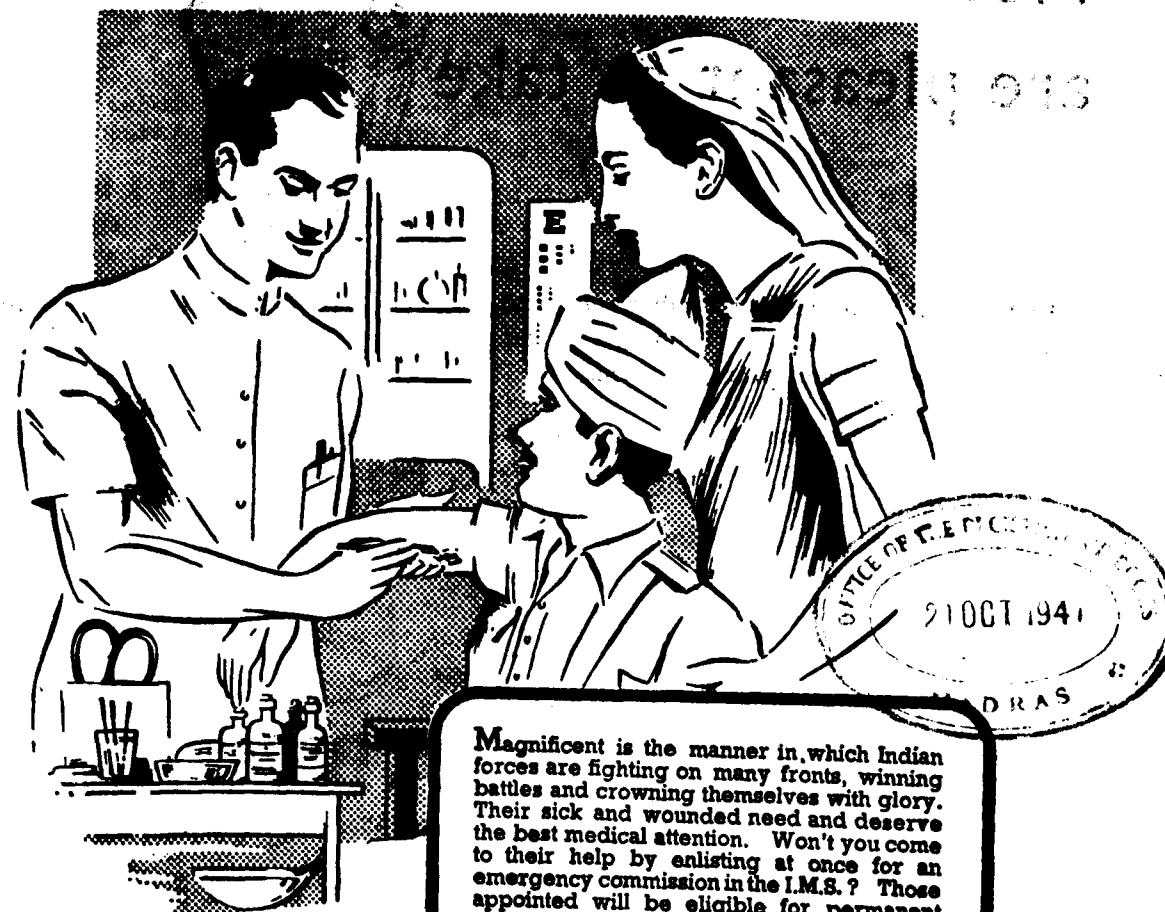
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purely professional, and in no way a political, question of this kind. We are in a position to assure the Government this much on behalf of the licentiates: they are really anxious, and are prepared in large numbers, to join the Emergency Medical Service, but only if they are treated as worth-while Members of the medical profession in which they have won their stake and reputation by dint of hard work and service to the people—precious things which no average medical man can barter away for less than the accustomed mess of pottage, not to say of the loss of their entity, as men belonging to the noble profession of Medicine, involved in the tire-some exigesis of scriptures and sacraments connected with the anachronism called "the Sub-Assistant Surgeon branch of the I.M.D.", now rechristened as "the Assistant Surgeon Branch of the I. M.D., Indian Cadre" without the baptism of Holy Spirit.

SPECIAL ARTICLES

Treatment of Atonic Post-Partum Hæmorrhage

- Dr. K. S. Sivaramakrishnan, L.M.P. (Mad.), L.C.P.S. (Bombay) and
● Dr. K. S. Sreenivasan, D.M. & S. (Mad.), L.G.O. (Mad.)

(Women and Children Clinic, Madras)

The incidence of atonic post-partum hæmorrhage is not uncommon in obstetric practice, which is mainly due to mismanagement of the three stages of labour, and so the treatment of this condition should be thoroughly known.

Definition:—By atonic post-partum hæmorrhage is meant hæmorrhage occurring during the third stage of labour before the expulsion of the placenta, and hæmorrhage in the first 6 hours after delivery. The hæmorrhage is not due to trauma to the genital passage, but is due to an exhausted uterus failing to contract and retract properly.

The treatment of post-partum hæmorrhage resolves itself into the following:—

- (i) Prophylactic and Preventive Treatment:
 - (a) Ante-natal treatment.
 - (b) Careful management of labour.
- (ii) Treatment of Hæmorrhage.
- (iii) Treatment of shock and collapse.
- (iv) Treatment of post-hæmorrhagic anæmia.

So, the principles of treatment of the hæmorrhage can be epitomised thus:

Empty the uterus

Stimulate the uterine muscle to contract
Control Hæmorrhage while the uterus is gaining tone
Treat shock and collapse.

Prophylactic and Preventive Treatment

Ante-natal treatment aims at the recognition of abnormal presentations and correcting them suitably. In patients who give a history of weak pains, prolonged 2nd stage, post-partum hæmorrhage, morbid puerperium, etc., in previous deliveries, any factors contributing to the above should be removed, and general health improved by suitable treatment.

Preparations of calcium and uterine tonics and sedatives (liq. sedans) will be very useful.

Careful management of labour is highly essential. In all cases help Nature and avoid unnecessary interference. Prophylactic injection of pituitrin soon after the child is born, has been highly praised as an aid to the placental separation and prevention of post-partum hæmorrhage by favouring good contraction and retraction of the uterus.

The uterus during the third stage of labour should not be subjected to any undue manipulations. Kneading of the uterus before the placenta is completely separated allows the retroplacental clot or hæmatoma to escape prematurely, disturbs the normal mechanism of separation of the placenta, so that the partially detached placenta or one of its cotyledons is not unfrequently retained *in utero* and hence predisposes to post-partum hæmorrhage by interfering with the normal retraction of the uterus.

Among the predisposing factors, a distended bladder or bowel, uterine exhaustion following prolonged labour or ante-partum hæmorrhage, rapid instrumental delivery during uterine inertia, or too free administration of ChCL, anæsthesia often cause imperfect retraction of the uterus. Premature fundal massage or administration of oxytocic drugs, especially ergot, before the placenta is freely separated from the uterine wall may cause hour-glass contraction of the uterus, retention of the partially separated placenta, and consequent imperfect retraction of the fundus of the uterus.

In addition to these, there are other possible predisposing factors, such as multiparity with rapid succession of pregnancies, fibromyomata, obesity, general debility, over-distended uterus, which though less frequent, give rise to very serious trouble, and then treatment is liable to be difficult. If these predisposing causes are avoided, the incidence of post-partum hæmorrhage would be less often met with in obstetric practice.

Treatment of Hæmorrhage

Empty the uterus:—In all cases of post-partum hæmorrhage, the most important thing to find out is whether the placenta is expelled or is still *in utero*. The uterine contents should be evacuated without delay when the hæmorrhage follows delivery, and does not cease, after fundal massage per abdomen. A steady continuous trickle of blood is no less important than smart hæmorrhage, and may exsanguinate a patient in a very short time.

If the placenta is still in the uterine cavity, it should be expelled by Crede's method under general anæsthesia after emptying bladder, and if this manœuvre fails, manual removal of the placenta should be done. Strict asepsis should be observed for the operation and general anæsthesia is always required. After the right hand is gloved and undiluted Dettol liberally applied to the hand and to the parts, the hand should be gently passed inside the uterus and the placenta carefully detached from the uterus, and removed *en masse*.

If the placenta has been expelled, hæmorrhage usually ceases after fundal massage and expression of the clot.

Stimulate the uterus to contract:—The uterus may be stimulated to contract by kneading through the abdominal wall or by subjecting the uterus to the action of certain oxytocic drugs or by administration of a hot intra-uterine douche. The temperature of the fluid should be 118°F. The hot intra-uterine douche is especially useful after manual removal of the placenta. The use of hot intra-uterine irrigations is contra-indicated in cases of hæmorrhage following delivery, when placenta prævia has been present, as it may wash out clots,

from the mouths of the vessels in the placental site on the lax lower uterine segment and therefore cause further loss of blood. Bladder should be emptied and uterus massaged in all cases of hæmorrhage following delivery and administer by mouth Ext. ergot liq. (10–20 m.) or by intra-muscular injection any one of the following.

- (1) Pituitrin $\frac{1}{2}$ c.c.
- (2) Ergometrine 5 mgm. in 1 c.c. of distilled water.
- (3) Gravitol (Bayers).
- (4) Thymophysin $\frac{1}{2}$ c.c.

The action of pituitrin lasts only for half an hour and hence this should be followed by an injection of Ergometrine—the action of the latter drug lasts longer say 4 hours.

Control hæmorrhage, while the uterus is regaining tone:—(1) Hendry of Glasgow has described a very useful method of controlling uterine bleeding. With the hand on the abdominal wall, grasp the uterus as low down as possible, simultaneously draw it up and press it backwards against the sacral promontory. This method kinks and occludes the uterine vessels and thus arrests hæmorrhage.

(2) Bimanual compression of the uterus, between the fist in the anterior vaginal fornix and a hand on the abdomen over the posterior wall of the uterus, is one of the most efficacious methods known in controlling acute uterine hæmorrhage. This manœuvre should be done with proper aseptic precautions in cases where bleeding is severe after manual removal of the placenta.

(3) Aortic compression by pressure on the aorta through the abdominal wall by the clenched fist is good in patients with thin abdominal walls. But even in this procedure, proper care and smartness are wanted, or else it will give rise to much shock. After the hæmorrhage is controlled, firm pad and binder should be applied.

(4) Packing the uterus, with aseptic precautions, perfectly controls the hæmorrhage. The cervix should be grasped by a vulsellum and drawn down to the vulva, and broad sterilized gauze passed in by the hand or by a pair of long forceps. After well packing the uterus, the vagina should be packed, and a vulval pad and a tight abdominal binder should be applied. Packing the uterus is not generally favoured owing to the impossibility of observing strict asepsis and if efficiently done, increases shock from acute distension of the uterus, and if inefficiently done, converts a revealed post-partum hæmorrhage into a concealed one when the uterus fails to contract properly.

In addition to these common methods of controlling hæmorrhage, there are some more which are rarely used in practice.

(5) **Hysterectomy:**—This is a very drastic operation and so needs time and much skill.

(6) Arent's extension of uterine arteries by traction on the cervix.

(7) Hankel's clamp compression of the parametrium and uterine arteries. This is a simple and quick method and has the advantage of no risk of infection and no lochia retention; and if bleeding continues, it can be seen easily. But there are some dangers. The clamp may fail to catch the artery and may tear the bladder or ureter.

Treatment of Shock and Collapse

The main treatment of collapse is to utilize the blood remaining in the body as economically as possible, to avoid exhaustion and wasteful expenditure of energy, and to take steps to restore an efficient circulation in the shortest possible time after hæmorrhage has been controlled.

Patient should be covered with blankets and suitably protected by hot water bottles so as to prevent loss of heat from the body. The available blood may be mobilized into active circulation in the essential organs, especially the brain, by elevating the foot of the bed and bandaging the lower limbs from below upwards. Stimulants like alcohol should be absolutely forbidden. Inhalation of 5% CO_2 in O_2 may be helpful in stimulating the respiratory centre when the breathing becomes shallow.

In all cases, absolute quiet with minimum amount of disturbance and careful avoidance of over-treatment should be insisted. Unessential obstetrical manipulations should not be done when the patient is in a state of collapse. Sedatives should be brought into use when there is uneasiness and frank restlessness, and the preparations of morphia take prime place under these circumstances. Any factor which will hasten collapse such as deprivation of fluid or food, excessive fluid loss by sweating and exposure to cold must be entirely avoided.

Fluid loss should be restored. Glucose solution by mouth or by rectum or submammary hypertonic saline (one pint) can also be given to restore the fluid loss.

If the blood pressure falls to 80 mm. of Hg., after this routine treatment, the infusion into a vein of a pint, of ephedrine-glucose gum saline (Ephedrine gr. 1 in a pint of 5% glucose with 6% gum acacia in distilled water) is commenced immediately. The warm solution should be introduced slowly to avoid overloading the heart and to give the capillary walls time to recover and to assist the fluid to be retained inside the blood vessels.

As soon as the solution is passing freely into the vein, 10 units of Insulin are injected intramuscularly for every pint of solution (containing 5% glucose) to aid absorption and utilisation of the sugar.

The restored fluid level is maintained and supplemented by giving glucose water by mouth and if necessary submammary saline one pint. When there are minor small recurrent hæmorrhages or syncopal attacks, sighing respirations or slow recovery, a blood transfusion is carried out by indirect citrated method, as quickly as possible.

Treatment of Post-hæmorrhagic Anæmia

The after-treatment of a patient who has suffered from severe blood loss is very important as her soldiers (blood cells) are less numbered to fight out the subsequent infection during puerperium. She should rest in bed for a few weeks more than would be necessary, had there been no excessive hæmorrhage, and, on being allowed to be up and about, should live a regular life with abundant fresh air, sun light, sufficient exercise with avoidance of fatigue, adequate sleep, balanced diet, and a tonic containing iron, liver extract and Vitamins A & D.

Post-Partum Hæmorrhage

● Dr. R. G. Petkar

(Retired Sub-Assst. Surgeon, Malkapur, Kolhapur State)

The flow of blood which usually accompanies the separation of the placenta may be so excessive as to produce marked constitutional symptoms. It is then called Post-Partum Hæmorrhage, because it follows the birth of the child. The hæmorrhage is always occasioned by uterine inertia, and if profuse may cause pallor of the lips and face, weak fluttering pulse, faintness, sighing respiration, dimness of sight, dysphagia, convulsions and death.

Post-Partum Hæmorrhage is a serious complication which demands prompt and thorough treatment. Its diagnosis and treatment are of the utmost importance to the practising obstetrician. The treatment will often need careful consideration. Therefore all hæmorrhage must be treated with great care so as to prevent any further loss of blood. The greater the amount lost, the lower the resistance of the patient which will increase the susceptibility to infection. By remaining cool, calm, and collected in cases of severity much can be done to diminish the maternal mortality resulting from this cause.

Post-Partum Hæmorrhage is a serious bleeding from any part of the genital tract following the completion of the third stage of labour. It must be remembered that some bleeding occurs from the placental site or from laceration of cervix, vagina or perineum, after the third stage of labour is over. The amount varies greatly in different cases.

Causes

Post-Partum Hæmorrhage may sometimes occur from mismanagement of the third stage of labour. Such cases are common in rural practice, because these are generally conducted by untrained midwives who are quite ignorant of the complications which often occur during the course of labour.

The need for a greater number of midwives and nurses has never been felt so acutely as now. At one time, it was thought that this paucity was due to the unwillingness of our Indian girls to take to nursing. That is not true today. A large number of educated girls is now available but training centres are insufficient and the scope for paid service is limited. But there is no doubt of the fact that this paucity of nurses and midwives is felt badly in the rural areas of this country and earlier relief is essential in the interest of the sick. The chief causes of maternal mortality in India, are anæmia, eclampsia, puerperal sepsis and hæmorrhages. They at once indicate the inadequacy of the prevailing maternity service. They are not simply medical problems. They have their roots in the sociological distempers of the people. The worst of these distempers are: bad housing, insanitation, over-crowding, defective and insufficient food. Their evil effects have to be reduced to a minimum if we are ever to tackle the problem of maternal mortality with any thing like reasonable satisfaction.

(2) Post-Partum Hæmorrhage before the delivery of the placenta is due to its not being expelled on account of weak irregular contractions and want of normal shrinking of the uterus. It also occurs when there are adhesions between the placenta and uterus.

(3) Post-Partum Hæmorrhage immediately after the third stage of labour is due to want of contraction and shrinkage of the uterus which normally follow the expulsion of its contents, thereby reducing the flow of blood through the opened sinuses in the placental area.

(4) Severe hæmorrhage sometimes follows retention of a part of the placenta, membrane or blood clots.

(5) Predisposing causes of the Post-Partum Hæmorrhage are all conditions which lead to uterine inertia and want of tone. It may occur after prolonged, difficult and rapid labour, and over-distension of the uterus especially in multipara who have had several confinements in a short period of time. Certain constitutional conditions also favour hæmorrhage such as anæmia, debility, heart, kidney and lung disease, and obesity. Much bleeding takes place, if tumours such as fibroid coexist. In a very large pelvis, the uterus does not receive the normal pressure when it settles into the pelvis and thus bleeding occurs.

(6) Post-Partum Hæmorrhage may also occur in cases of hydramnios, abnormally large foetus and placenta previa.

Diagnosis

In most cases of Post-Partum Hæmorrhage an unusual rapidity and jerking of the pulse may be noticed before the actual occurrence of flooding. Dr. Churchill in his *Theory and Practice of Midwifery* has made some valuable remarks on this point. He says:

"In almost all the cases of flooding after labour when I have had an opportunity of examining the pulse upto the time of the occurrence, I have found it to remain quick and perhaps full instead of sinking after delivery. This has been so marked in severe cases that I now never leave a patient so long as this peculiarity remains and, in more than one instance, I believe the patient has owed her safety to this precaution. Three cases occurred within a very short time of each other in which I noticed this undue quickness of pulse, without any other untoward symptom; at that time there was no excessive discharge and the uterus was well contracted. In all these, alarming hæmorrhage occurred within an hour and was with difficulty arrested."

In most cases of Post-Partum Hæmorrhage the flooding is sufficiently obvious both to the woman and her attendants, for the blood will gush forth upon the bed clothes and mattress until they are saturated and then run in a full stream on the floor. In some cases the bleeding takes place slowly, in others it is profuse. The patient's condition usually suggests the loss of blood. The pulse becomes rapid, weak and jerky, before the actual occurrence of flooding. The respiration becomes hurried and shallow. There is faintness and dimness of sight. The uterus will be felt to be in a relaxed and flabby condition, so that one can scarcely define its limits, or if it contracts and hardens for a few seconds it will speedily return to its former state.

When the bleeding occurs in the presence of good uterine contraction and retraction it is probable that the blood comes from the lower uterine segment which has not undergone retraction and which has been torn or which has been the site of placenta previa. It is, therefore, necessary that the bleeding from the uterine cavity must be differentiated from that due to laceration

of the cervix, vagina and perineum or from a new growth. In these conditions the uterus does not lose its tone and function.

The exact source of bleeding must, therefore, be well determined by careful examination of the genital tract.

In all cases, therefore, where there is any reason to apprehend hæmorrhage, the pulse should be frequently felt and the uterus examined. The patient should be asked whether she feels any discharge and the napkin should be frequently removed and inspected.

Prognosis

The prognosis of cases of Post-Partum Hæmorrhage is generally favourable, if promptly and carefully treated. The seriousness of the hæmorrhage must be decided by the condition of the patient. If the woman is healthy she can stand the loss of much blood without the risk of death, provided the loss is not too rapid. Women who have become weak from previous illness such as anæmia or exhausting labour will not stand well to much loss of blood. In this state they are likely to suffer from puerperal sepsis and if recovered they will remain weak and in debilitated condition for several months.

Treatment

Post-Partum Hæmorrhage is always a dangerous and alarming accident requiring prompt and vigorous treatment. Dr. Gooch has well remarked:

"In these cases you would give anything for a consultation, but there is no time for it; the life of the patient depends on the man who is upon the spot, he must stand to his gun and trust to his own resources. A practitioner who is not fully competent to undertake these cases of hæmorrhage can never conscientiously cross the threshold of a lying-in chamber."

Prevention is better than cure. This is too true of Post-Partum Hæmorrhage.

In the annual report of the Public Health Commissioner (1933) (*Ind. Med. Jour.*, July 1933) Col. Russell has shown that in India nearly one and a half lakhs of women die during childbirth. The chief causes of these are:—Anæmia, Eclampsia, Puerperal Sepsis and Hæmorrhages. They at once indicate the defects in our people and the inadequacy of the prevailing maternity service. As mentioned before they are not simply medical problems. They have their causes in the sociological distemper of the people, such as bad housing, insanitation, over-crowding, defective and insufficient food on account of poverty. All these causes lessen the resisting power of the women and so they do not sustain the pressure of troubles arising during pregnancy and delivery and die during delivery either from want of help from a midwife or a doctor or from Post-Partum Hæmorrhage and Puerperal Sepsis, unless the above mentioned defects are corrected and antenatal care of the pregnant woman is taken it is not possible that the high rate of mortality will be reduced to a minimum.

There are indications to show that this process of regeneration has begun after the Montague-Chelmsford Reforms of 1920 when separate Provincial Public Health Departments were created. The local self-governing bodies, like Municipalities and District Boards are taking a lively interest in the matter. Maternity and infant welfare has been one of the chief activities of the Indian Red Cross Society and it has been financing many a scheme of maternity service in the different parts of the country. The Public Health Department has been exerting its influence by helping many organisations with the necessary and qualified personnel, and also with useful suggestions and advice. Many Civic Bodies have already taken up this responsibility. But these activities are confined to large cities and towns only and rural India where this suffering is greatest and unrelieved remains almost untouched.

Prevention of Post-Partum Hæmorrhage is thus a matter of great importance.

If there is history of hæmorrhage in previous labour, calcium lactate should be given in the last month of pregnancy.

Uterine inertia is the most important factor, the causes of which must be prevented. Many physicians have advised the daily use of small quantities of quinine during the last weeks of pregnancy to decrease the danger and difficulties of labour. According to Prof. Green Armytage (*Midwifery* by Green Armytage, ref. *Ind. Med. Jour.*, Aug. 1939) quinine lessens the duration of labour if given during the last 4 to 6 weeks of pregnancy and it is of great benefit to patients whose general musculature is poor and abdominal, uterine and cardiac muscles are flabby, as this raises the contractility and retractility of the uterine muscle and thus lessens the risk of Post-Partum Hæmorrhage.

According to Ganner (Ph. J. Ganner, *B.M.J.*, 3rd Aug. 1935, page 397, ref. *Ind. Med. Jour.*, Aug. 1939) the first and second stages of labour are accelerated without causing any harm to mother or child if quinine is administered to pregnant woman.

Bradbrook's experience is that "the treatment with quinine ensures a definite decrease in the average duration of labour. He points out the following advantages:—(1) The dilatation period of labour is short and much less painful. (2) In the third stage there is remarkably little hæmorrhage. (3) The confinement is a very easy course.

Linton Smith advised 1½ grs. of quinine bihydrochloride three times a day, beginning only three weeks before the expected confinement (*Jr. Med. Ass., Georgia*, July 1936, p. 347 ref. *Ind. Med. Jour.*, Aug. 1939). It is not yet possible to explain pharmacologically the action of quinine in this respect. Every doctor knows that 1½ grs. of quinine sulphate or hydrochloride three times a day taken daily for three weeks is quite harmless. According to Smith it acts as a tonic and increases the tone of the muscular fibres.

Robert M. Corbet (*Br. Med. Jr.*, Aug. 1939, p. 438) writes that according to the investigation into the causes of maternal mortality in New York 6.3% Post-Partum Hæmorrhage was responsible for 7.5% of the deaths in England and Wales and 3.9% in Scotland. He suggests the following measures to reduce the mortality:

- (1) Treatment of anæmia during the antenatal period.
- (2) Refraining from interference with the normal uterine action during the third stage.
- (3) Realising the danger of attempting delivery through the partially dilated cervix.
- (4) Early recognition of the failure of the normal mechanism of placental separation.
- (5) Having adequate equipment prepared to deal with the hæmorrhage rapidly, particularly where the history or the patient's condition suggests the likelihood of bleeding.

He divides Post-Partum Hæmorrhage into three classes:—

- (1) Placental site hæmorrhage.
- (2) True atonic hæmorrhage where there is no bleeding till after delivery of the placenta.
- (3) Traumatic hæmorrhage particularly laceration of cervix. (*Ind. Med. Jour.*, Nov. 1939).

The whole process of labour is clinically divided into three stages. The third stage commences after the delivery of the placenta and membranes. The duration of this stage varies in different individuals, and may be from a few minutes to a few hours. It is in this stage that meddlesome midwifery brings on fatal complications. Davidson went so far as to say "It is the proper management of the third stage that the accoucheur is paid for."

Management

Immediately the child is born cover up the mother and watch her pulse. Divide the cord when it ceases to pulsate. In treating Post-Partum Hæmorrhage the chief point is to produce uterine contraction. For this purpose it may be better to place the patient on her back; because in this position the uterus can be more fully commanded, and pressure more effectually applied than when she is lying on her side. Now stand on the mother's right side, place the left hand on her abdomen above the fundus and hold the cord with the right hand. Do not pull on the cord but just keep it tight and gently press on the fundus with the left hand using the empty hardened uterus as a piston to push out the placenta which is lying in the lower part of the birth canal. When the placenta appears at the vulva, let go the cord and receive the placenta in the right hand. Be very slow to pull it out. Gentle traction with a side to side movement may be helpful in certain cases. Having the placenta delivered, place it in a large bowl of water and carefully examine the uterine surface for any missing cotyledon; spread out the membranes and see if there is any hold anywhere as happens if a small succenturiate placenta is left behind in the uterus.

Hold the fundus firmly with the hand at least for 10 minutes after the full delivery of the placenta and the hand and then proceed to make further management of the mother. If you find everything is alright finish with a dose of ergot or pituitrin, pad and bandage (abdominal binder). Needless to remark that strict aseptic technique should be observed while doing this work. Watch the mother for at least half an hour and, before leaving, record her pulse rate.

If there is delay and there is no evidence of external or internal Post-Partum Hæmorrhage no need to worry for getting the placenta out and one can safely wait for an hour without any danger following. If there is hæmorrhage and the patient is in a low general state active interference must be done.

Delay in the delivery of the placenta may be due to following causes:—(ref. *Ind. Med. Jour.*, May 1939).

(1) Distended bladder (2) Exhausted uterus in cases of inertia (3) Flabby and degenerated muscle of the uterus in cases of toxemic accidental hæmorrhage (4) Hour-glass contraction (5) Morbid adhesion of various kinds, including the placenta accreta.

I am not going into details of the treatment of all these conditions as it is out of the scope of this paper. Simple procedures only are given.

In distended bladder simple passing of a catheter will help to deliver the after-birth in the majority of cases. (2) Simply rub up and massage the uterus. (3) Try Crede's method. It is a simple method introduced over a century ago, which consists in squeezing the placenta out of the uterus.

Manual removal of the placenta:—It has often been done to save time even in the absence of the slightest indication for such a risky and serious operation. It should be considered if there is any of the following conditions:—

(1) Uncontrollable hæmorrhage. (2) Hour-glass contraction. (3) Adherent placenta except placenta accreta where it is impossible to remove the placenta without the uterus along with it. (4) Detached cotyledon or succenturiate placenta. While doing the operation for removal of the placenta strict surgically aseptic technique should be observed. Under a general anæsthetic, gently peel out the placenta and the membranes, insinuating the fingers between the membranes and the uterine wall, commencing in the region of the os externum and finish with a warm 110°F. intrauterine douche with 2% Dettol solution.

In most cases the third stage of labour is quite so simple and easy if the routine management is observed. Some grave complications such as (1) Post-Partum Hæmorrhage (2) Hour-glass contraction of uterus (3) Acute inversion of the uterus (4) Obstetric shock and (5) Air embolism may occur. It is not within the scope of this paper to go into details of each condition mentioned except Post-Partum Hæmorrhage.

The accoucheur should realise the seriousness of this stage and be always prepared to combat these obstetrical emergencies should it be necessary.

Indeed very little is to be done in the average management of the third stage and one should bear in mind that it is the stage which requires minimum doing with maximum equipment for the emergency that is always associated with it.

'Pitocin' in the third stage of labour:—It is the oxytocic principle of the pituitary gland. Ten oxytocic units are in each cubic centimeter.

M. R. White (*Am. J. Obst. and Gynec.*, 36: 90, 1938) has observed the effect of Pitocin on duration of third stage of labour in 630 patients; blood was determined in each case. At the onset of the third stage 2 to 3 c.c. of blood was aspirated from a vein to dilute the Pitocin; the mixture was then injected intravenously over a period of one minute. Five hundred and five patients received 0.5 c.c. Pitocin intravenously immediately following delivery of the baby; 125 patients received 0.5 to 1.0 c.c. of Pitocin or Pituitrin intramuscularly. The average measured blood loss was 88.3 c.c. With intravenous Pitocin the average duration of the third

stage was 5.4 minutes; with intramuscular administration it was 6.5 minutes. Given intravenously this oxytocic agent induced prompt and uniform contraction of the uterus during the third stage of labour and hastened separation and expulsion of the placenta, without evidence of trauma to the uterus or laceration of the placenta and membranes.

Pitocin was selected for the following reasons. It produces no appreciable change in blood pressure; it has been separated from inactive proteins and so is less likely to cause allergic reactions; it does not produce any deleterious effect; its use is not contraindicated in toxemia of pregnancy, chronic nephritis, or arterial hypertension; it produces uterine contraction within one minute following intravenous administration.

Intravenous use of Pitocin is preferred to intramuscular injection because the oxytocic reaction occurs with great rapidity, and blood loss following this method is less than that after intramuscular injection.

Placenta Previa and Post-Partum Hæmorrhage

Placenta Previa is one of the causes of Post-Partum Hæmorrhage. Normally placenta is attached to upper uterine segment but when the whole or part of it is situated on the lower uterine segment, it is known as placenta previa. The lower uterine segment during the later weeks of pregnancy and the first stage of labour is stretched and gets dilated in order to allow the passage of fœtus, but the placenta cannot be stretched and so separation of placenta from its uterine attachment results in hæmorrhage from the exposed placental site, this type of hæmorrhage is termed unavoidable hæmorrhage (Ante-Partum Hæmorrhage).

Two varieties of placenta previa are commonly described. (1) Complete variety. It is also called placenta previa centralis. In this variety the placenta covers the entire undilated internal os. In this variety if you pass your finger through the cervical canal, it will not touch the membranes. (2) Incomplete variety. Here the placenta does not cover the internal os. This is again divided into two types (a) Marginal placenta previa or placenta previa marginalis, where the placenta comes down to the edges of the internal os, so that its edge can be reached and felt by the finger (b) Lateral or partial placenta previa or placenta previa lateralis, where a portion of placenta lies in the lower segment but does not reach as low as the internal os.

Thus it is evident that there are three varieties of placenta previa. All these varieties are defined in relation to the undilated internal os, as the relation of the placenta to the internal os varies according to the degree of its dilatation. Thus a case which appears complete when internal os admits one finger only may be found to be marginal when os admits 3 or 4 fingers. In order to avoid this confusion it is better to define the placenta in relation to the undilated internal os.

Placenta previa is usually unhealthy and abnormal in shape. Normally placenta is thicker at the centre and thinner at margins, while it is not so in the case of placenta previa. It is usually thin, so much so that it sometimes resembles a membranous placenta. Cord has frequently a marginal insertion.

In placenta previa the lower segment of uterus and cervix are thicker than normal and as they are more vascular they do not dilate so well and tear more frequently.

Effects of Placenta Previa:—

(1) Malpresentation: Engagement of head is difficult, as part of the lower uterine segment is occupied by the placenta.

(2) Hæmorrhage before or during delivery.

(3) Premature labour due to separation of placenta, which in turn is due to dilatation of lower uterine segment in the last weeks of pregnancy.

(4) Uterine inertia due to loss of blood.

(5) Post-Partum Hæmorrhage from uterine inertia and inability of lower uterine segment to retract properly.

(6) Sepsis.

In cases of placenta previa the placenta is attached over the os uteri and the necessary result is, that as soon as os begins to open, the placenta becomes detached and a copious hæmorrhage takes place. The flooding usually comes on a few weeks before delivery, and is at first considerable. After a week or two it returns more copiously until at last it becomes frequent and profuse. The flooding accompanies each uterine contraction and ceases in the interval between them. On examining, one finds that either the entire os uteri is thickened and occupied by the firm, rough, spongy mass of placenta or the os is partly occupied by the placenta and partly by the membranes. The first is complete and the second partial. The hæmorrhage from placenta previa is occasioned first by the slight dilatation of the cervix uteri which takes place some weeks before delivery; and subsequently by the still further dilatation which is effected during labour. The opening of the cervix produces a disruption of the connections between the placenta and uterus. The large venous sinuses of the latter are laid open and frightful hæmorrhage ensues with the pains.

Placenta previa is most dangerous of all the presentations. If the labour be permitted to go on under such circumstances without interference the woman will almost certainly bleed to death before the termination. Still, however, some exceptional cases occur in which Nature effects delivery without a fatal result. In these the uterine contractions are very powerful and energetic. The placenta speedily becomes detached and expelled and the hæmorrhage ceases. As soon as the placenta is completely detached the uterine arteries are broken away from it and the veins are closed by the dilatation of the os uteri which effected the separation, as well as by the direct compression of the child's head, which soon descends and occupies the place of the placenta.

In cases of placenta previa, send immediately for assistance when the labour has started actually, or if possible it is better to remove the patient to a hospital or institution where constant medical supervision can be obtained.

Try to arrest the hæmorrhage by placing the woman in the recumbent posture, by cold applications to the abdomen and vulva, by cold drinks and enema

and a dose of opium. If the full term has not yet arrived, these methods of treatment may for a time succeed. If they should fail, you may plug the vagina until assistance arrives. If there is a partial placenta presentation, you may rupture the membranes. In all cases stimulants are to be given if necessary.

In cases of complete placental presentation the proper treatment is to turn and deliver as soon as the os uteri is sufficiently dilatable to allow of such a procedure. When the diagnosis is clear, nearly all authorities are in favour of prompt interference on the first occurrence of hæmorrhage.

In some cases where the exhaustion from hæmorrhage is very great and when turning would be dangerous complete detachment of placenta has been recommended and practised with success. (See Sir J. Simpson's memoirs on this subject). But should the inferior extremities present with the placenta previa, it is a fortunate circumstance, because there will be no need for turning.

When the membranes have been ruptured in partial placenta previa, the head descends, compresses the placenta and the bleeding vessels of the uterus and thus stays the hæmorrhage.

In treating Post-Partum Hæmorrhage the chief indication is to produce uterine contraction. For this purpose grasp the uterus firmly with one or both hands and keep up the pressure for a considerable period. It may be better to place the patient on her back because in that position the uterus can be more fully commanded and pressure more effectively applied than when she is lying on her side. Keep the woman's head low by taking away the pillows and remove all the clothes except a sheet from the lower part of her body. Apply frequently ice bag or cold wet clothes to the vulva, hypogastrium and thighs. Give an injection of Pituitrin immediately. If there is much tendency to syncope, open the windows and if necessary give stimulants such as brandy, ether or sal volatile.

"Dickinson Pomeroy Technique" is very useful, which includes—(1) The administration of Pituitrin as soon as the child has been delivered (2) Prompt expression of placenta at the time of the first uterine contraction after delivery (3) The immediate lifting of the uterus out of the pelvis by abdominal manipulation (4) The occasional use of second dose of Pituitrin and the administration of ergot and (5) Employment at times of the vaginal pack with or without an abdominal binder. Dr. Smith (*New York State Jour. of Med.*, Feb. 1931) believes there is no need in Post-Partum Hæmorrhage to use the intrauterine pack. He insists that unceasing vigilance in the control of small blood losses at the start is the method by which the obstetrician may lessen the incidence of such hæmorrhage, and quotes the aphorism "The only safe uterus is the empty uterus."

According to Carl Henry Devis, most authorities now favour the uterine pack with sterile gauze when the atony cannot be controlled with pituitary extract and ergot. Devis moistens the first part of the pack with a weak mercurio-chrome solution, believing that this will lessen the risk of infection, since the antiseptic will reduce the possibility of the blood in the pack acting as culture media (*Ind. Med. Jour.*, Aug. 1939).

In desperate cases manual compression of the abdominal aorta may be necessary, but it is a temporary measure.

The Use of Pituitrin in Obstetrics

Dr. E. R. Downey writes (*Ther. Notes*, May 1916, Vol. XVII, No. 2).

"In a comparatively large experience my results with the hypodermic use of Pituitrin in obstetrics have been little short of marvellous. To possess a drug which has given such startling and gratifying results is, it seems to me, a wonderful advance in obstetric therapeutics.

"Pituitrin has proved in my hands to be far superior to ergot in Post-Partum Hæmorrhage, its action being very prompt and it produces strong and prolonged contraction. It is a good prophylactic of Post-Partum Hæmorrhage.

"It is necessary, however, to use ordinary caution in the administration of Pituitrin. To give this powerful uterine stimulant in a case of impossible delivery, a vicious presentation or a contracted pelvis, is to invite disaster.

"The fault then would not be one of drugs but of ill-advised therapeutics on the part of an unskilled obstetrician. Its principal indication is in cases of secondary uterine inertia. In patients of nervous temperament, Pituitrin has invariably calmed excitement and restlessness, in an extraordinary manner after its administration. It has never been necessary to administer a second 1 c.c. dose to bring about the desired result and 42 minutes has been the longest interval from the time of injection until the child was born."

Herr Rubsamen of Dresden contributed a paper at the last International Congress on Obstetrics and Gynecology in which he reported some results he had obtained in the treatment of Post-Partum Hæmorrhage. In the first place he showed in a graphic manner that the Pituitrin given in the after-birth period increased the activity of the uterine contractions in the sense of shortening the interval causing the contractions to occur more frequently. Ergotin, on the other hand, did not shorten the pause but only strengthened the individual contractions. The uterus that was under the influence of Pituitrin had scarcely any pause between the pains and could not bleed, as the hæmorrhage occurred during the interval between the contraction contrary to what occurred in the case of ergot. From this could be deduced the advantages of Pituitrin in Post-Partum Hæmorrhage.

In *Surgery, Gynecology and Obstetrics*, Nov. 1926, R. A. Scott says that he has studied 1,000 consecutive cases in which Pituitrin was injected intramuscularly in a dosage of 0.5 c.c. at the beginning of the third stage of labour as a routine procedure, and earlier cases in which Pituitrin was not used.

He concludes that the injection of Pituitrin definitely shortened the time of labour, that it lessened the amount of blood lost in the third stage of labour, both in spontaneous and operative deliveries; that it lessened the number of cases of Post-Partum Hæmorrhage and that it diminished the frequency of retained placenta due to a constriction ring.

Pituitrin is a powerful drug, and care should be used in its administration. It should never be used until the accoucheur is familiar with his case and certain that no harm will result from its use. It is absolutely contraindicated when there is a disproportion between the size of the fetus and that of the pelvis or when there is an obstruction. Instead of Pituitrin rest is indicated when the uterus is exhausted.

As the drug acts best towards the termination of labour and only slightly at the beginning, the time to use it is when dilatation of the cervix is complete or nearly so. It is senseless to inject it in every case. After the injection has been given the physician should never leave his patient until labour is complete for fear of precipitate labour.

The position of Pituitrin in obstetrics is now definitely established. A review of the many published reports leads to a number of conclusions that are generally accepted as sound.

The dose:—The first dose should be 0.2 to 0.5 c.c. (3 to 8 minims) and this dose may be repeated if necessary at the intervals of 30 to 40 minutes to maintain the effect. There is no doubt that some of the untoward results reported when pituitrin first came into prominence were due to the administration of unnecessary large doses.

When to use:—Pituitrin should not be given during the first stage of labour or when there is any mechanical obstruction to the natural delivery. It is inadvisable to administer Pituitrin in complete inertia or when scars are present in the uterus from a previous Cæsarean section, because of the risk of uterine rupture. It should be employed only when the cervix is dilated, the membranes ruptured and the presenting part well engaged.

Certain other conditions may be taken as *contra-indications* to the use of Pituitrin: cardiac diseases with high blood pressure, eclampsia or pre-eclamptic condition when the blood pressure is high and threatened asphyxia of the unborn child. In cases associated with hypertension the oxytocic effect of Pituitrin is more safely obtained by means of Pitocin.

Pituitrin should not be given when the foetal heart is irregular and its rate abnormal.

The indications for Pituitrin in obstetrical cases are excellently summed up by Cleveland. He suggests its employment in (1) Weak pains in the second stage of labour and occasionally near the end of the first stage if the cervix is dilatable. This is by far the common indication. (2) In accidental hæmorrhage—*abruptio placenta*—when the head is engaged and the membranes have ruptured. (3) Having changed a face into an occipital presentation, strong pains are needed to force the occiput down on the perineum. (4) In the third stage after delivery of the placenta to cause retraction and contraction of atonic uterus. (5) In Post-Partum Hæmorrhage from atony. (6) In the puerperal stage where there are clots or pieces of placenta in the uterus. (7) In late puerperal hæmorrhage.

Other Factors and other Methods

Hæmoplastin is also useful in arresting Post-Partum Hæmorrhage. 2 c.c. of Hæmoplastin subcutaneously or intramuscularly may arrest uterine hæmorrhage within an hour.

When a battery is at hand, galvanism may be tried. It will sometimes overcome uterine inertia, when all the other methods have failed.

Strict antisepsis must be observed in every intrauterine manipulation to check Post-Partum Hæmorrhage. In desperate attempts to check the bleeding the natural tendency of the obstetrician is to forget the risk of infection.

Lastly, after the actual hæmorrhage has been checked, attention should be given to improving the general condition of the patient. When the shock is not profound and the pulse is not rapid elevation of the foot of the bed, wrapping up the patient in warm blanket and application of hot water bottles to the extremities will be all that is needed. When the patient is profoundly shocked sterile normal Saline solution should be administered intravenously or subcutaneously.

If the patient is in imminent danger of death from want of blood in the body, transfusion of blood should be tried.

The blood and general condition of the patient should be improved through medical and dietetic treatment.

For "hour-glass contraction" fainting or collapse, Glonoin (Abbot Alkaloid Co.) is a good remedy. It is commonly known as Nitroglycerine, or trinitrin. The standard granule is gr. 1/250 of which one or two should be given to an adult hypodermically or by the mouth, to be chewed and held on the tongue from whence quick absorption takes place. Its effect upon the circulation is noticed almost instantly and reaches its maximum in five or ten minutes.

In rupture of the uterus—which is fortunately rare—the child if *in utero*, must be extracted with forceps; if in the abdominal cavity, by prompt abdominal incision. If delivered the treatment for hæmorrhage will be as described above and as soon as possible the woman must be anaesthetized and the rent repaired.

Hæmorrhage from inversion of uterus will be met by replacing the organ; the hand supports the fundus and the fingers of the other hand circle the cervix. The part which comes down last must be replaced first and the body pushed upwards and forward till reduction is accomplished.

Lacerations of the lower canal will be speedily recognized on inspection and tampons and sutures will stop the hæmorrhage.

When rupture of the perineum occurs, wash thoroughly, shave the parts and suture at once. Be careful to secure coaptation and place your sutures deep. Do not tie them too tight. All repairs of the perineum should, whenever possible, be made within an hour.

In your care of the lying-in woman, be gentle and sympathetic. Don't get excited; be master of the situation; never appear strained or nervous; know what to do and do it. Never make light of conditions and don't forget that it is the woman that must "have the baby".

[This Thesis secured the Dr. Joseph Benjamin's Prize for 1939 awarded by the Gujarat Branch of the All-India Medical Licentiate's Association.]

Management of Eclampsia

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Eclampsia is one of the greatest bugbear of obstetric emergencies, and one may be called upon to treat it either

- (1) before labour has commenced,
- (2) when labour is in progress,
- (3) or soon after confinement has taken place.

The two cardinal points of importance in the management of eclampsia are:

- (1) the control of fits,
- (2) and whether any obstetric interference is necessary or not, either as an inevitable measure to control the fits or to save the life of the mother or the foetus.

The Control of Fits

The known methods of control are:—

- (1) Stroganoff's Method,
- (2) The Dublin Method,
- (3) Arnold & Fay's Method,
- (4) A. L. Mudaliar's Method.

There is no fundamental difference between the methods of these various schools of thought except that stress is laid on certain measures as more important than the other. While the practitioner should understand the technique of these methods, he would be well advised, however, to stick to one method till a prolonged experience warrants a change.

We, in Madras, naturally follow Mudaliar's Method, the chief principles of which are:

- (1) Administration of sedatives
- (2) Starvation
- (3) Elimination and dehydration
- (4) Reduction of blood pressure
- (5) Non-interference with labour except when it is urgently indicated.

(This is the essence of what is called the conservative treatment).

Administration of sedatives:—As soon as the patient is isolated in a separate room and all her tight clothings and jewels are removed, morphine tartrate ($\frac{1}{2}$ gr.) with atropin (1/100 gr.) is injected immediately and repeated every 2 hours should such a necessity arise. The total amount of morphine should not, however, exceed 2 grs. within 24 hours, and one could well manage the fits with much less of morphine if sedatives (Pot. Bromide and Chloral Hydras 30 grs. each in two or three ounces of distilled water) are introduced into the rectum once in two or three hours.

Reduction of Blood Pressure:—After thus immediately controlling the fits, the blood pressure should be taken. If the systolic blood pressure is above 160 mm., veratrine ($\frac{1}{4}$ c.c.) should be injected without any

hesitation. Venesection is resorted to only when high blood pressure persists.

Elimination and Dehydration:—Starvation, elimination and dehydration are the three emphatic features in Mudaliar's method. If the patient is unconscious a large boric bowel wash is given and repeated at 4-hourly intervals. If the patient is conscious, or when she has recovered consciousness, she is given saline purgative ($1\frac{1}{2}$ oz. of Mag. Sulph. in concentrated solution). If the patient does not regain consciousness for a long time, a saturated solution of mag. sulph. may be left in the bowels after the bowel wash. The patient is starved for 12 hours after she recovers consciousness.

Interference with Labour

There are strong advocates for the termination of pregnancy, at whatever stage it may be, on the ground, or rather the belief, that the foetal products are the inciting causes of eclampsia. This goes under the name of radical treatment.

But the advocates of conservative treatment, of which Mudaliar's is a conspicuous example, suggest termination of pregnancy only when

- (1) there is a failure of conservative treatment after a fair trial,
- (2) the fits occur during the progress of normal labour or of miscarriage.

It is not the intention of this article to detail the various methods adopted by obstetricians to terminate pregnancy. But the broad principles, as followed in Madras, may be stated thus:

- (1) If the woman is at the full term of pregnancy, medicinal methods of inducing labour are adopted.
- (2) If the pregnancy has not reached the full term, obstetric methods are employed.

The medicinal methods are:

- (1) $1\frac{1}{2}$ ozs. of castor oil at 6 a.m.
- (2) Soap and water enema at 9 a.m.
- (3) Pitocin (the oxytocic principle of the pituitary) 2 units every two hours upto 10 or 15 units (of the international standard).

If the labour does not begin within 24 hours of this treatment, the patient should be left alone for 2 or 3 days, and another course given. Should even this second course fail to induce labour, obstetric methods should be instituted.

The obstetric methods are:

- (1) Rupture of the membranes
- (2) Karuse's method of insertion of bougies between the membranes and uterine wall.

Prognosis

This is, as a rule, uncertain. If the pre-eclamptic syndrome is recognised early and treated properly, the pregnancy may reach its full span and terminate normally with skilled obstetrical help at the time of confinement. But in our country where ante-natal organisations are only just coming up, it is but inevitable to meet with gross cases of eclampsia with or without

the history of antenatal attention. There are also cases which occur with abrupt suddenness, and which can by no means be prevented. The following prognostic factors may be conveniently remembered.

- (1) If the fits are frequent and longer in duration with a dwindling period of consciousness in between the fits, the prognosis is grave.
- (2) Ante-partum and intra-partum eclampsia is more serious than that of the post-partum, in as much there is danger to maternal and/or foetal life.
- (3) Hyperpyrexia, though rare, is of serious significance.
- (4) Persistent high-blood pressure is unfavourable.
- (5) Very severe and generalised œdema is bad.
- (6) Albuminuria with suppression of urine is ominous, indicating an irreparable previous renal damage.
- (7) Jaundice, œdema of the lungs, failure of cardiac compensation, cerebral hæmorrhage, and sepsis are of grave import.

Incidence of Toxæmia and Eclampsia in our Country

The reports from the important maternity hospitals in our country show wide variations both in incidence and mortality, as well as in the methods of treatment adopted. But the summary given by Miss Telang and others¹ may be taken as a rough guide. They write:

"Our greatest hope in the future lies in the antenatal clinic, where a large number of eclampsia can be prevented, but, there will still be that small number, which occurs with a dramatic suddenness, without any warning, and which cannot be prevented, unless the etiology of eclampsia, which is at present a mere disease of theories, is solved, and the prevention and treatment based accordingly.

There were 714 cases of toxæmia during the years 1934 to 1937. 595 patients recovered and 19 died—maternal mortality 2.66%.

"Incidence of toxæmia among total deliveries—5.26%.

In 1937, 47.2% of total toxæmias were booked, and 52.71% were emergencies.

"Incidence of toxæmia is greater in primiparæ.

"The incidence amongst Mahomedans and Christians is on the increase and is almost double that amongst Hindus.

"Toxæmia occurs with greater frequency during the ninth month of pregnancy and before the age of 30 years, but the incidence is highest above 35 years when reckoned against total deliveries.

"14.9% of twin deliveries are toxæmic.

"The mild type of toxæmia is more frequent. Pre-eclampsias are on the increase, with a corresponding decrease in the eclampsias.

"Infantile mortality—38%.

¹ Proceedings of the Second All-India Obstetrical and Gynecological Congress, Bombay, 1938, pp. 85-101.

The foetal head must not be too small, since the forceps is likely to slip, and cause much damage to the passages and the foetal head.

Lastly, the foetus should be presenting by the vertex or face.

Mode of Operation

The patient should be in the dorsal recumbent position and an anaesthetic administered. The anaesthetic given to the patient should be such that, as soon as the operation is finished, the patient should be coming round from its effects. That is the optimum period of anaesthesia. Administration of too free and too prolonged anaesthesia is a risk and is always followed by severe P. P. H. The parts should be cleansed, Dettol cream applied, and sterile towels or sheets should be covered on the operating area. It is highly essential that an enema should be given to the patient at the onset of labour. The bladder should be relieved by the passage of a sterile metal catheter. No force should be used, as in some cases the head is jammed in the pelvis and pressing on the anterior vaginal wall when there is a risk of injury to the urethra.

After these preliminaries have been gone through there are two important rules to be observed when introducing the blades into the vaginal passage. Always the blade should be carefully guided by the fingers as it is passed through the vaginal passage, and there should be no force used in applying it.

There are two modes of Forceps application:— (1) Cephalic (2) Pelvic. In the former the blades lie on the sides of the foetal head with the long axis of the fenestra lying over the vertico-mental diameter. In the latter the blades are strictly parallel to the sides of the pelvis irrespective of the foetal head. The cephalic application is safer for the foetus and necessitates a good idea of the foetal head preliminarily by feeling the posterior ear and the sagittal suture.

The obstetrician passes two fingers of his gloved left hand into the vagina into the right and posterior quadrant of the pelvis, with the palmar surface of the fingers looking up. The lower blade is held lightly with the traction rod in contact with the handle in the right hand, the tip of the blade is held at right angles to the fingers of the left hand in the vagina and gently slipped into the vagina until the whole of the cephalic portion of the blade has been introduced. It is then gently rotated laterally through half a circle so that it becomes the left blade. Next the upper or the right blade is taken in the right hand, so that the axis traction rod rests on the middle finger and held parallel to the patient's abdomen; the tip being pressed against the palmar aspects of the two fingers, and by rotation through half a circle the cephalic portion is introduced into the vagina so as to be in contact with the head. After the introduction the forceps should be locked. Always the upper or the right blade should be made to meet the left or the lower blade but never the lower should meet the upper. The traction rods should be fixed and the handle carefully applied. Before the traction is commenced a careful vaginal examination should be made to see that the cervix has not been caught between the blades of the Forceps. Then the traction should be applied gently during the uterine contractions and the

screw should be loosened in between so as to prevent undue compression on the foetal head. When the occiput has emerged under the symphysis pubis the blade should be removed and the rest of the delivery conducted as in a normal confinement.

In all cases of Forceps delivery everything necessary for the treatment of asphyxia in the new-born has to be kept ready.

Floating Forceps and High Forceps are not at all done in modern obstetrics since better modes of delivery are present. The mid and low Forceps operations are the ones commonly employed.

Application of the Forceps in other varieties of Cephalic Presentations

Application of Forceps in occipito-posterior positions require experience and tact on the part of the obstetrician. Most cases are seen in the late part of the second stage when the application of the instrument gives rise to difficulty in locking and extraction of the foetus. In some cases rotation is completed by nature, but should it fail manual rotation by hand or by the Forceps becomes necessary.

In case of Face Presentation great delicacy and care are essential in introducing the blades. Mento-posterior cases are difficult. An attempt must be made to bring the chin forward and Forceps applied later on. Rotation in mento-posterior cases means a lot of risk and injury to the foetus and should always be avoided.

In Brow Presentation Forceps application should be done only after it is converted into a vertex presentation by promoting flexion or into a face presentation by favouring extension of the head.

The application of the Forceps to the after-coming head in Breech presentation, when all other modes of delivery has failed, requires tact and experience.

Prognosis

There is always a certain amount of risk in cases where artificial help is rendered such as Forceps application. The risk to the mother is as great as to that of the foetus.

Bruises, tears, lacerations of the cervix, vaginal walls and perineum may lead to a host of gynecological ailments such as vesico- and recto-vaginal fistulae and prolapse of the uterus. Severe haemorrhages from the lacerated areas may cause shock and collapse, and an unwelcome termination. In addition, there is chance of infection and sepsis during the puerperium due to the careless application of the instrument.

The dangers to the child may also be mentioned here. There may be undue compression of the foetal head, leading to intracranial haemorrhages, fracture of skull, tentorial lacerations resulting in the child being born deeply asphyxiated and with little chance of revival. Other dangers are facial paralysis, Erbs paralysis and pericranial haemorrhages.

Any such injury may occasionally result in spite of taking all care and precautions, but it only emphasises the imperative importance of a judicious use of the Obstetric Forceps.

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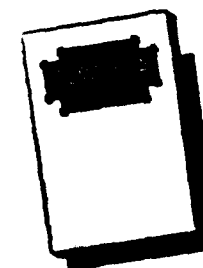
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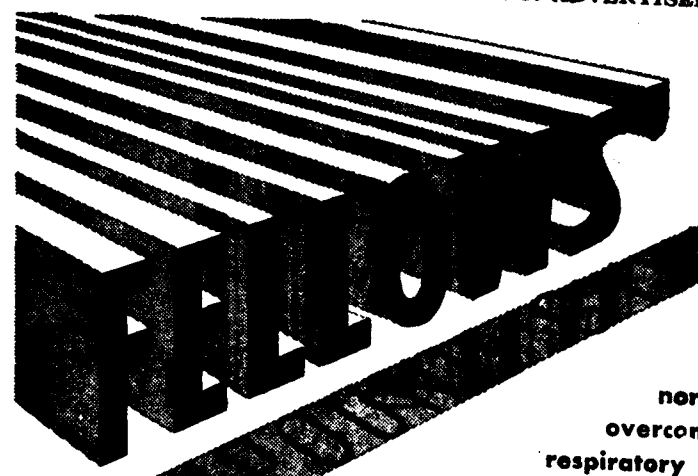
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Some Common and Rare Obstetrical Emergencies

● Dr. A. Viswanathan, L.M.P.
(Medical Practitioner, Madras)

Abortion

Abortion is one of the commonest emergencies in midwifery and when a practitioner is called to treat a supposed case of abortion he must make a quick mental review of the following possibilities whether

- (1) it is a case of pregnancy at all,
- (2) it is a case of threatened abortion, or
- (3) it is a case of inevitable abortion.

The disposal of the first possibility is all important, because there are certain women, who, on account of cessation of menses for a period of one, two or three months, presume they are pregnant when they are really not. In other words, we must exclude such causes of hæmorrhage as uterine myomata and carcinoma, or functional menstrual disturbances. In a large majority of cases, these pathological conditions could be diagnosed by a careful sifting of history and by vaginal examination with a view to find out the condition of cervix and uterus. In cases of doubt Ascheim-Zondak test or Friedman's test may be employed to find out whether the patient is really pregnant or not.

There are yet two other conditions, which, though not quite common, ought to be excluded before concluding that hæmorrhage is due to real abortion. They are: extra-uterine pregnancy and vesicular or hydatiform mole. The classical differences between abortion and the latter two would be found tabulated and explained in any ordinary text-book of midwifery.

Abortion may be "threatened" or "inevitable". The dividing line between these two is the absence or the presence of the progressive signs and symptoms of abortion. If the bleeding is not the result of the death of the foetus but merely proceeds from the *decidua vera*, or even from the placental site, an abortion is not an inevitable consequence. But if the bleeding affects the *decidua basalis*, i.e., the placental site, the ovum dies and abortion inevitably occurs.

The development of ovum depends on the adaptability of endometrium which, in its turn, depends upon (1) hormonal balance and (2) such extrinsic factors as disease of the endometrium, retroversion of the gravid uterus, emotional disturbances, trauma—accidental or designed.

Hormonal Balance:—The hormone of the corpus luteum is said to be responsible for the adaptability of the endometrium to the developing ovum. The stimulus for the optimum production of corpus luteum hormone is derived from the prolactin of the anterior pituitary. Very recently it has been shown that the presence of anti-sterility fat soluble vitamin E is necessary for the proper development of ovum. It is obvious that factors which upset the natural endocrine balance would precipitate abortion, and these factors may arise from consti-

tutional and metabolic disturbances such as anemia, tuberculosis, diabetes and tropical diseases such as chronic malaria, kala-azar and dysentery.

Extrinsic Factors:—Of these the commonest are the displacements of the uterus (retroversion or retroflexion) which not only interfere with the normal growth of gravid uterus but also impede the development of the ovum as a consequence of uterine congestion. The next common ætiological factor is endometritis which prevent the formation of normal decidua with consequent malnutrition of the ovum and its ultimate death and expulsion. The third factor is trauma, but unless it is severe it does not cause abortion. But the trauma caused by attempts to induce criminal abortion, either by means of drugs or physical appliances, is often of such a degree that complications such as sepsis and incomplete abortion do occur and cause no inconsiderable anxiety to the attending physician.

It may be mentioned here that syphilis, chronic nephritis, placenta previa and accidental hæmorrhage are more the causes of miscarriage than of abortion.

Yet, on the whole, it may be truly said that it is not altogether easy to present a strictly scientific classification of the causes of abortion.

Symptoms:—The cardinal symptoms of abortion are:

- (1) Hæmorrhage.
- (2) Miniature labour pains.
- (3) Dilatation of the os uteri.
- (4) Protrusion or expulsion of the uterine contents.

But these symptoms vary in severity as well as in degree according to the period of early pregnancy at which abortion takes place. If the abortion occurs between the fourth and the sixth week there is smart hæmorrhage accompanied by clots and shreds of decidua membrane and severe pain. Usually the embryo is embedded in the coagulum and therefore this is often regarded by women as one of delayed menstruation. If the abortion occurs between the seventh and twelfth week, the symptoms are more pronounced: sudden and profuse hæmorrhage, and pain till the whole uterine contents are expelled. But sometimes the uterine contents are not wholly expelled, in which case the possible results would be:

- (1) incomplete expulsion of the decidua leading to persistent hæmorrhage,
- (2) retention of ovum either in uterus or cervical canal owing to cessation of the uterine contractions,
- (3) retention of placenta and/or membranes after the expulsion of the foetus (in the fourth month).

It is these complications of abortion that are usually described in the text-books as *Incomplete abortion*, *Cervical abortion*, *Missed abortion* and so on.

Treatment:—It is always safe to be conservative in the treatment of abortion, unless there are definite indications that the abortion is inevitable.

The conservative treatment consists of

- (1) rest,
- (2) glycerine enema,
- (3) a general and uterine sedative,
- (4) light and nutritious diet.

If this treatment fails, i.e., if the hæmorrhage and pain are persistent, active interference becomes inevitable. Even so, many cases of inevitable abortion end spontaneously and the question of active interference arises only when

- (1) the hæmorrhage is too severe, and recurring,
- (2) a portion of the ovum or the decidua has already been expelled, and
- (3) the cervix is gaping.

In which case, it is always necessary to complete the evacuation of the uterus.

This can be done, provided the cervix is dilated, by introducing the finger and gently separating the ovum from the uterine wall. The ovum can be expressed out by pressing on the fundus with the other hand. Or it can be removed by ovum or sponge forceps. If the cervix is not dilated, it can be done so by the finger or the Hegar's dilators.

Another method is by plugging the vagina and wait for the uterine contractions to expel the ovum. If the uterine contractions are too feeble 5 units of pituitrin hypodermically, and 5 grains of quinine (every 2 hours) orally may be given to provoke uterine contraction.

The former method is by far preferable to the latter.

It is obvious that antisepsis of the external genitals and the vaginal canal should be maintained before, during and after interference. It is a safe precaution to give a few doses of sulphanilamide as a prophylactic against infection.

The use of flushing curette is not always necessary, nor an intra-uterine douche, unless there is a clear evidence of small bits of placenta or blood clots being left behind.

The after-treatment is similar to that of a normal puerperium.

Incarceration of Retroflexed Gravid Uterus

If there is acute retention or dribbling of urine in a woman during her third or fourth month of pregnancy, the case is probably one of retroflexed or retroverted uterus.

If by a vaginal examination a mass is felt in the hollow of the sacrum, the diagnosis of displaced uterus admits of no doubt, but care should be taken to exclude retro-uterine hæmatocele, an impacted ovarian cyst or fibroid of the uterus.

In most cases the displacement corrects its position spontaneously when urine is relieved by the passage of a catheter. In not a few cases it leads on to abortion.

If in spite of repeated catheterisation, the displacement does not rectify itself manual reposition should be attempted and kept up by means of Hodge's pessaries. This may be worn until the fifth month of pregnancy

when the gravid uterus would have grown beyond the pelvic cavity and thus escaped the danger of incarceration.

If it is difficult to pass a catheter, paracentesis of the bladder must be performed. But care should be taken to empty the bladder slowly to avoid the risk of hæmorrhage and to wash it with a mild antiseptic solution to avoid the risk of infection.

Only after the urinary bladder is emptied, should the attempts at reposition of the uterus be made.

The reposition can ordinarily be effected by putting the patient in the knee-elbow position, and anteverting the uterus manually through the vagina or rectum. After reposition, the patient should be kept in absolute rest for a week or more.

Pulmonary Embolism After Child-birth

This is one of the gravest, and often a fatal complication of the puerperium.

If you are called upon to attend on a woman in puerperium, convalescing satisfactorily after labour, but suddenly seized with severe stabbing pain in the chest, severe dyspnoea, livid and pale appearance, convulsive seizures followed sometimes by even unconsciousness, it would in all probability turn out to be a case of pulmonary embolism.

The possible source of pulmonary embolism in a puerperal woman is a pre-existing thrombosis either in the femoral or external iliac vein drawn from any of the uterine veins at the placental site. The thrombus may be septic or aseptic. In many cases the mischief is confined to lower extremities giving rise to what is called *phlegmasia alba dolens* or 'white leg', which pathologically is nothing more than infective phlebitis.

The thrombus may extend to hypogastric or ovarian veins also.

The onset of symptoms is always sudden, like a bolt from the blue, and one may be wondering what it is all about.

But the agony of the patient with tumultuous action of the heart, quick and feeble pulse, distressing pain on the chest and dyspnoea is a sure indication that you are faced with a case of pulmonary embolism.

Such cases end fatally within 24 hours, and if they survive this period recovery is the rule.

If there is time for treatment the following should be adopted:

- (1) Morphine 1/4 grain hypodermically. Haultain suggests even an intravenous injection of morphia.
- (2) Oxygen inhalation if available; if not, 1 c.c. of ether should be injected subcutaneously.
- (3) If cyanosis is marked, venesection should be done.
- (4) If the patient is conscious sal volatile and digitalis may be given in a mixture every hour for a few doses. If unconscious, digitalis or strophanthin may be given by injection.
- (5) Absolute rest on bed should be maintained for some time.

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The Present State of Medical Practice in the Province of Madras

Introduction

The aim of this study is to give reliable information on the following aspects of medical practice in the Madras province:

- (1) *Paid Services*: The actual number of medical men employed by various agencies with fair security of tenure, and the range of their practice.
- (2) *Honorary Service*: Its history and present trends.
- (3) *Private Medical Practice*.

The information given in this article is derived from Government blue books, personal communications from some of the employing agencies, and interviews with local leaders. These were gathered and compiled without much trouble, inconvenience, or loss of time, which would go to show that if there is a will to help the Association in supplying it with the 'sinews of war' there is always the way open to every member of the Association, particularly the secretaries of our regional branches, to contribute his, or their best, towards this common objective. How can the Association take up our cause if we do not help it to arrive at right conclusions? More often than not, we make use of general impressions as if they are legitimate conclusions derived from close investigation and study, and thus urge the Association to pass this and that resolution on a particular subject, and then blame it for passing mere pious resolutions. I am myself amazed, while carefully looking into facts, how some of my pet impressions have been proved to be delusions based on my own wishes as to how things should be; on my own frustrations in life; and on hear-say reports and experience of others. Let me illustrate this point. In common with many, I used to write and talk about "the miserable state of the unemployment of the members of the profession." Table I of this report gives a direct lie to this impression on which I have wasted many a written and many a spoken word during the last 10 years. This point would be dealt with at the proper stage, and is but mentioned here just to show that there is a lot of difference between personal impressions and studied conclusions, and that no organisation can maintain its prestige and

effectiveness if it does not base its recommendations on the bed-rock of study of changing facts in a changing environment of which the most reliable reporter should primarily and naturally be the leader of its local branch.

A Fundamental Fallacy

If one finds 50 per cent. of the members of a learned profession have secure employment, as evidenced by Table I of this report, it would smack of demagogism to say that there is a state of acute unemployment among them. Medical Services are highly marketable, if I may be permitted to use this commercial expression; and if they are not marketed effectively it means that salesmanship, distribution and quality are deficient in our medical men. I think it is this deficiency which gives the appearance of a state of unemployment—an artefact in reality. This deficiency, in turn, arises out of ill-adaptation to environment. The sister profession of Law in this province is very much less "employed" than ours and a profession in which its members find 50 per cent. of secure employment can by no means be said to suffer from pangs of unemployment. No non-socialistic Government can give cent per cent. security of employment, and we must thank our stars that, even under the most unimaginative of all governments—as the British Government in our country is—50 per cent. find employment on payment basis. It is, therefore, a fundamental fallacy to conjure up our present problem of existence in terms of unemployment. Of course every State and Society should see that those who serve them are fed and sustained properly. But if those who serve throw this onus entirely on the former without understanding and practising their own obligations they have no right to demand sympathy from their Government and Society. In my view, the so-called "unemployment" is nothing more than a prominent symptom of maladjustment to our environment, aggravated by an utter lack of co-operative effort, disinclination to hard work, and disruptive tendencies. It is from this aspect that this article would deal with this subject, and not from the point of view of "unemployment". I am not oblivious to other external factors that predispose to this state of affairs, but since the internal factors are the root cause of our state of

"unemployment" they should engage our first attention, and unless we do this, our fight against extrinsic factors is bound to prove futile and foolish. The essential problems of the private practitioners today are therefore one of finding ways and means

- (1) To effect fairly even distribution of available opportunities for private medical work
- (2) To effect a fair distribution of income without, as at present, a glaring disparity between the high and low incomes
- (3) To prevent disruptive influences among themselves
- (4) To continuously increase their efficiency.

At present, unemployment—in the sense of dearth of remunerative work—is, in my view, the result of our own weaknesses, and not their cause.

Population

The population of this Province is 47.2 millions, nearly the same as for Great Britain.¹

The total number of medical men, at the end of 1939, was 6,000. This includes a large number of medical men who are registered in the Madras Medical Council but who are employed or practising in Madras States: Travancore, Cochin, Mysore and Hyderabad. I put this figure roughly as 1,000.² If we deduct this from the gross total, we get 5,000 medical men for the British Province of Madras, with which alone this article deals.

The total number of practitioners in Great Britain is 62,000 (1938) for a population of 47 millions. Note the disparity.

If we take the practitioners of all systems into account we have, for this province, as follows: Those who are in the

(1) Madras Medical Council Register ..	5,000
(2) Register of Practitioners of Indian Medicine ³ ..	20,000
Total ..	25,000

Ratio of Medical Men to Population

(1) Allopathic ..	1 : 9000
(2) Indigenous ..	1 : 2350
(3) Combined ..	1 : 1840

The combined ratio is quite comparable with that of other countries, but the efficiency of medical relief is highly questionable. At any rate obstetrical, surgical

¹1931 Census.

²This is likely to be a very low estimate.

³G. O. No. 231 P. H. dated 1-2-1933. This registers (1) those who hold diploma of Licentiate of Indian Medicine (L. I. M.); (2) holders of Government titles such as Vaidya Ratna and Shifa-ul-Mulk; and (3) hereditary practitioners. Registration and education (Indian School of Medicine) are under the control of "Central Board of Indian Medicine" appointed by the Government of Madras. Their Registration fee is Rs. 15/-.

and other special services can only be offered by practitioners of scientific medicine whose number is relatively small. It is, however, interesting to note that the Licentiates of Indian Medicine are permitted by the Government of Madras to undertake "medical, surgical (including obstetrical) and medico-legal work"; they can issue certificates and are eligible for employment by the Local Bodies and as subsidized rural medical practitioners.

What are the problems which this condition of affairs has created in this Province? They may be categorically stated, without discussion, thus:

- (1) Both the sets of practitioners designate themselves as "Registered Medical Practitioners". Result: The statutory recognition of highly trained scientific medical practitioners becomes ineffective and meaningless in the face of the executive recognition and registration of practitioners of Indian Medicine—both trained and untrained.
- (2) Many Local Bodies prefer to employ Registered Practitioners of Indian Medicine impelled by (a) feeling of patriotism and (b) desire for economy. Result: What ought naturally to go to highly trained medical men goes to less and doubtfully qualified people.
- (3) The people are the ultimate sufferers.
- (4) Medical castes and creeds, and division of loaves and fishes, assume, and in fact are given, greater importance than the quality and extent of medical relief.

The only consolation is that the Licentiates of Indian Medicine⁴ are yet not allowed to invade the Public Health Department though this is certainly less harmful than to allow them to dabble in curative medicine.

State of Employment of Qualified Medical Men (Allopathic)

In this Province, as elsewhere, medical men may be classified under three economic categories:

- (1) Employed under a paid Service with security of tenure, provident fund and pension
- (2) Employed in recognised hospitals as Honorary Medical Officers whose main source of living is by private practice
- (3) Employed wholly in private practice with wide variations in high and low incomes.

(1) *The Paid Services*: The following table will show that 2,451 medical men are in secure employment, that is, 50% of the total medical men in this province are in jobs, and that the remaining 50% may, by a process of exclusion, be taken to be in independent practice. The grievances of the former are more about their pay and prospects, and those of the latter are more about finding the optimum level of economic existence.

⁴The practitioners of Indian Medicine are classified into two classes: (1) Class A is made up of the diplomates of Government Indian School of Medicine (2) Class B is made up of others. Both are registrable, but the latter are not eligible for employment under Government and Local Bodies.

TABLE I (a)

Showing distribution of Government Medical Officers

(1) I. M. S.: Total strength 19, inclusive of 4 leave reserve.	
8 Civil Surgeoncies reserved for them (Malabar, Madura, Coimbatore, Bellary, Nilgiris, North Arcot and Guntur).	
6 Special posts as professors of surgery, medicine, obstetrics and ophthalmology.	
1 Resident post for "obtaining efficiency in a speciality."	
(2) Provincial Medical Service: Civil Surgeons ..	19
Asst. " ..	280
	299
(3) Subordinate Medical Service: S. A. S. ..	366
Leave reserve ..	36
Epidemic ..	9
	411

TABLE I (b)

Showing distribution by qualification of the Subsidized Rural Medical Practitioners

Licentiates ..	410
Graduates ..	10

Honorary Medical Service

This was introduced in the year 1920 when the first popular ministry under the Government of India Act, 1919, was inaugurated. Raja of Panagal was then the Chief Minister and he responded to the request of the then leaders of the profession, Drs. Nair, Jesudasan, Krishnaswamy Iyer, etc., to initiate a scheme of Honorary Medical Service. At that time, and before, men in Government Service claimed a monopoly of all medical experience and skill which naturally created a reaction in the quickly growing group of private practitioners. The latter wanted to show to the people and the Government that they were in no way unequal to the former. The Government⁵ yielded to this demand possibly for two reasons: (1) if the honorary service succeeded in its objective it would save some money for them; (2) if it failed the causes of failure could be foisted on the profession itself.

Till 1930, the honoraries were appointed only in the City Hospitals under the following categories:

- (i) Honorary Surgeons and Physicians who hold M.D., M.S., M.R.C.P. and F.R.C.S. qualifications,
- (ii) Honorary Assistant and Sub-Assistant Surgeons,
- (iii) Clinical Assistants.

The tenure of Service was unlimited till they attain the age of 55 or 60.

⁵Till the working of the Government of India Act (1935) in 1937 under separate and elected ministries with definite portfolios, the policy of the Government may roughly taken to be the personal views of the Head of a department. That is why between 1920 and 1937, honorary medical service made little progress either in numbers or quality.

TABLE I

Medical Men in Paid and Honorary Services, Classified according to Hospitals and Employing Agencies as at the end of the year 1937

Categories of Hospital	Number of Hospitals	Number of Superintendents	Number of Honoraries	Remarks
Over 20 beds				
Government ..	63	302	194	
Missionary ..	39	121	15	
District Board ..	2	2	..	
Municipal ..	2	1	..	
Private ..	4	9	..	
	110	435	209	
Under 70 beds				
Government ..	70	96	6	
Missionary ..	18	19	2	
District Board ..	109	129	2	
Municipal ..	10	7	1	
Private ..	5	11	..	
	212	262	11	
Dispensaries				
Government ..	27	27	..	
Missionary ..	9	9	2	
District Board ..	619	619	1	
Municipal ..	64	70	6	
Private ..	81	64	..	
	800	789	9	
Special Clinics and Special Hospitals*				
Government ..	61	165	153	*E. N. T., X-ray, Venereal, Eye, etc.
Missionary* ..	14	15	2	*1 T. B. hospital and the rest leprosy hospital
District Board* ..	111	84	..	*Mostly leprosy
Municipal* ..	9	9	2	*Mostly infectious diseases hospitals
Private* ..	3	3	3	*Private leprosy clinics
	198	276	160	
Other Services				
Railways:				
M. & S. M. ..	..	67	..	
S. I. Ry. ..	..	51	..	
Madras Corporation* ..	..	30	..	*Divisional dispensaries in the city
P. H. Deptt.* ..	..	101	..	*52 D. P. Hs. and 49 L. P. Hs.
Subsidized rural practitioners ..	..	420	..	
Tea and Coffee estates ..	..	20	* ..	*Rough figure only.
	..	689	..	
GRAND TOTAL ..	1,320	2,451	389	

NOTE: Between 1937 and 1939, there has been an increase of honoraries by 111, giving thus a total of 500 at the end of 1939.

After 1930, it was extended to a few district head-quarter hospitals. The number of honoraries in 1933 was only 45; in 1934, 171; in 1937, 389; and in 1939 about 500. Table I would show that a large majority of them are employed in special clinics and special hospitals.

This is, of course, as it should be. Table II below would show the distribution of Honorary Officers in the Government Hospitals as at the end of 1939:

TABLE II

To act in the vacancy of a Civil Surgeon's post ..	1
To act in the vacancy of Asstt. Surgeon's posts ..	45 Men 4 Women
Supernumerary Honorary Officers:	
CITY: Govt. General Hospital ..	28
" Royapuram ..	18
" Royapettah ..	18
" Maternity ..	3
" Ophthalmic ..	4
" Tuberculosis ..	2
" Goshia ..	1
DISTRICTS: Anantapur ..	1
North Arcot ..	6
South Arcot ..	2
Bellary ..	2
Chingleput ..	1
Chittoor ..	3
Coimbatore ..	12
East Godavari ..	7
West Godavari ..	7
Guntur ..	8
South Kanara ..	7
Kistna ..	3
Kurnool ..	3
Madura ..	12
Malabar ..	22
Nellore ..	6
Nilgiris ..	1
Salem ..	4
Tanjore ..	5
Trichinopoly ..	10
Vizagapatam ..	12
	134
GRAND TOTAL ..	258

N.B.—(1) Out of these three only are paid honorarium—one Rs. 40/-, two Rs. 30/- each, and one Rs. 25/- per month.

(2) Out of these, 47 are L.M.P. Honorary Officers.

It may be stated that, as a rule, the Government before 1937 treated the honoraries as the Cinderellas of the profession, and were considered more as an infliction than as a need. The paid men, although alike in education and social status, did not take to the honoraries kindly or sympathetically. In reality they were blocking more the progress and growth of the Honorary System than was the luke-warm policy of the Government on this subject. This uncalled for bitter estrangement led the practitioners to demand from the Government a whole hospital for themselves to enable them to vindicate their ability. Again the same old responsive Chief Minister, Raja of Panagal, came to their rescue and allowed the Royapettah Hospital¹ to be

¹ This is one of the big city hospitals, but is not a teaching hospital.

managed wholly by the honoraries save for one paid medical superintendent drawn from the Provincial Medical Service.

The reorganisation of the Medical Department set up by the Congress Ministry in 1937² swung to the other extreme, and under this scheme all the posts except the superintendents of Government City Hospitals, District Medical Officers, Resident Medical Officers, and Directors of King Institute (Guindy) and Pasteur Institute (Coonoor) were thrown open to honoraries drawn from all the ranks in the private medical profession. As a necessary corollary, recruitment to Provincial and Subordinate Medical Services was immediately stopped. The profession itself was dazed at this audacious reform, but jubilant that the day of its deliverance had come after all.

The avowed policy of this scheme, inaugurated by that intrepid Congress Minister of Health, Dr. T. S. S. Rajan, was displacement of service men within the course of next 20 years and the active participation of the profession as a whole in hospital practice and administration. None but the most selfish doubted his motives or questioned his ability to put his reforms in working order.

The essential good features of his reforms were:

(i) *Classification*: (a) Honorary Physicians and Surgeons with the highest qualifications, (b) Honorary Assistant Medical Officers with qualifications registrable by the Madras Medical Council. Recruitment to (a) will usually be from (b) plus experience and efficiency without any undue stress on the possession of high academic qualifications.

(ii) *Provision of training in special subjects*, without payment of fees, to medical men desirous of honorary appointment on condition that they would serve the Government for two years as honorary medical officers in their speciality.

(iii) *The tenure of appointment in each grade* was strictly limited to five years, with a view to give suitable opportunities to the largest number of medical men.

(iv) *Remuneration*: (a) Honorary Physicians and Surgeons who have both hospital and teaching work are given Rs. 100 per month. (b) Those with only teaching work Rs. 60 per month. (c) Hon. Assistant Medical Officers with both hospital and teaching work Rs. 40. (d) Those who have only hospital work Rs. 30. (e) Those who have only teaching work Rs. 20.

But the Government stated that preference would be given to those who were prepared to work without any honorarium.

(v) *Duty hours*: Three full hours of the best part of the day.

(vi) *Hospital work*: They are allowed to do all kinds of work under the direction of the paid medical superintendent.

(vii) *Private practice*: They shall not take fees from the hospital patients under their care, but it is open to them to undertake private treatment of patients discharged from the hospital.

² G. O. No. 3600, P. H., dated 23-12-1937.

(viii) *Leave*: They are entitled to 15 days' casual leave per year. If they take long leave they have no lien on their post, unless the Surgeon-General can arrange to carry on their duties without extra expenditure to the Government.

(ix) *Transfer*: Honoraries in the city hospitals are subject to transfer from one hospital to another. Those in the mofussil are not subject to transfers.

The working of this Scheme: There was no dearth of applications for honorary posts even without any honorarium, in the city as well in the mofussils. Thus within a period of two years (1937-1939 when the Congress Ministry resigned) the number of honoraries rose from 389 to about 500. *The Minister of Health advised the Local Bodies also to employ Honorary Medical Officers in their hospitals and dispensaries.*

The paid medical men, as a whole, vowed in private that they would "murder" this scheme at no distant date. This is to my personal knowledge. Their reasons were good, but they did not agitate in the right way. Instead of frankly intimating the Ministry their views, they praised it in front and sabotaged its scheme from behind.

The sudden extension of the Honorary Scheme drew all kinds of medical men: (1) Those with high qualifications but with little experience and less practice; and (2) those youngsters who were diffident of and found difficulties in practice. Many of them sought honorary service, sometimes as the best way of escape from monotony, and more often with the fond hope of getting a berth in some form of paid service. Some prominent honorary medical officers told me that the moment a honorary medical officer gets a paid job he becomes vociferous in his complaints against his erstwhile colleagues, and the very system which he used as a foothold to jump on to a life of security.

The honorary medical men themselves began to imitate their service colleagues in under-estimating and treating their fellows in private practice with scant courtesy and consideration. It is a common knowledge in this city that many of these officers are accustomed to way-lay patients, who would have sought private medical aid, to hospitals under the suggestion of better treatment and special attention. Their clientele is mostly drawn from this class of patients who want to purchase medical benefits at much less than the ordinary cost. Thus there is a growing divorce between honoraries and full-blooded private practitioners; and it is to my personal knowledge that the practice of many a private practitioner in the city has dwindled in proportion to the growing strength of the honorary officers. This is, at any rate, what the practitioners tell me as the chief cause of their going down in income. The unanimity of their opinion on this point shows that there must be some truth behind it.

The scheme, however, has not been without its advantages. The one most substantial benefit derived is that a fairly large number have got themselves trained in specialities, and a good proportion of them are having a successful specialist practice. They are also fairly distributed in all the big towns in this province. The largest of this group is the eye-specialists. Next come the E. N. T. Specialists. From this point of view

Dr. Rajan's scheme was really fruitful. If his scheme had not outstripped the average capacity for sacrifice, it would have gained its objectives much earlier than his friends hoped or his enemies wished.

Post-Congress changes: Due to the resignation of the Congress Ministry and also as a result of the cumulative effect of adverse opinion of both the Service men and the local branches of the Indian Medical Association and the All-India Medical Licentiate's Association the Government, by tradition and temperament ever luke-warm about this system, used this opinion as the basis for its re-orientation. The proposed changes are not yet published, but from the public pronouncements of the Surgeon-General it looks as if the following would be effected:

- Limitation of the Scheme to city hospitals and selected head-quarter hospitals,
- Payment of honorarium to all assistant medical officers and clinical assistants (now to be revived)—probably Rs. 75/- per mensem.
- Cancellation of the previous five-year tenure.

The present Government have already begun to recruit men for Provincial and Subordinate Medical Services. This would show that, unlike the Congress Government, it does not lay much store about partial or complete honorarisation of medical personnel in its hospitals and dispensaries.

The Indian Medical Association at its last Waltair Session passed a resolution to the effect that more honoraries should be employed and that the saving of the cost of medical personnel so accrued should be utilised to create more rural dispensaries and paid rural medical staff. Theoretically, this is no doubt a sound proposition, and presupposes favourable conditions which do not exist at present, namely (1) a responsive government, (2) a profession subject to the influence and discipline of a central all-India or provincial medical organisation and (3) a spirit of mutual goodwill among the members of the profession. Is there any province in India where the honorary system is in force where its Government have used this part of the saving of the cost of medical personnel for such beneficent purpose as suggested in the resolution?

On the other hand, the following figures for Madras would show, notwithstanding the employment of the largest^a number of honorary officers, there has been a progressive increase in the cost of medical personnel:

TABLE III

Year	1932	1933	1934	1935	1936	1937	1938	1939
Gross expenditure in lakhs ..	80.8	80.4	80.3	80.6	76.5 ^b	81.3	86.8	86.7
Salary of Medical Officer	17.8	19.0	19.8	20.0	18.0	19.1	19.9	19.3

^aThis is perhaps the largest number for any province in our country.

^bThe report for this year records a slump in provincial finance.

It is obvious that it is not the intention of the Government to effect any saving under this head, and I think it is but right in principle.

But there is another way of fair distribution of this expenditure. It is by reorganising the Provincial Services on the basis of a minimum pay of Rs. 75/- and maximum pay of Rs. 500/- per month. The Civil Surgeoncies may be abolished—they are the white elephants of the Service—and in their place 4 regional chief medical officers may be employed on the maximum pay of Rs. 500/-. This would give employment to nearly 500 more doctors without in any way affecting the present total expenditure on medical personnel. Saving by the employment of more honoraries would be tinkering with the problem without ultimately solving it.

My own view is that the insistent demand for Honorary Medical Service in State Hospitals from our own medical men is a form of psychological escape from their feelings of down-troddenness and oppression to which they were subject under a perverse and caste-ridden system of medical administration with a top-heavy personnel, uneven distribution of responsibilities and lack of contact with public opinion. Our medical men thought that Honorary Service would heal this time-long wound and give them the same prestige and status as the State-paid medical officers. All these did not materialise by virtue of the tainted atmosphere which suffocated their talents and of the blemished organisation and working of the scheme.

It is pertinent to observe here that in no country medical men are asked to work in honorary capacity *in an hospital owned and managed by its Government*. The British analogy, of which ours is a pale imitation, is often quoted in its support, but this I believe is not true to facts. In Britain there are 900 County Hospitals which have got a fully-paid staff. Infirmaries managed by the State, and intended for the really indigent, are also likewise staffed. It is only in voluntary hospitals, 1,800 in number, that the Honorary system is in force,¹⁰ but even here almost all the junior honoraries are paid, and paid well—£300 to 400 per annum which would be a wind-fall for our men.

Resident and House Staff

In this Province all the members of the resident staff are paid and whole-timed.

There is provision for House Staff in the city as well as in the following mofussil hospitals: Vizagapatam, Tanjore, Madura, Coimbatore, Trichinopoly and Salem. Some of them are paid Rs. 25/- per month.

The selection to the paid House Staff is based on (1) communal considerations, (2) the marks obtained in the final M.B. examination.

I interviewed the Secretary of the House-Surgeons' Association, and he informed me that they have no grievances except the poor allowance.

¹⁰ After the outbreak of the present war, the voluntary hospitals have been taken over by the Government. Under a Scheme of Emergency Medical Service, the doctors and hospitals have been re-distributed in eleven equal zones with paid staff. Even consultants are grafted to this Service, either whole-time or part-time. There is a growingly strong feeling that the Government should take over all hospitals and initiate a State Medical Service after the present war.

Recently, however, the Government have advertised for House Surgeons in the Tuberculosis and Mental Hospitals calling for applications not only from the freshers *but also from retired medical men* on Rs. 30/- per month. This seems to me an absurd and vicious policy in the recruitment of House-Staff which should naturally be reserved wholly for the freshers.

The present sanctioned strength of House-Surgeon's cadre is, I am informed, sufficient to meet the needs of annual output of medical men from the three colleges in this province. This would approximately be 120 per year.

The tenure of House-appointment is for one year only. Selection is made twice a year after the examination.

Since the employing agencies insist on a period of House-Surgeonship for eligibility to appointments, every fresher, now-a-days, seeks house appointment and fortunately gets it without much difficulty provided he does not expect payment.

Subsidized Rural Medical Officers

Of all the provinces, Madras has got the largest number of such practitioners—420—excluding the subsidized licentiates of Indian Medicine. This system was initiated in 1924¹¹ by the then Chief Minister, Raja of Panagal.

Each one of them is paid Rs. 500 a year (if a medical licentiate) and Rs. 600 a year (if a medical graduate) and Rs. 360 worth of drugs and equipment.¹² In theory they are expected to charge those whose income is more than Rs. 30 per mensem but in actual practice this comes to treating nearly all men who visit the hospital free. The village head-man, the members of the village panchayat, the members of the Local Fund and the District Board are more royal than the King, and demand free treatment, even free domiciliary attendance, by virtue of their position. The rural practitioner cannot afford to incur their displeasure lest he may be thrown out of even this precarious means of livelihood. He lives generally from the payment towards supply of medicine, injections, etc., by the lower-middle class and agricultural labourers. But there are some rural practitioners who are thriving well, and they form about 5 per cent. of the strength of this cadre.

Neither by rules nor by implication they are Government servants, but by a subtle process of red-tapism they have been reduced to a worse status than the lowly paid servants of the Government and Local Bodies. They have two masters to serve: the District Board President and the District Medical Officer. The former is often minatory, and the latter quite unconcerned, if not actively hostile towards them. They cannot leave their village for a day or two without the consent of the District Board President, and if they do not obey him with bated breath and whispering humbleness he may concoct a report against them and move the Government for their removal. Some of the practitioners have recently resisted such onslaughts by suing

¹¹G. O. No. 1522 P. H. dated 27-10-1924.

¹²Cost is borne by District Board.

the District Board for unlawful removal and such other issues, and so far they have vindicated their self-respect and position quite successfully. Besides, they have organised the Subsidized Rural Medical Practitioners' Association which is alert in helping its members.

The Congress Government aimed to make use of these practitioners as rural health officers in addition to their usual work, and they were given intensive training in the Poonamallee Health Unit for 15 or 20 days by batches of 10 or 15. The District Board was directed to meet the cost of this training and to pay Rs. 15 per month as Public Health Allowance when engaged in such work.

The other privileges given to them are:

- (1) Inoculation fee of 9 pies per case subject to a minimum of one rupee and maximum of Rs. 5.
- (2) T. A. for journeys beyond 5 miles from the village of residence.
- (3) Preference to fully paid appointment in Local Fund, District Board and Municipal Hospitals.
- (4) Permission to do medico-legal work in the absence of paid medical officers or at their instance.

Particularly item No. (3) is more often breached than observed.

Private Medical Practice

Majority of medical practitioners have dispensary practice, that is, they dispense their own prescriptions, charge only for the mixture and not for consultation. A day's medicine is sold at Re. 0-12-0 to Rs. 1-4-0; for children correspondingly less. They, however, charge visiting fees and for other services rendered. The ordinary practitioner (graduate or licentiate) charges Re. 1 per visit, Re. 1 per hypodermic injection and Rs. 2 to 5 for intravenous injection. A few charge less than this. The senior practitioner, if he is in good practice, charges Rs. 2 per visit, and other services are charged the same as his junior colleague. The charge of consultants varies from Rs. 5 to Rs. 15, very rarely more, and often very much less. The surgical specialist charges for major operation Rs. 50 to 100 according to the economic type of his patients. Their practice is mostly direct, that is, he receives his patients not through the general practitioner, and partly indirect through the general practitioner. The radiologist charges Rs. 5 to 10 for each X-ray picture and radiological treatment is charged at Rs. 2 to 5 per day. The dentist charges Rs. 2 for extraction and filling each, and Rs. 20 to 60 for a full set of artificial teeth. There are a few obstetric specialists only, mostly drawn from retired Government Medical Officers, and their charges are fairly reasonable.

Except the consultants and the specialists, most patients do not pay the general practitioners ready cash but keep an account. More often than not nearly 50 per cent. has to be written off as irrecoverable, and they dare not ask for ready payment lest they may go to other doctors who are only too ready to give credit. This is one of the greatest handicaps to the practitioners in this province. The remedy lies in their own hands but they would not apply it in a concerted manner.

It is, however, very difficult to obtain correct data to judge the present actual state of private practice. The easiest way of doing this is to select a few towns and send a questionnaire to the local medical practitioners. A Gallup survey like this is bound to give us some idea as to the real economic condition and equipment of practitioners, and the nature of their difficulties in practice. But unfortunately our own fellows would not help us in such an enquiry. On the other hand they will mock at it and question its utility.

Hence this part of the article is necessarily based on my own personal observations and impressions.

On the whole it may be said that the mofussil practitioners' income is more constant and sufficient than that of those in the city because of the high cost of living and dependence on a fleeting population in the latter. Another reason is that many of the reputed consultants have their own practice, apart from the cases handed over to them by the general practitioners. Real consultation practice has not taken root in the city. Every "big doctor" is both a consultant and practitioner, and the fee charged from a patient referred to by the practitioner is often higher than what he usually charges his regular patients.

The largest practice in the city is concentrated in a few, and our people are more prone to go to big than small temples although the God in all the temples are the same. This certainly affects the average income of the practitioner. Besides seniors rarely retire from practice.

Insufficient work is due to:

(i) The competition by the Government Medical Officers in the field of private practice. Naturally it is difficult for a weakly placed 2,500 private medical men to compete with a similar number in Government Service with the advantage of hospital equipment and status behind them purchased at no capital at all, and without initial struggle for existence.

(ii) Competition by qualified and unqualified practitioners of Indian Medicine whose number is eight or ten times greater.

(iii) Want of enterprise among our own practitioners. They expect that their name plates and degrees would invite the people to their clinics. They would send to the hospital even such minor surgical cases, as hydrocele, benign tumours, carbuncles, etc., to the city or municipal or missionary hospitals or specialists. This undermines their popularity and naturally and necessarily affects their income.

In spite of these handicaps I really believe that a good majority of us can attain an average level of economic existence if only we can act in a co-operative spirit. I regret to observe that this is highly lacking.

It is not my aim at present to suggest definite or specific remedies. But I venture to give below, in general, what I consider would go a long way in finding more work and better income for our practitioners.

The figures indicated in Table I conclusively show the imperative need for incessantly urging the Government to stop the privilege of private practice now enjoyed by fully paid and whole-timed medical officers. In no other civilized country are such officers allowed this privilege. This would release sufficient paying work to the practitioners.

Notwithstanding the existence of numerous practitioners of different systems of medicine in this province, I am convinced, both by experience of 22 years in practice and careful observation, that the people have taken to scientific medicine very well and in growingly large numbers. It may be said roughly that almost all acute cases do seek scientific medical aid, and all chronic cases indigenous medical aid. I am certain that if the people know that our graduates and licentiates in medicine are also taught Ayurveda and Unani they would seek their treatment for chronic diseases also; for, it is their present belief that "Western medicine is useless for chronic diseases." There is no other way of breaking the back of semi and unqualified practitioners under the existing political and social conditions.

Simla Conference on Recruitment to the Emergency I.M.D.

(A Brief Account of its Proceedings)

Dr. A. D. Mukharji, President, with the prior permission of the Standing Committee of the Association, requested all the Provincial Secretaries and other important office-bearers to meet at Simla on the 22nd September to review the latest developments of opinion in each province and to restate their demands in a manner helpful to the Government and the medical licentiates alike. The following were present at this meeting:

Drs. A. D. Mukharji, President; Manohar Lal Kapur, General Secretary; A. Viswanathan, Editor, *Indian Medical Journal*; Khan Chand Wohra, Treasurer; D. V. Venkappa, Prov. Secy., Madras; K. B. L. Varma, Prov. Secy., U. P.; G. K. Kulkarni, Prov. Secy., C. P.; A. N. Ray, Prov. Secy., Bengal; U. Sessa Rao, Prov. Secy., Bombay; Dal Singh, Prov. Secy., Punjab; G. S. Das, Prov. Secy., Assam; M. D. Pustake, Prov. Secy., C. I.; Ram Narain Lal, Ex-President; Hari Ram, Ex-President; Mathra Das, President, Punjab Branch; K. P. Sen, President, Calcutta Branch; V. D. Sathaye, President, Poona Branch; Jamiat Ram B. Desai, Chairman, Reception Committee of the ensuing Ahmedabad Conference.

Drs. L. K. Barooah, J. N. Ray and R. C. Prosad could not attend owing to unavoidable reasons.

Drs. Samuel Ram Singha and Bhaktawar Singh of Simla Branch were also invited to this meeting.

22nd September 1941: The President, Dr. A. D. Mukharji, explained to the Provincial Secretaries the genesis of this Conference, and requested them to formulate their demands in a manner just to themselves and to the Government. It was unanimously agreed that the Association should render to the Government all such help which lay within its power and influence, but it was the common opinion of all that to make this help real and substantial the Government should offer such terms and conditions of service as would lift the medical licentiates from the morass of unhealthy tradition, and assign to him a respectable position in the Emergency Medical Services of the country. One member expressed the view that the relatively tardy

Even minor surgical cases are not confidently undertaken by practitioners. A surgical patient involuntarily thinks of hospital treatment, because he has been led to do so by the practitioners themselves. In these days of specialities and special hospitals, unless the practitioners protect and foster their sphere of legitimate work, they will ere long be reduced to a position of mere touts to the hospitals or the consultants, as is said to be the case in Great Britain.

As far as possible, the practitioners must practise in groups which would help pooling of individual capital investments. This would conduce to a better equipment, less cost on over-head and recurrent expenditure, and a more complete medical attention to the patient.

We must avoid disruptive tendencies. This is too rampant at present.

A. VISWANATHAN.

response to recruitment from the medical licentiates, as compared to the medical graduates, was wholly due to the miserable status and emoluments offered to the former despite the fact of their acknowledged social standing and their well-known stake in the profession. "If the disparity between licentiates and graduates could not at present be statutorily levelled," he said, "it should not in any case be greater than what it is in civil services or in private practice. Otherwise, they are not at all likely to barter their present standing and income in medical practice to one much inferior to it. The promises of good berths in the post-war period for the licentiates joining the Emergency I.M.D. are too unreal, because they would not be taken in the permanent I.M.S., not even in the Provincial Civil Medical Service, and they would not care to join the Subordinate Medical Service which is none too popular even today." A large number of members expressed it as their opinion that there is no valid reason, except traditional prejudice and the stakes of the vested interests, why the licentiates, who are in charge of the largest number of Government dispensaries and who hold nearly 75 per cent. of private medical practice in their palms—not to speak of the progressive integration of standards of licentiate medical education in our country, should not be given the temporary King's Commission in the I.M.S., failing which, at least, a King's Commission in the Indian Army. Another member significantly pointed out that he knew of a few instances of medical licentiates who joining the Army in a non-medical capacity are able to get the King's Commission which they would not get as members of the medical profession!!

The President, while reviewing the various points arising from this discussion, expressed his agreement with them in general, but appealed to the House to take a realistic view of the whole situation and to so formulate their suggestions as to make the Government to meet them half-way at least, considering the urgent medical needs of our own Indian Soldiers who are fighting gallantly in many of the important and strategic sectors of war. "In normal times," he said with great emphasis, "we shall certainly continue to ask for our birth-rights in the

profession, and shall have them given to us in full measure. But in times like the one we are passing through it is only prudent to ask for a reasonable minimum, consistent with our own self-respect and dignity as members of the profession, and to give up the corroding bitterness of heart, however justifiable, in view of the urgent medical needs of the greatly expanded and expanding Indian Army." "Therefore," he appealed to the members in conclusion, "the Association should arm its representatives who would meet the members of the Government tomorrow with alternative suggestions, honourable to us as members of the Indian Medical Profession, and helpful to the Director-General, Indian Medical Service in putting up our case favourably before the Central Government. I may assure you that he would be a stout champion of our men and their cause, during this war and after it."

The House, then, unanimously formulated the following main suggestions to be presented at the Conference and to discuss the same with the Government representatives.

(1) Rank: The Assistant Surgeons of the Indian Medical Department whose standing is less than 10 years in service or practice may be given, to start with, the 2nd Lieutenant of the Indian Army in the Indian Medical Department. If this is not possible at least the rank of Subedar Major must be given.

REASONS: Since the recruitment will largely be from among the private practitioners who are accustomed to a fairly high average standard of life, they will not be tempted to join the Emergency Medical Service on a rank which does not materially indicate their social status in life. Therefore the Association is of opinion that they should be given the King's Commission in the Indian Army, but in order not to embarrass the Government the Association suggests the alternative of the rank of Subedar Major.

(2) Those Licentiates who have got more than 10 years' standing in the profession either in service or in practice; those who have specialists' qualifications such as D.T.M., D.P.H., L.T.M., and L.P.H., L.D.Sc., D.M.R., etc., and/or those who have been working in the special departments of hospitals or in special hospitals should be given the King's Commission in the I.M.S., to start with as a Lieutenant.

(a) REASONS: The Association recognises the existing statutory difficulties in connection with the subject of conferment of King's Commission in the I.M.S., on the Licentiates, but the Association suggests that this could be overcome if the Government of India could apply Section 121 of the Government of India Act which says that the Government of India can confer such commission and that by virtue of this commission their qualifications would be temporarily recognised by the Medical Statutory Bodies (General Medical Council and Indian Medical Council).

(b) The Association understands that His Majesty's Government in Great Britain have passed under Defence Regulations 32-B an order on the 1st January 1941 by which Medical qualifications, hitherto unrecognised, have been declared temporarily registrable by the General Medical Council. This, it is hoped, applies also to the Licentiate qualifications in India.

(c) The Government may be aware that King's Commission in the I.M.S., was granted to a few selected Sub-Assistant Surgeons of the Indian Medical Department during the last War.

(d) The Association learns that a few persons possessing the qualification of L.D.Sc. (but who do not hold any medical qualification) have also been granted the King's Commission.

(3) Pay: For categories of persons mentioned under para (1) above, the Association suggests the following scale of pay: Rs. 200—15—450. While fixing the initial salary of those officers, ante-date may be given according to their standing in the Civil Medical Department or in private practice. The Association strongly disapproves of the present allotment of non-medical work

to the Military Assistant Surgeons in the Indian Medical Department. They shall be made to share the legitimate professional work as they are doing in the Civil Medical Department and Private practice.

REASONS: The Association wishes to point out that the resolution of the Standing Committee wanted a scale of pay from Rs. 250—15—450, but this has been altered slightly just to meet with the wishes of the Government as far as possible and to make it correspond to the rank of Subedar Major, now proposed as an alternative to King's Commission.

23rd September 1941: On the side of the Association, the Representatives were Drs. A. D. Mukharji, K. P. Sen, D. V. Venkappa, Mathra Das, Ram Narain Lal, V. D. Sathaye and Manohar Lal Kapur.

On the side of the Government the Representatives were Colonels Jolly, Chopra, Bhatia and Mullick, Captain Sampurna Singh, I.M.D., and the Secretaries of a few related departments.

There was a common agreement that the present rank and emoluments of the Licentiates in Emergency Indian Medical Department are too low and unattractive, and certainly inconsistent with their educational and professional status. The suggestions of the Association regarding the rank and emoluments, viz., Subedar, Subedar Major and Lieutenant in the Indian Medical Department with a corresponding salary on a scale of Rs. 200—15—450, in the case of licentiate volunteers below 10 years' standing in the profession, were noted down after a prolonged discussion of their pros and cons.

As regards the licentiates above 10 years' standing, it was felt that they would not be easily able to wind up their practice in favour of a military career, and therefore the Government members did not want to tackle this aspect of the question at present, but allowed the Representatives of the Association to present their viewpoints.

The Government members recognised the need for a generous ante-dating of rank and increments of salary for those licentiates above 3 years of standing. They also recognised the need of relieving the Military Assistant Surgeons of their present clerical work as far as possible, by recommending to the Government employment of more military clerks and thereby making a fuller use of the medical licentiates for medical purposes.

Various suggestions regarding the enhancement of different allowances were made, and the Government members informed the Association that their general revision is already under Government consideration, but that radical changes could not be expected at present owing to the inevitable repercussions in other ranks of the Indian Army. The Association's Representatives realised this difficulty and requested the Government to do their best in this matter.

The Association's Representatives accepted the suggestion of the Government for the co-option of its provincial leaders to the Provincial Recruitment Committees.

The Director-General, Indian Medical Service, on behalf of the Government thanked them for their practical suggestions, and appreciated the effective presentation of their case. He sincerely hoped that the Government would favourably consider the various issues discussed by them.

ASSOCIATION NOTES

(The Proceedings printed below refer to the Committees and Branches of the A. I. M. L. A., unless otherwise stated.)

Jorhat (Assam). Meeting held on 20th July 1941. Five members were present. Dr. D. Bhattacharjee was in the chair. Read Circular No. 12/1941 and noted the contents.

Regarding Circular No. 10/1941, the following conclusions were arrived at:

(a) This Branch regrets that it cannot support the Tingri Valley Scheme, neither does it think it fit to forward to the authorities concerned for consideration and action, and that, on the other hand, if it is done so it will lower the prestige of the Association. This Scheme is purely theoretical and impracticable.

(b) This Branch still holds that the Scheme formulated by this Branch was arrived at after a mature consideration, and if the Standing Committee thinks fit it may be forwarded with some additions and alterations.

(c) This Branch is of opinion, after a careful consideration and in discussion with some Tea garden officials, that nothing can be gained out of waiting on the Secretary, I. T. A., at Calcutta. The Tea garden concerns are merely more or less internal administrations of each individual Tea Company. The members of this Branch therefore think that it will not be a huge task on the part of the Provincial Secretary to approach about a dozen of Tea Company Superintendents by means of letters and appeals. The Secretary of the above Branch has already given the address of some of the Superintendents for this purpose.

Read Circular No. 11/1941 and this Branch is extremely sorry to inform the Secretary that it is unable to invite the Provincial Conference to Jorhat.

Tinsukia (Assam). Managing Committee meeting held on 27-7-41 with Dr. G. C. Sil in the chair.

Proceedings of the last Managing Committee meeting read and confirmed.

Read Provincial Secretary's Circular No. 10 of 1941: Resolved that as majority of the Branches are in favour of sending a deputation, this Branch retains its old views on the subject.

Read Provincial Secretary's Circular No. 11 of 1941: As Tinsukia is now a "protected area" under Defence of India Act so no conference can be invited during the Puja holidays to this place, although it desires to do so.

Monthly accounts for the months of May and June 1941 were placed on the table and passed for payment.

Marijani (Assam). Meeting held on 26-7-41 with Dr. Nawab Danish Mahmud in the chair. Five members present.

This meeting approves of the suggestions made by the Branch Secretary to the Provincial office, as regards the proposed deputation to wait on the Tea garden authorities for the improvement of the Tea Garden Service.

It is much regretted that this Branch is not in a position to invite the Provincial Conference.

Resolved that the Provincial Secretary be requested to withdraw his resignation of his office, at least till the next annual sitting of the Provincial Branch.

Contingent bill for Rs. 5/8/- was passed.

Mymensingh (Bengal). Meeting held on 13-7-41. Five members present. Dr. D. C. Roy was proposed to the chair.

Following resolutions were passed unanimously:

(1) Dr. D. C. Roy was proposed by Dr. A. Talukder and seconded by Dr. S. Patranavis to be a member of the Provincial Standing Committee from this Branch in addition to Dr. B. Chaudhuri, Branch Secretary.

(2) Re. Provincial Secretary's letter No. 148 dated 8-7-41 and resolution No. 9 of the last Provincial Conference, the Provincial Secretary is respectfully referred to resolution No. 2 of the meeting of this Branch held on 11-6-41.

(3) The contingent bill of Rs. 15-2-0 of this Branch from 1-4-41 to 30-6-41 has been scrutinised and passed and the Branch Secretary is requested to send it to proper authorities for payment.

24 Parga. (Bengal). Monthly meeting of the above Branch was held on 13-7-41 with Dr. S. Sarker in the chair. Seven doctors attended.

After the proceedings of the last meeting held on 4-4-41 were read and confirmed, the members considered the letter of the Provincial Secretary and the resolution No. 9 passed in the 8th Session of the Bengal Provincial Medical Conference. Dr. K. K. Dutt, Secretary, was requested to reply suitably to the same.

Drs. K. K. Dutt and P. K. Das were elected to the Provincial Standing Committee.

Dr. K. K. Dutt appealed to the members to enrol new members and thus strengthen the Association. It was resolved to pay the expense of this propaganda.

It was resolved that the contingent bill of Rs. 19-8-0 be submitted to the Mother Association for payment.

Resolved that a Saving Account be opened in the Suburban Bank in the name of Drs. K. K. Dutt and S. N. De.

Calcutta (Bengal). Minutes of the General Body Meeting held at the Campbell Hospital on 22nd July, 1941 at 4-30 p.m. Dr. K. P. Sen was in the chair and 45 doctors were present.

(1) Resolved that the minutes of the last meeting be confirmed.

(2) Resolved that the contingent bill of Rs. 72-15-3 be passed and the General Secretary be requested to pay back the advance of Rs. 14-15-3 made by Dr. Salil Dutt, Hony. Secretary of this Branch in this Bill.

(3) The following suggestions came from some of the members regarding the programme for increasing the strength of membership of this Branch:

(a) Dr. Bimal Ukil suggested that Socials be arranged for which each member will have to pay an extra fee of annas four or eight as necessary, and for those Socials other licentiates practising at Calcutta be invited.

(b) Dr. Naresh Chandra Banerji suggested that a Board be formed whose duty shall be to visit all the licentiates practising at Calcutta, as far as practicable, with the help of the local doctors.

(c) Dr. A. D. Mukharji suggested that an Unemployment Bureau be formed whose duty should be to make correspondence with the local firms, so that without recruiting directly they can take men from our Unemployment Bureau, and that in this way we can make our Association more popular. A sub-committee was formed with the following members: Drs. A. D. Mukharji, K. P. Sen, A. N. Roy, and S. K. Dutt.

(4) Resolved that the following two members will represent our Branch in the Provincial Standing Committee: (1) Drs. K. P. Sen, (2) S. Dutt.

(5) After an informal discussion on the recent order by the Superintendent, Campbell Hospital, it was decided that a deputation consisting of Drs. A. D. Mukharji, K. P. Sen, and S. Dutt will wait upon the Superintendent, Campbell Hospital within a week from today, to redress the grievances of the R.M.Os., O.Ds. and the Junior staff of the hospital.

Poona (Bombay). General Body Meeting held on 14-7-41.

Resolved unanimously: "This meeting of the above Branch is of opinion, that recruitment to I.M.D. in the present emergency be made from the members of the Licentiate class and senior rank be granted to them, according to their seniority in practice and that ten per cent. of them should be selected for the King's Commission." Proposed by Dr. R. H. Soman, seconded by Dr. A. N. Jejurikar, and passed unanimously.

Bombay. The joint meeting of the Bombay and the Bombay Suburban Branches was held on the 13th July '41 at Girgaon, Bombay. Dr. U. B. Narayan Rao was voted to the chair.

The meeting decided to amalgamate the two branches of the Association in the city municipal limits as the Bombay Branch, as per resolution of the last Bombay Conference.

The meeting then proceeded with the election of the office-bearers for the year. On the proposal of Dr. U. S. Rao and seconded by Dr. Prabhudesai, Drs. Baliga, Mastakar and Karandikar were elected to be the patrons of the Branch. Then Dr. Karandikar proposed and Dr. U. Shesha Rao seconded the following names for the various offices which were unanimously accepted: Drs. U. B. Narayan Rao—President, U. A. Rao and S. S. Kriahnan—Vice-Presidents, V. K. Prabhudesai—Hon. Secretary and Treasurer, L. K. Rao—Jt. Hon. Secretary, Members of the Managing Committee: Drs. M. Johnston, Joshi Mirajwala, M. E. Meherji, K. V. Joglekar, G. G. Wadhvani, S. N. Ganti, G. T. Kshirasagar, N. P. Narayan Iyer, U. S. Rao.

The meeting then considered the circulars from the Provincial Secretary and requested the Hon. Secretary to furnish the information desired about the *bona fide* members of the above Branch. About the grievances of the class the meeting resolved that the only grievance which is the root cause of all the other minor grievances should be the abolition of the licentiate education altogether.

The meeting then considered the letter from Dr. J. Mehta, Dean of the G. S. M. College, Bombay, and desired that the Secretary should inform the Dean Dr. Jivraj Mehta that it will be much better and convenient if the fees charged for the re-breacher course are only a nominal amount of, say, Rs. 5/- as the Obstetric Association had done before with great success.

Bareilly (U. P.) Meeting held on 4-7-41 with Dr. Babu Ram in the chair.

Dr. Garga, Hony. Secretary, regretted that no meeting could be called for during the last six months due to his serious illness.

Resolutions passed:—

(1) That the proceedings of the last meeting be read and confirmed.

(2) Read G. S.'s circulars Nos. 1, 6, 8, 9 and 11, and noted.

(3) Read G. S.'s circulars Nos. 12 and 13 and the members expressed the view that a resolution of protest be passed in the next meeting.

(4) Read Provincial Secretary's circulars Nos. 4, 5, and 6 of 1941. Resolved that if Kashi Co-operative Bank or any other reliable bank gives higher rate of interest so as to cover the cost of all the medals, the amount in question be transferred from the name of Dr. P. L. Jain to U. P. Provincial Branch, A. I. M. L. A.

(5) Read Provincial Secretary's circular No. 6 of 16-7-41 and resolved that Drs. Kunj Behari Lal Verma and Miss T. Zacharia be elected as our representatives to U. P. State Medical Faculty.

(6) That the contingent bill from 22-11-40 to 23-7-41 be passed.

Rajkot (Kathiawar). The second meeting of the licentiates of Kathiawar was held in the West Hospital premises under the presidency of Rao Sahib Dr. Lallubhai C. Shah at 4 p.m. on the 28th July 1941. A large number of doctors were present.

(1) Rao Sahib Dr. Ghate stated that he does not see any reason for the revival of the Branch; the President, however, remarked that it was very vital to re-start it as he thought it was much in the interest of the youngsters. He then requested those in favour of revival to raise their hands. All were in favour except Dr. Ghate, who, though refused the office of Secretary, yet consented to be a member at the request of his colleagues.

(2) The President showed to the members an old post office savings bank account book which was opened in the year 1912 with a deposit of Rs. 28/- and which had increased upto Rs. 53-11-7 on 12-8-1934. It was decided to use this Fund to meet the local expenses of the Branch.

(3) The President then requested all those present to enrol themselves as members if they have not done so already. The following doctors paid up the membership fee on the spot: Drs. R. M. Mankad, L.M.P., Rajkot; Sulochanbhai L. Jobanputra, L.C.P. & S., Rajkot; Prataprai L. Jobanputra,

L.C.P.S., Rajkot; Ishavarial T. Kamdar, L.C.P.S., Bedi Gate, Rajkot; S. B. Shukla, L.C.P.S., Agency Jail, Rajkot C. S.; Jatashankar R. Doshi, M.O., Dhrafa (Kathiawar); V. A. Chavda, M.O., Lodhika; P. V. Talvalkar, M.O., Chotila; J. V. Dixit, M.O., Paliad; Revashankar P. Kamdar, M.O., Gondal.

The Secretary was asked by the President to read the circulars from the General Secretary; there were four circulars Nos. 8, 9, 10 and 11. In No. 8 the General Secretary wanted to increase the number of members in all the provinces, and in No. 9 he gave us the good news that henceforth our brethren in the I.M.D. will be designated as Assistant Surgeons (Indian Cadre).

Bhilaspur (C. P.) (1) A Clinical Meeting held on 31-5-41. Five members present.

Minutes of the last meeting held on 20-4-41 read and confirmed.

It was resolved that Dr. Lankey be thanked for sending his paper on Peripheral Neuritis and he be requested to attend the next meeting to read it himself as his presence would make it more interesting.

The pathology of pyrexia with comatose condition, clinically observed after intravenous hypertonic saline infusion in some of the cholera cases, was discussed. The conclusion arrived at was that it might have been due to detachment of coronary thrombosis should other possible causes of such a condition were excluded.

Complications and sequelæ of diabetes and their possible treatment was discussed by Dr. P. H. Sant.

A case of extravasation of urine due to impassable stricture of urethra successfully treated by Cock's operation was discussed by M. N. Sen Gupta.

(2) Ordinary meeting held on 5-8-41. Seven members were present. Dr. P. H. Sant was in the chair.

Minutes of the last meeting held on 31-5-41 were confirmed.

Resolved that this Branch notes with regret the apathy shown by the Provincial Branch in taking up the subject of supplying the necessary information to the *Indian Medical Journal* regarding the service notes (both Public Health and Medical department) of our province in spite of our resolution No. 3 dated 20-4-41 and correspondence regarding same. This Branch again requests the Secretary of the Provincial Branch to move in the matter if he has not done so far.

This Branch is further of opinion that the General Secretary be requested to arrange with the Editor, *I. M. J.*, to publish the names and addresses of the members, branch by branch once in a quarter. Proposed by Dr. P. H. Sant, seconded by Dr. S. S. Sapre and passed unanimously.

Proposed by Dr. Kaore and seconded by Dr. S. L. Gopal that Dr. P. H. Sant, private medical practitioner, Bilaspur be re-elected as the member on the C. P. Medical Examination Board representing the licentiates of this province for the period of coming three years, commencing from January 1942.

This Branch thanked Dr. S. K. Vaidya for enlisting himself as a member of our Association.

Chapra (Saran) Bihar. (1) A monthly meeting held under the presidency of Dr. S. D. Banerjee on 26-7-41. Six doctors present.

Lively discussion on clinical cases took place.

Contingent and propaganda bills were placed before the house and passed unanimously.

(2) A monthly meeting held under the presidency of Dr. B. N. Roy on 26-8-41. Seven doctors were present.

This Committee brings to the notice of the Government that the present terms of recruitment for medical licentiates are so meagre and unsatisfactory that those who intend volunteering their services for the Emergency Branch of I. M. D., are unable to do so. The following resolution was passed unanimously:

(1) The Government is fully aware that the difference now left between the educational training of medical graduates and medical licentiates is more in form than in substance and

The combination of repeated attacks of abdominal pain and bleeding are mostly significant.

Pulsation:—"During the progress of hæmatocele an undue pulsation of the arteries in the vagina and cervix uteri are felt." (Albutt). "Pulsating vessels are often to be felt." "The presence of definitely pulsating vessels on the affected side only favours a diagnosis of pregnancy." (White House, 1935). Though not specific of tubal pregnancy, since the symptom as such is taken as proof of pregnancy as a whole, Munro Kerr alone among gynaecologists of repute does not appear to attach any special significance for this sign.

Elicitation of arterial pulsation in the fornix, however, needs a little care, as it is very easy to miss the presence of pulsation in a fornix. The tip of the index finger should rest gently in the region of the attachment of the vagina to the cervix. It is there that pulsation is best felt. Only slight pressure is to be applied, for, if it is too firm then the pulsation would be obliterated. For the elicitation of this sign in the right fornix, it is preferable to use the left index finger and *vice versa*.

Before this phase of the subject is disposed off the differential diagnosis between an unruptured inflamed pelvic appendix and an unruptured tubular gestation on the right side has to be stressed since either of the condition could be easily mistaken for the other.

Symptoms	Unruptured inflamed appendix	Unruptured tubular gestation
Menstruation	Usually regular	Irregular
Uterine bleeding	" " more	Some irregularity
Initial pain	Epigastric	Hypogastric
Fever	Slight	No fever
Vomiting or nausea	Present	Unusual
Tenderness	Tenderness—no movable lump	Tender round movable swelling to one side of uterus

Illustrative Case. Fourth para aged 24 years—married 6 years. Last delivery six months ago. Menstruation commenced two months later, but the subsequent period was a fortnight overdue. Fourteen days after this a severe attack of pain occurred in the left side followed by continuous bleeding for six weeks. There were three recurrent attacks of acute pain. Abdominal examination disclosed a mass rising out of the pelvis and extending into the left iliac fossa equivalent in size to a 16th week pregnancy. P.V. Pulsation was felt in the left fornix and an irregular shaped swelling filled the left half of the pelvis. At operation a large hæmatocele was found with many adhesions.

Symptoms of Second Phase

(Acute rupture with internal hæmorrhage)

Acute tubal rupture with severe internal hæmorrhage is followed by dramatic sequence of events. Such cases are rare, still one has to be quite familiar with the symptoms of this catastrophe, as the case may become an "acute abdomen" from the commencement of rupture or abortion.

Chief symptoms—Nine "S's"

- (1) Sudden abdominal pain.
- (2) " feeling of faintness.
- (3) Shock.
- (4) Subnormal temperature.

- (5) Speedy pulse—thin, thready, weak compressible.
- (6) Shallow respiration.
- (7) Severe restlessness.
- (8) " air hunger.
- (9) " thirst.

Of the symptoms 'Shock' alone is emphasized but which with the remaining symptoms above are common in 'acute abdomen' also.

Lachary Cope, the eminent British surgeon, recognises three stages of shock in such cases.

- (1) Primary or initial, due to stimulation of nerve terminals.
- (2) Reactionary when symptoms almost subside only to be followed by
- (3) Secondary or toxic stage, partly from nerve stimulation and chiefly from absorption of poisons which directly affect the higher nerve centres the terminal stage of which being termed "collapse".

Between primary and secondary shock there is often an interval in a latent period during which the observer may be easily deceived. For example, in many cases of perforated gastric ulcer the sudden stimulation of the nerve endings in the peritoneum or sub-peritoneal tissue causes severe shock. After a time the nerve equilibrium is restored, pulse, respiration, temperature and even the appearance of the patient improves so much that one might be deluded that the pathological process was stayed or that the patient is improving. Soon, however, symptoms of peritonitis dominate the scene and one realises that the calm period was but one of physiological reaction. This period is the cause of many mistakes in diagnosis.

Illustrative Case. A nullipara 29 years, married 12 years, had vaginal bleeding for eight days after missing one period. Abdominal pain preceded the bleeding by eight hours. Gastric rigidity was present and a small tender swelling was felt in the posterior fornix. The diagnosis was in doubt, since the patient declared that her periods were irregular and often accompanied by pain. The posterior fornix was punctured and much blood and a right tube gestation was present. An auto transfusion of 700 c.c. of blood was given.

I do not propose to enter into details of treatment or its technique as it is the province of practising surgeons, except perhaps to mention that the old conservative treatment is giving place to radical operation. Regarding auto-transfusion opinion is still divided. One school of thought, mostly British and in the absence of infection the beneficial results of transfusions are remarkable in cases which appear moribund. The other school of thought, mostly American, appears to be less enthusiastic. Auto-transfusion of the free blood obtained from the abdominal cavity in 21 of 34 tragic cases of extra uterine pregnancies gave no reduction in the usual mortality as two of the cases died as the result of auto-transfusion.

Symptoms of Third Phase

(Subsequent to abortion or rupture whether days or weeks with the formation of a hæmatocele either intra or extra peritoneal)

A large number of ruptured tubal pregnancies in their early stages of conception are missed as uterine abortions. The stage at which patients come under observation is the post-abortion or post-rupture hæmatocele formation. Symptoms during this period re-

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therefore the medical licentiates would be as much helpful to the Government in the discharge of their professional duties in the military department as the medical graduates.

(2) The medical licentiates in the Emergency Branch of I.M.D., are offered the rates of pay which are only equivalent to what they are already drawing on the civil side less their private practice, whereas the medical graduates on joining the Emergency Branch of I.M.S. are, however, granted King's Commission with Rs. 650/- p.m. as pay including overseas allowance and that the disparity between the two services is highly invidious and disappointing to medical licentiates as they honestly believe that with the bridging of gulf between their educational qualification, the gap in their pay and prospects instead of being narrowed has been so widened that the medical graduates draw nine times what they ordinarily expect in the civil side, while the medical licentiates are offered the same pay as on the civil side.

(3) This Branch therefore (i) urges on the Government to do bare justice to medical licentiates by granting the scale of pay of Rs. 250-15-450 to Military Assistant Surgeons (Indian Cadre) of less than 10 years' standing and, (ii) by considering the case of suitable medical licentiates of over 10 years' standing for Emergency I.M.S. Commission, particularly in view of the fact that His Majesty's Government in Great Britain have passed under Defence Regulation 32-B an order on the 1st of January 1941 by which medical qualifications granted amongst other States and territories in the Province of India, have been declared temporarily registrable in the United Kingdom, and under this order Great Britain has opened the door for registration to many foreign countries with which she was not on a reciprocity basis before and the qualifications granted in the several provinces in India appear to have been included within the scope of such registration.

NOTICE OF RESOLUTIONS AND AMENDMENTS TO RULES to be moved at the ensuing Ahmedabad Conference

Dr. S. N. Mukherjee, Secretary, Faridpur Branch:—

(1) Be it resolved that the Provincial Secretaries or other influential members be deputed by the General Secretary or the President of the Association to make occasional tours in the district and attend annual meetings of all Branch Associations.

Dr. Dal Singh, Prov. Secretary, Punjab:—

(2) Resolved that those Provincial Secretaries who are posted to, or living at, stations which are neither cities nor under any Municipal Committee or even small town committee, be granted Rs. 20 p.m. for a clerk as it is impossible to get a part-time clerk and much less a part-time typist on Rs. 10 p.m. at such small and out-of-the-way stations.

(3) Resolved that, in Rule No. 80, the words "duly countersigned by the President of the Provincial Branch through" be changed to "after sending a copy to the President of the Provincial Branch."

Dr. Rochiram A. Amesur, Secretary, Karachi Branch:—

(4) That the General Secretary of the All-India Medical Licentiates' Association be requested to obtain sanction, under Rules, for forming a Sind Provincial Branch as Sind is now a separate province.

Dr. K. K. Dutt, Secretary, 24 Parg. Branch:—

(5) Rule No. 65 (d). After "Committee" insert "one of whom must be the Secretary of the Branch."

Dr. G. K. Kulkarni, Prov. Secretary, C. P. and Berar:—

(6) Resolved that the system of taking permission of the Standing Committee for the payment of bills of more than six months' duration for petty amount like Rs. 5/- be done away with.

Dr. G. T. Kaore, S. A. Health Officer, Bilaspur, C.P.:—

(7) Resolved that the All-India Medical Licentiates' Association should be requested to stop publishing service notes of any Province and, instead, should publish the list of members of the Association with their change of addresses every year province by province.

Dr. S. A. Subedar, L.C.P.S., Kutiyana, W. Kathiawar:—

(8) Contributions to the *Indian Medical Journal* which are rejected should be duly returned to the authors concerned and due intimation of the rejection should be given to them.

(9) For the use of those licentiates who seek employment, a column in the *Indian Medical Journal* shall be reserved with the heading "Situations Wanted". A nominal fee for the insertion of notice may be charged from those licentiates who wish to take advantage of this column.

(10) In view of a large number of licentiates remaining unemployed, it is resolved that a *Service Securing Agency* be started under the supervision of the Mother Association. The aims of this *Agency* shall be to render all possible assistance and to supply all possible information to licentiates in securing employment in return of payment of a nominal fee as membership. A suitable Committee shall be appointed to frame rules and regulations for the conduct of this *Service Securing Agency*, at an early date.

(11) The President of the A. I. M. L. A. shall be supplied with a robe and wig befitting the rank and position of the highest official of the Association.

In order to keep the licentiates up-to-date in medical knowledge, it is proposed to start an elaborately furnished library at some suitable centre to be hereafter decided. A committee shall be formed to frame suitable rules and regulations for the conduct and upkeep of this library.

(12) With a view to assist deserving licentiates to prosecute their higher studies in India or abroad, two scholarships, each worth Rupees One thousand per year, shall be set aside. Applications from candidates wishing to derive benefit from this scholarship shall be invited, and decision shall be made by the Committee to be hereafter appointed who shall frame rules and regulations for the distribution of this scholarship.

(13) It is resolved that once a year, preferably at the end of the financial year, a complete list of all the members of the A. I. M. L. A. shall be published in the *Indian Medical Journal* for the information of the members.

(14) It is resolved that a Directory shall be published in which the names and addresses and brief information about the members of the A. I. M. L. A. shall be published in a book form. The book shall be called "*Who is who in A. I. M. L. A.*" A nominal fee shall be charged from those members who intend to get their names published.

(15) Rule No. 68 be changed as follows: Each Branch shall be entitled to send delegates to the annual Conference of the Association as fixed hereunder:—

From 5 to 25 members .. 1 delegate.
etc.

(16) For the conduct of the deliberations of the Annual Conference of the A. I. M. L. A., a separate President shall be elected. The President shall be either an outstanding personality in the medical profession or a Government Servant from the place where this Conference is held.

Fortunately, this complication is now-a-days rare owing to increasing management of labour by aseptic methods, and pre- and post-natal care.

If the pregnant woman is suffering from varicose veins of leg; or if she is known to be liable to thrombosis; or if the patient is suffering from 'white leg' most scrupulous precautions should be taken to avoid detachment of any thrombus by

- (1) enjoining absolute rest in recumbent position.
- (2) avoidance of the massage of the leg, which Indian women frequently have recourse to for relief of pain in the legs,
- (3) limitation of calcium salts in blood by substituting butter milk (with lime juice) in the place of usual milk diet.

Ectopic Gestation

● Dr. T. A. Gopala Krishna Rao, L.M.P.

(Medical Officer, Thondamuthur)

Definition:—Development of fertilized ovum in any place other than the uterine cavity. The commonest place for ectopic gestation is the ampullary portion of the fallopian tubes.

Analysis of Frequency of Ectopic Gestation

Number of Gynec Cases	Number of Cases Ectopic Gestation	Percentage	Variety	Authority
1000	21	2.1%	Tubal	Brook Bland
3600	120	3.3%	"	Werth
3458	95	2.7%	"	Blacker

Analysis of frequency of ectopic gestation in relation to number of intra-uterine pregnancies

Out of 56,441 births recorded by the Bureau of Vital Statistics in Philadelphia in 1918, 118 were ectopic, which works to one out of 304 pregnancies.

Analysis of frequency with which either of the tubes are affected

Tubes affected 742. Left 373, right 365; 4, both tubes. A review of 236 cases of ectopic gestation recorded (Cornell and Lash 1931) is interesting reading.

- (1) Age incidence 15 to 64 years.
- (2) Deformities are the rule in the baby. Only 8 out of 236 cases being reported to be normal.
- (3) Foetal mortality 35%.
- (4) Maternal mortality 14 in 236 cases. Shock, hæmorrhage and peritonitis accounting for the major portion of deaths.
- (5) According to another compiler mortality of untreated cases is 80% and among those receiving modern surgical treatment being 2 to 5%.

Etiology and Pathology

"In order that a fecundated ovum may reach the uterine cavity it must follow the course of the tubal canal. Etiologically the sequence of inflammation of the fallopian tubes, from whatever causes, act in a large variety of ways. Most frequently it alters the mucous

membrane of the tube, destroys the ciliated epithelium, limits the motility of its corrugations or villus projections, and changes the character and quality of its secretion. Inflammatory infiltration of the mucous wall of the tube causes sclerosis with stiffening, distortion, and a loss of the natural motility of tubal peristalsis. This undoubtedly occupies a very prominent position in causation" (Brook Bland). An ectopic gestation represents essentially a parasitic condition. The tendency is not to progress and live but to destroy not only the foetus but the life of the host also. "The ovum which makes its bed in the tube digs its grave as well." (Werth). Self-destruction of the pregnancy takes place in the great majority of cases occurring in the very early days or weeks. Even if secondary implantation occurs and the pregnancy proceeds to term, death, as a rule, is the outcome ultimately. If, however, the child survives, Nature has exerted her utmost to retard full anatomical development and according to Winckel 50% of children or more are born seriously deformed. Many die few hours or days after birth. A healthy living child is exceptional and more of a curiosity than a reality. Injury and death are not inflicted on the foetus alone. The host is also exposed to sudden death from hæmorrhage or to ultimate death from sepsis or peritonitis.

Symptoms

Symptoms depend upon the three principal phases of the malady.

- (1) Before rupture.
- (2) During rupture.
- (3) Subsequent to rupture (whether days or weeks with the formation of hæmatocele, either intra or extra peritoneal).

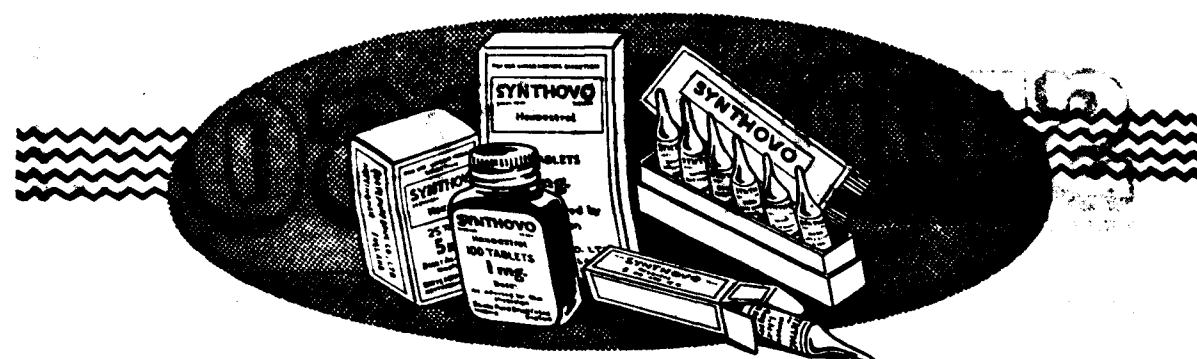
Symptoms of First Phase

(Before Rupture)

3 P's.—Pain, periods and pulsation.

Pain:—Confined to lower abdomen, present perhaps for a day only occurring at intervals and of a colicky nature. Eventually it may settle down to become a continuous dull or dragging ache.

Periods:—No definite interruption of periods, as the irregular bleeding makes its appearance before, at, or continuous with menstruation.



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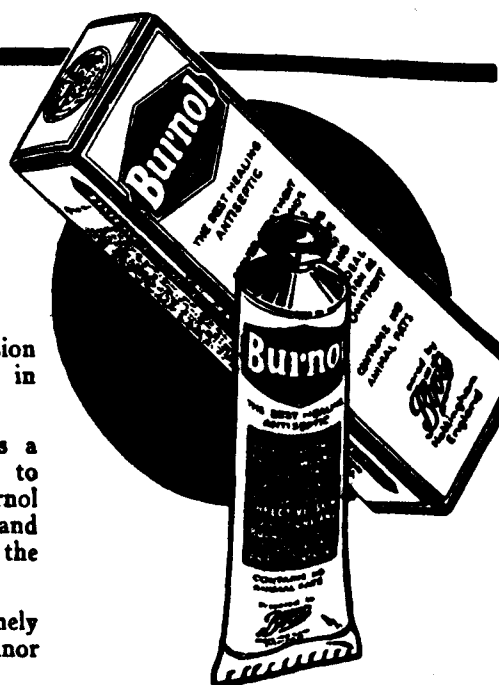
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seem very closely those of a low grade pelvic infection and the clinical history is very suggestive of a possible previous pregnancy. Patient may show constitutional evidence of blood loss and may complain of weakness and fatigue. The pulse rate does not return to normal and remains rapid, as a result of decreased volume; later by the absorption of irritating materials from the pelvis. The temperature is usually elevated due to the absorption of fibrin ferment and peritoneal irritation. Leucocytic count varies from 10 to 20 thousand. Stomach is upset, nausea and vomiting being present. If infection is present evidence of sepsis sets in.

Local symptoms:—There is persistence of a bloody discharge long after abortion or rupture, owing to the pelvic engorgement induced by the presence of the collection and associated inflammatory change. This bleeding may be constant, or intermittent, and it may alternate with mucopurulent discharge if the pelvic mass is infected. The most prominent local symptom, however, is pain which is more or less constant. It is throbbing or aching in character, due to mechanical pressure of the mass and the accompanying low grade peritonitis.

Uterine Inertia

● Dr. B. G. Modak, L.C.P.S. (Bom.), L.M. (Rotunda)
(Saraswati Maternity Home, Poona)

In India, obstetrics is still in its infancy. There are very few maternity hospitals, and they too are far from satisfactory in their equipment. The conditions in city are slightly better. There is a growing tendency in the urban population to avail themselves of these hospitals. But in small towns and villages the confinements are usually conducted at home by nurses and midwives—trained or untrained—oftentimes under adverse circumstances. The writer has actually seen a woman deliver in a third class compartment of a running train. There is no wonder if many emergencies arise. The doctor is called in. And why is he called? He is sent for to expedite labour. The obstetrician has to work under circumstances which are very peculiar. There is no proper antenatal care, and no satisfactory arrangements for confinement with reasonable safety.

What are the causes for delay in labour? The causes may be described in three P's, namely, faults in Powers, Passage and Passenger. Under the first fall lax abdominal wall, pendulous belly, slack uterus, physometra, inertia and early rupture of membranes; under second, oedema, tumours and hæmatoma of vulva, imperforate hymen, atresia and tumours of vagina, rigid os, operations on cervix, congenital defects, fibroids of cervix, cancer of cervix, contracted pelvis and tumours of pelvis; and under third, twins, malpresentation, hydramnios, large foetus, over-carrying, monsters and hydrocephalus.

It is not possible in this brief article to go through in detail the ætiology and the treatment of the above-mentioned causes of delayed labour. I will only deal with the one and most common cause of delay in labour, namely, UTERINE INERTIA.

Uterine inertia may be primary or secondary. Previously primary inertia meant the one that started early in labour, and the secondary the one that started late. But this classification is abandoned now, and is based on more practical grounds. Thus we now mean by primary inertia a condition of which the cause is to be traced to the uterus itself, and by secondary inertia a condition due to something extraneous to the uterus such as contracted pelvis, malpresentation, tumour, etc.

Before enumerating the causes of uterine inertia—weak uterine contractions—let us consider the various factors that bring about uterine contractions at the time of labour. Braxton Hicks described spontaneous, painless contractions of uterus and regarded this as one of the reliable signs of pregnancy. As a matter of fact the contractions of the uterine musculature are there from the beginning of conception. They are felt by the mother and the obstetrician from after eighteenth week. The contractions strengthen at the onset of labour. The contents of the uterus become too big and hence it tries to expel them. Also the pressure of the presenting part on the cervical ganglion reflexly causes the uterus to contract.

Primary Uterine Inertia: By this is meant, weakness of the muscle due to something wrong in the uterine muscle itself and/or to some weak nerve impulse, weak muscle or hormonal causes. The first cannot easily be known. The second is found in the slack uterus of multipara and the uterus diseased from syphilis and heart or kidney diseases. It is said that there is over-activity of the anterior pituitary gland during normal pregnancy, so something that retards this over-activity may be a cause. But this cannot be the only cause as it is oftentimes seen that injections of the pituitary gland substance fail to strengthen the uterine contractions in primary uterine inertia. There are also, it is said, some other endocrine secretions responsible for it. But this subject is still not properly investigated.

Symptoms: Labour usually starts in the ordinary way. But after sometime, the pains grow weak and sluggish until at last they may be permanently stopped. This condition may be seen in primigravida or multipara, and may set in at any time. If the doctor is called at this stage, he should first make out whether the condition is primary or secondary. He also usually finds that the retraction ring is very low near symphysis pubis; the temperature, pulse and foetal-heart sounds are normal. At this stage no active interference should be made as it will oftentimes end in some trouble.

Treatment: After having excluded the secondary causes, the main things to be aimed at are: (1) to get the patient to sleep, (2) to watch the progress of the labour and (3) to interfere at the right time. It is easy to get

the patient to sleep by giving a hypodermic injection of morphia gr. 1/4. After the effect of the morphia is gone the patient usually finds that the pains have started with increased force. If the case is likely to last longer than a day or two, morphia should be avoided. Under such circumstances the sedatives (Pot. bromide grs. xv., Chloral hydrate grs. xv and Tr. opii ms. xv) may be tried without any ill-results. Such other drugs as omnopon, chloral hydrate dr. ii. by rectum, veronal or veramon may be useful. The most important thing is that the patient must get rest and sleep. Bowels and bladder should be kept open and occasional vaginal douches of Dettol or some such antiseptic may be given. These stimulate the cervical ganglion and thus help to bring about uterine contractions. Oxytocic drugs should be avoided. There is a growing tendency to use pituitary extract, practically in every case of delayed labour. This is a dangerous drug in as much as any inadvertent overdose of it may cause rupture of the uterus. *Pituitary extract may be given in an intractable case of uterine inertia where disproportion has been carefully excluded, in four doses of two and half units at half-hourly intervals, but this should never be done except by very experienced obstetrician.*

In the second stage, pituitary extract may be given in two doses of two and half units at half-hourly interval where there is delay and where the forceps is contraindicated by, for example, presence of gonorrhoeal discharge.

With the exceptions mentioned above, use of pituitary during second stage should be avoided. The reasons for it are: (1) pituitrin tends to diminish the placental site and thus reduces the oxygen supply to the foetus (2) the foetal head is likely to undergo severe moulding causing more pressure on foetal brain and vessels. This may cause the tentorium cerebelli to be torn. Holland mentions that in out of 167 cases the tentorium cerebelli was torn in 81 (or 48 per cent.) in association with the tear of falx cerebri in five cases, and subdural hæmorrhage in all except six cases. When the moulding occurs these septa are always affected to a greater or lesser extent. "These septa perform the same function in relation to the cranial bones as do stays to a mast of a ship, all movement or bending of the bones being resisted by their tension. If the bones are bent or moved too far in any direction, tearing of the septa results. If the stays of a mast snap, greater play is allowed to the mast, with the result that it gets broken; similarly tears of the septa allow greater movements to, and bending of the cranial bones which is liable to be accompanied by fatal injury to the cranial contents."

(*Tweedy's Practical Obstetrics*). Excessive moulding causes the blood vessels to be stretched, often torn, giving rise to cerebral hæmorrhage. Hence excessive moulding should be thought as a danger. A further reason to withhold pituitary injection is that the soft parts are likely to be damaged by precipitate labour following the administration of this drug. It may even cause membranes to be retained with its attendant complications. It has been suggested that it lessens hæmorrhage and shortens the third stage. "We have tried it and have met several cases of retained placenta, which we feel we have to attribute to its use." (*Tweedy's Practical Obstetrics*). So, the pituitary extract should only be used after the end of the third stage. It may, however, be used in the first and second stages but only by a skilled obstetrician, and that too with great caution. So long as the membranes are not ruptured and there is no danger either to mother or child, only palliative measures should be carried out.

Is it ever justifiable to effect delivery in cases of primary inertia? Yes. If the cervix is fully dilated and the presenting part is fixed, the delivery should be effected by forceps in head presentation and by traction in case of breech presentation.

Secondary Uterine Inertia: This may be early or late. In the former the pains never start properly; in the latter, they tend to weaken after about twenty-four hours. When it occurs early, no signs of dystocia arise, but when late all the signs of obstructed labour occur and the mother and the child are in danger. The mother may show all signs of exhaustion, œdema of the genital organs, dryness of the parturient canal and rise of temperature and pulse. The foetal heart-rate rises, there are tumultuous movements of the foetus and meconium may come out unmixed with liquor amnii. The cause can be found in the faults of one of the P's enumerated above. The full treatment cannot be described in such a small article as this. It should be aimed at the removal of the cause. In almost all the cases of secondary uterine inertia, interference will be found essential, as the life of mother or child will be in danger.

In brief, palliative line of treatment, with the exception of a few cases, is advisable in the primary uterine inertia, and radical treatment in secondary uterine inertia.

In India, where a general practitioner has to deal with obstetrical emergencies, he should try to know exactly as to what should be done and what should not be done.

IMPORTANT NOTE

This Special Number is but a Companion Volume to our previous publication on Antenatal Diseases, July, 1937, which the readers are requested to refer to gain a more comprehensive view of the subject of Obstetrics in some of its important phases.

Abstracts from recent Obstetric Literature

DELAYED LABOUR by Arnold Walker, M.A., M.B., F.R.C.S., F.C.O.G. *The Practitioner*, Feb. 1939, Pp. 153-162.

Delay during the First Stage

Delay during the first stage with unruptured membranes is only of importance in so far as it interferes with the rest and with the fortitude of the patient and her relatives. The treatment should be limited to the maintenance of the patient's comfort by attention to her bladder and her bowels, to her food and her sleep and, last and most important, to her confidence. Under normal conditions as shown by intact membranes, uterine stimulants are neither helpful nor necessary. The uterus will start work in earnest sooner or later and all that is required is to see that the patient and those around her are in a proper condition when that time arrives.

When the membranes rupture early in the first stage of labour, a totally different complexion is put on delay in dilatation of the os. It is customary to regard delay in such a case as being due to the early rupture which deprives the uterus of its natural hydrostatic dilator. This is a wrong conception of what is happening. In a normal case, the forewaters, protected by the head, unquestionably form an admirable dilator against the upper uterine segment pulls the relaxed lower segment, but, if the bag is replaced by something which fits the lower segment equally well, there is no reason to expect any delay in labour. This is well illustrated in cases in which labour is induced for toxæmia. In such cases, it is assumed that the child is not large, the pelvis is of normal size, and the presentation a well-flexed vertex. The great majority of obstetricians have abandoned the introduction of foreign bodies into the uterus as a means of inducing labour and do no more than rupture the membranes below the head. Although there may be delay in the onset of labour, once this starts, far from there being delay, the first stage on the average seems to be more rapid than in normal cases. In other words, when there is no bar to its descent, the spheroidal vertex alone is a most efficient dilator.

Spontaneous early rupture of the foetal membranes must always be regarded as a sign of abnormality and not as a complication in itself. In the majority of cases, no cause will be found and the rest of labour will be uneventful. In the minority, however, some condition will be found which prevents the presenting part from protecting the forewaters from the full force of the uterine contractions; the presenting part is either irregular in shape or too large to pass through the brim. How often does the attendant say on hearing that the membranes have ruptured early, "We shall have a long labour," and take no further action? Early rupture is not an indication for prophecy; it is an indication for examination and diagnosis. It is an early warning of possible trouble to come and a danger signal which no one can miss. The point to determine is the existence of and reason for a bad fit.

Causes of a "Bad Fit"

Pelvic deformity, foetal deformity, pelvic tumours, placenta prævia, breech presentation and other mal-presentations have all to be excluded, together with a pendulous belly and hydramnios. Most of these will have been diagnosed before labour and appropriate measures taken to deal with them. The condition most likely to be present is the occipito-posterior presentation of the vertex. It is so common that it is hardly regarded as an abnormality and yet must be the primary cause of more obstetric calamities than any other single condition. The time to diagnose it is before labour. The diagnosis should be confirmed at the onset of labour; it should again be confirmed when the membranes rupture by feeling the sutures of the foetal skull.

An occipito-posterior presentation does not necessarily imply that the membranes will rupture early or that labour will be delayed. In most cases labour is normal. In the minority, the attitude of flexion of the foetus is incomplete, the chin is not pressed down on to the sternum and the centre of the presenting part is a point on the sagittal suture nearer the anterior than the posterior fontanelle. Instead of being a circle,

the presenting part is oval, wider behind than in front. On account of its shape, the presenting part fits the lower segment of the uterus badly even if it can sink into the pelvis. Probably the head will be held up above the brim because the bi-parietal diameter of 3½ inches is applied to the sacrocyloid diameter of the pelvis of 3¼ inches. Not only does this ill-shaped plug fail to protect the unsupported forewaters from the full force of the uterine contractions, but it also fails to apply itself to the lower segment until moulding of the head allows the bi-parietal diameter to pass its obstruction. In the meantime, the anterior part of the head is free to descend, extension increases and, when the head is eventually firmly pressed by the contractions of the upper segment on to the lower, pressure is uneven; it is excessive at the front and back of the head and absent at the sides. This excessive pressure by the front and back of the head may nip the cervix between head and pelvis so that in one plane the os cannot dilate because there is nothing against which it can be pulled, and in the other plane it cannot dilate because it is jammed between head and pelvis. The mechanics of slow dilatation of the cervix are similar whatever be the cause of a badly fitting presenting part.

As in all things medical, the fundamental preliminary to treatment is the recognition of the cause, and the attendant, when in doubt, should not hesitate to examine under an anæsthetic. Space does not allow a consideration of the many abnormalities which may be present, but it should be remembered that the diagnosis of a posterior position from the sutures of the foetal skull is often difficult. Direct pressure on the head produces a caput which masks the sutures and also causes these sutures to be closed either by overlapping or by apposition. The latter occurs in the frontal suture, and it may be impossible to feel this suture because the two frontal bones are forced together edge to edge. The remaining sutures are closed by one bone over-riding the other and can be identified through the œdematous scalp. Three sutures may then be palpable running into each fontanelle and the only safe way of establishing the position of the occiput is to insert the hand and feel an ear or the face of the child.

If deflexion of the head is found to be the cause of the bad fit and no other condition is involved, no further operative measures should be taken. In theory, the treatment should be rotation of the child to an anterior position and flexion of the head. In practice, however, this is difficult, dangerous and rarely effective. It entails rotation of the child by its shoulder as rotation of the head only fails to move the body. This means that the head must be pushed up, and the whole hand passed above it with consequent serious risk of damage to the uterus. Even when rotation is successfully performed the unfavourable position tends to recur because the uterus, having adapted its shape to that of its contents, tends to force the child round again to the position to which it has become accustomed. Manual rotation is only of value as a preliminary to forceps delivery, that is, when the os is fully dilated.

Correct Use of Sedatives

The management of such a first stage as has been outlined above is directed to securing good uterine contractions by maintaining the strength of the patient and to the prevention of any condition which may impede the drawing up of the cervix above the head. Good contractions are essential as the work done by the uterus during the first stage is considerably greater than in a normal case. When, therefore, the uterus is working well and the patient is in good condition, drugs which may stop or reduce the strength of these contractions should not be given. In such a case, the relief of pain must take second place to non-interference with uterine action, and any sedative, hypnotic or analgesic, must be withheld in case the contraction be affected. But if the patient becomes tired, however, sleep is more important than contractions, and a full dose of morphine or one of its less toxic derivatives should be given.

The sign of a worsening in the mechanical state of the lower segment is the appearance of œdema in the cervix. This is usually found in the anterior lip and it shows the venous return in this part of the cervix to be obstructed. This œdema can be relieved only by reducing the pressure on the head. For this purpose, morphine is given, the patient is allowed to sleep, and also reduces the tone of the lower segment between the pains. Relaxation is an essential part of the process of dilatation and it is because the tone is increased that uterine stimulants are so harmful in such circumstances. It is well known that only rare

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occasions a small dose of pituitary extract will cause rupture of the uterus during the first stage, but pituitary extract will always cause increased tone and so increased delay.

Delay during the Second Stage

Once the os is fully dilated, the role of the child in the mechanism of labour changes. Up to this time it has acted as a solid body which aids in the dilatation of the os. The position of the head in relation to the brim has been controlled by the position of the uterus itself, and if the head has been lying deep in the pelvis, it has only been in this position because the pull of the upper segment on the ligaments which anchor the uterus to the pelvis has been sufficiently great to pull the lower part of the uterus down. On full dilatation, the uterus and vagina form one canal which is obstructed only by tissues outside it. These tissues are the bony pelvis and the pelvic floor.

Under normal conditions, the bony pelvis causes no obstruction and the only resistance the uterine forces have to overcome is that caused by the levatores ani muscles and the tissues which form the perineal body. To overcome resistance in the second stage, the patient is encouraged to bear down. This action is twofold. The diaphragm and abdominal muscles press the whole uterus and its contents downward and the pelvic floor muscles at the same time relax. Before full dilatation, bearing down delays labour, as its effect is to jam the cervix between head and pelvis, quite apart from the fact that the voluntary muscular effort exhausts the patient.

Once the head reaches the pelvic floor and exerts pressure upon it, the scalp is visible and stretching of the anus can be seen. Although the head should be given a chance to be pushed out by the uterine forces alone, it is bad midwifery to delay too long before applying the forceps. The immediate dangers of delay on the perineum are firstly, danger to the child, when prolonged pressure may result in intracranial injury, and secondly, the prolonged effort may exhaust the uterus and cause trouble in the third stage. Delivery may be expedited either by reducing the resistance of the perineum by a deliberate incision downwards and outwards or by applying forceps. The remote danger is that prolonged pressure devitalizes the tissues and causes concealed trauma. These become apparent later in subinvolution and genital prolapse. Owing to the damage so often caused when forceps are applied too soon and the consequent tirades which have appeared from time to time in the medical press this valuable conservative instrument is, at the present day, being neglected and its place is being taken by pituitary extract and by the application of pressure to the uterus itself. Both these measures are likely to cause much more damage than the application of the forceps, and a low forceps rate indicates a high prolapse rate in the future. Forceps applied when the head is visible and is causing pressure on the perineum is an easy and safe operation, and should not be withheld for long. Forceps applied under other conditions is a serious obstetric operation.

If the head remains above the brim, full dilatation of the os will probably never be reached. In such circumstances, the os will have no dilator and signs of obstructed labour will be observed while the cervix is still present. In such cases, Caesarean section through the lower segment will have been the obvious treatment at an earlier stage. To attempt delivery by forceps with the head floating is a most dangerous undertaking, and it may almost be said that it is never justifiable to apply forceps to a head above the brim. The difficult cases are those in which the head, after full dilatation, fails to reach the pelvic floor. There can be only two reasons for this, pains too feeble to move the child, and resistance too great between the head and the bony pelvis. The two are often combined, but it must always be remembered that a head is a flexible body with great capacity for moulding, and it is rare for a head which is past the brim to be held up in the mid pelvis if contractions are strong. In other words, the dynamic factors in labour are of far greater importance than the static.

Use of Forceps

Whenever forceps are applied to a head which has not reached the pelvic floor, it is important to realize the serious nature of the operation and to be quite clear as to the reason why delivery has to be aided by traction from below. A consideration of the large number of "failed forceps" cases

admitted to maternity hospitals and their high mortality is a sufficient excuse for this platitude. Whatever be the indication, the head of the child will be lying in the oblique or transverse diameter of the pelvis, and the rotation of the head into the antero-posterior diameter is a necessary preliminary to the application. The obstetric forceps in common use are designed for pelvic application, and if they are to grasp the head safely and securely, the occiput must be facing forwards. A cephalic application is sometimes necessary, but it is not easy, and rotation with the forceps may cause serious trauma.

If the indication for delivery by the forceps of a head in the mid pelvis is weakness of the contractions only, the operator realizes that if he delays any longer the contractions may disappear altogether. Should this happen, the use of the forceps is dangerous, because the inertia is likely to continue after delivery with consequent post-partum haemorrhage. Often poor pains and a tight fit are both present. This is far more commonly due to the occipito-posterior position with a deflexed head than too large a head trying to get through too small a pelvis. Again diagnosis is essential, and the hand must be inserted into the vagina and the exact position of the head made out before the forceps are touched. Manual rotation of the head must be combined with abdominal rotation of the anterior shoulder. This should be done by an assistant, and the shoulder firmly held down in its new position while the blades are applied. If this is not done, the head will turn back as soon as the hand is moved. If the head has not been subjected to much pressure, flexion, which naturally accompanies rotation, will be maintained, and delivery will be surprisingly easy.

If contractions have been strong and, in spite of this, the head is held up, it is likely to be in one of two positions and lower in the pelvis. The first position is in the transverse diameter of the pelvis. Low transverse arrest is due to deflexion of the head, both ends of which are pressing on the pelvic floor and are trying to rotate forward. If pressure has been considerable, moulding has taken place, and full flexion of the head may not be possible because the sub-occipito-bregmatic diameter has ceased to be the smallest diameter. Rotation should not be difficult, but the head will not be fully flexed while the perineum is being distended.

This change in the shape of the head is of even more importance when the occiput is lying in the hollow of the sacrum, the persistent occipito-posterior position. Here again, rotation to the anterior position should be attempted after pushing up the head, but if this cannot be done, forceps should be applied to the head as it lies, face to the pubes, and delivery effected in this position. The diameter which passes through the antero-posterior diameter of the outlet is, on the living baby's skull after birth, three quarters of an inch larger than in an anterior delivery, but it must be remembered that a great deal of moulding has taken place, and that the measurements of the skull as it lies in the pelvis as a persistent occipito-posterior are different from what they will be a day or two after delivery. The head of a baby delivered as a persistent posterior has lost most of the occipital curve, it is of a square, Teutonic shape, and the occipito-frontal diameter differs little from the sub-occipito-frontal. The advantage of rotation is, therefore, much reduced, and it is much better to deliver as the head lies than to cause extensive vaginal laceration by heroic efforts to rotate.

Foetal Distress

A considerable proportion of persistent occipito-posterior presentations are delivered spontaneously even when a tight fit is undoubtedly present. Success depends upon the uterine forces, which, if strong and regular, will overcome marked bony resistance. Unfortunately, little can be done to obtain strong regular contractions. The uterus can be nursed and humoured, but it cannot be driven, and it must never be forgotten that in a long, tedious labour the interests of the child are not necessarily the same as those of the mother. In particular circumstances, it may be justifiable to subject the mother to increased risk for the sake of her child. Serious operations such as Caesarean section and incision of the cervix have their place on occasions, but usually, the child takes second place. A labour which drags on for several days imposes a great strain on the child, and the fetal heart rate must be watched at regular intervals. If the rate goes up, and the second stage is in progress, forceps delivery is indicated, but, if the os is not fully dilated, the application of forceps and attempts at delivery will either be unsuccessful

or a dead child will be delivered and the mother badly damaged. For this to be the end of a difficult labour is often a tragedy. The mother has lost her baby and may never be in a fit state to have another. A baby which is showing signs of foetal distress is not in a fit state to stand the strain of a difficult forceps delivery and its chances of survival are probably greater if attention is directed to securing full dilatation of the cervix.

Should the foetal heart cease to be heard on repeated examination, the death of the child must be assumed. Obvious though this statement be, the corollary that the corpse within the body of the mother must now be regarded as a large foreign body to be removed without injury to her seldom seems to be accepted. To drag out the intact corpse and seriously damage the mother in the process is little short of criminal, particularly when it is so easy and safe to reduce the size of the child by perforation of the head. Almost any instrument with a tapered end will serve the purpose of a perforator, and the head can be extracted either by the obstetric forceps or by attaching artery forceps to the edges of the torn scalp. Once the child is dead, the attendant should cut his losses and see that he has, on the credit side, a mother fit to try again.

Lastly, after the head is born, difficulty may be experienced with the shoulders. As the chest of the child is tightly gripped in the birth canal, respiration is impossible even though the air passages be clear. Undue delay may result in its death at the moment when labour is nearly over. If the anterior shoulder cannot be brought down under the symphysis pubis, it should be allowed to remain above and the posterior shoulder pulled down. This shoulder should not be pulled too far but, instead, it should be pulled round so that the body of the child is rotated through 180 degrees. It will be found that as the shoulder comes round, it slips under the symphysis and is born.

SOME MINOR CAUSES OF PYREXIA DURING THE PUERPERIUM by H. A. Davidson, M.D., F.C.O.G., Master of the Rotunda Hospital, Dublin. The Practitioner, Feb. 1939, Pp. 175-176.

A rise in temperature and pulse may be brought about by worry or the receipt of bad news. A cross baby, an unsuitable nurse, domestic troubles or too many visitors may all upset the patient's chart and for these reasons it is wise to urge the advantages of a nursing home and to insist upon no visitors during the first week. Constipation, septic teeth, septic tonsils, septic sores or boils, or naso-pharyngeal infections may cause pyrexia and such conditions should be diagnosed and adequately treated. Infections of the lungs, bronchitis, tuberculosis, and influenza are not uncommon causes of pyrexia in the puerperium. About 50 per cent. of all cases of puerperal pyrexia are due to infection of the birth canal. It is not proposed to discuss these in this article but there are two other extra-genital causes which merit description, namely, mastitis and "white leg" (phlegmasia alba dolens).

Mastitis:—This most commonly follows upon a cracked nipple, starts about the seventh to tenth day and is accompanied by a rise in temperature to 102°F. and severe malaise. The patient complains of great pain in the infected breast and on examination the affected area, which is usually wedge-shaped, is very tender and has a red flush over it. The treatment in the early stage is to keep the baby on the breast and apply hot fomentations of boracic or magnesium sulphate solution changed at frequent intervals. With this treatment the inflammation will in most cases subside, but sometimes pus is formed. The presence of pus is diagnosed at an early stage by noting the occurrence of oedema and pitting on pressure of the skin over the affected area. This should lead at once to the removal of the infant from the breast and the evacuation of the abscess. Under gas, oxygen and ether anaesthesia a radical incision is made about two to two and a half inches in length and deepened until pus flows out. A gloved finger is inserted and the abscess cavity thoroughly broken down until healthy tissue is felt. The cavity is then washed out with 2 per cent. dettol solution and packed with iodoform gauze wrung out of 2 per cent. carbolic solution. A dressing and tight binder are applied over the breast. The next day the gauze is removed and the cavity repacked under an anaesthetic. With this treatment clean granulating surfaces result and the cavity gradually closes in and heals, being kept open by a wick of gauze for about ten days.

"White leg":—This is due to the thrombophlebitis in the external iliac or femoral vein, and causes obstruction to the venous return. It is due to infection and usually spreads from a similar condition in the pelvic veins caused by uterine sepsis. There is a rarer lymphatic form of the disease. The condition usually arises in the second week of the puerperium and is characterized by a fairly acute onset with pain in the affected limb (usually the left) and a rise of temperature to 102° or 103°F. A mild pyrexia may have been present during the first week. It is sometimes possible to feel the thrombosed vein as a tender cord in Scarpa's triangle. Swelling of the limb develops rapidly, extending from the foot to the thigh. It is soft and pits on pressure and gradually assumes a white colour. The pain and fever may last from four days to a fortnight, after which they subside. Sometimes both limbs are affected. Treatment consists of immobilization of the limb by means of pillows and sandbags, and the relief of pain by the application of lint soaked in glycerine and ichthyol or glycerine of belladonna. This should be covered with cotton-wool and a loose bandage applied round the whole limb. If necessary sleep should be obtained by sedatives. The chief risk is that of pulmonary embolism. This should be guarded against by the prevention, as far as possible, of movement on the part of the patient, the nurse being warned to lift her gently on to the bed-pan when its use is necessary. Voluntary movement and getting out of bed are not allowed until at least fourteen days after the temperature has become normal. Massage of the limb is useful at a later stage. The patient will feel pain and stiffness in the limb for many months, and it is liable to swell after standing; she must be warned to expect this.

SOME ASPECTS OF ALBUMINURIA OF PREGNANCY by P. V. Venkataswami, M.D. Proceedings of the Second All-India Obstetric and Gynecological Congress, April 1938, Pp. 102-105.

It must at the outset be appreciated that albuminuria of pregnancy may arise from a multitude of aetiological factors such as severe anaemias, congestive heart failures, pyelitis or contamination of the specimen of urine with vaginal discharge, besides the well-known functional types such as the "orthostatic", "adolescent", "the nervous" and the "after-exercise" types.

The cases that have come under my study include (1) simple albuminuria cases by which I mean mere albuminuria without any heightened blood-pressure but include cases with oedema; (2) high blood-pressure cases, i.e., cases with a blood-pressure of 140 mm. of mercury or more, and (3) cases which had both albuminuria and high blood-pressure, the real pre-eclamptic toxæmia cases. I thought it fit to include the high blood-pressure cases also, because of the intimate relationship between the two clinical manifestations, viz., albuminuria and high blood-pressure; very often one proceeds or follows the other.

I have not included cases of Eclampsia, Albuminuric cases complicated with severe general conditions like tropical pyrexias, urinary infections and such of the albuminuric cases which developed sepsis or which had been subjected to operative interferences as my chief aim was to exclude such factors as would vitiate a natural post-partum behaviour of these albuminuria cases.

Analysis of the cases:—183 such cases came under my observation. 44 of them were simple albuminuria cases, 56 high blood pressure cases and 83 were a combination of the two so that albumin was present in 44 + 83 = 127 cases and hypertension was present in 56 + 83 = 139 cases.

The amount of albumin:—There were 18 cases of very severe albuminuria (+ + +), i.e., cases in which the urine turned solid on boiling. Almost all of them cleared up rapidly after labour was over and took an average of four days for the complete disappearance of albumin from the urine. The moderate cases were 35 in number and strangely enough they also had an average of about 3.9 days for the disappearance of albumin from the urine. It is remarkable how rapidly in a good number of cases, albumin clears up. In two cases where the albumin + + +, within about 12 hours after delivery the urine was absolutely free of albumin. (10 cases had a trace at the time of discharge of which one was the chronic nephritis case (which I shall describe presently), 5 cases were discharged against

medical advice on the 5th or 6th day and the four other cases did not show any abnormality in the eye-grounds or blood chemistry.

Blood urea:—Blood urea was investigated in 27 cases. Only one case had 147 mgms. per cent. and the average worked up to 39.5 mgms. per cent. which is near the upper normal limit. The one that had the 147 mgms. is the chronic nephritis case referred to. Two other cases showed 78 and 68 mgms. per cent. but there was no albumin in the urine in these two, blood-pressures of 160 and 150 respectively settled to normal in three days and one day respectively and cannot therefore be considered under chronic nephritis.

The lowest amount recorded is 18 mgms. per cent.

The fundus examination:—Ophthalmoscopic examination was made in 18 cases and only one case showed exudates and patches of retinitis in both eyes. Another examination was made after a fortnight and the appearances were the same. This is the case of chronic nephritis referred to with albumin + B. P. 160/110 and the blood pressure was swinging between 130 and 140 during the puerperium. One other case showed only a few spots of retinitis about the macula but the blood urea was 35 mgms. per cent. and the albuminuria (+ +) cleared up completely in six days and the blood-pressure of 160 came down to 120 in two days.

Hypertensive group:—There were 139 such cases (56 high blood-pressure cases + 83 pre-eclamptic cases). The hypertensive group is full of vagaries exhibiting many surprises during the puerperium. I have noted blood-pressures of 200 dropping to normal within 24 hours in a few cases, while in some others, the subsidence was gradual, spread over a week to 10 days. In a few cases the blood-pressure unaccountably shot up by 20 mms. during the puerperium only to drop to normal later. Only two cases from this hypertensive group can be considered to be of the "Essential hypertension" type. One started with a blood-pressure of 200/120 and for six days of the puerperium the blood pressure varied between 180 and 190 but the woman left the hospital against medical advice. The blood urea was 31.3 and the fundus was normal. In another case the blood pressure which was 180/100 before delivery rose up to 200 and 210 on the first and second day of puerperium and for 8 days subsequently the blood pressure was varying between 160 to 170 with no tendency towards remission. Blood urea was 25 mgms. and the vision and fundus were normal.

The significance of albuminuria:—The importance of albuminuria during pregnancy has been recognised for quite a long time, though in recent years, more than the albuminuria, the elevation of the blood pressure and the occurrence of the so-called "occult oedema" as evidenced by a rather sudden increase in weight of the gravid woman are being recognised as the earlier and therefore the danger signals of the onset of the pre-eclamptic toxæmia.

The quantity of albumin and the severity of the condition:—It must be remembered that the degree of albuminuria does not connote the severity of the toxic state, because it is within the experience of every practising obstetrician that the 'bolt from the blue', namely, the eclamptic fit has descended on a pregnant woman who has never shown any trace of albumin in her urine and per contra, cases with urine boiling solid escape this catastrophe and what is more surprising, often rapidly resolve with treatment. The blood pressure, the subjective symptoms and the weight have all to be considered together with albuminuria in arriving at a prognosis in these cases.

The question of permanent renal damage:—This subject has received considerable attention of late and opinion seems sharply divided. On the one hand there is the statement to be found that as many as 50 per cent. of the pre-eclampsics show residual changes in the kidneys, if one includes under kidney damage, "the recurrent toxæmias", "occult nephritis" and "low reserve kidneys" of pregnancy, while, on the other hand, the extreme view is held that chronic nephritis and/or hypertension is not a sequel of pregnancy toxæmia and in support of this is adduced the evidence that the incidence of chronic nephritis and mortality thereof is about the same in the multipara, nullipara, the single woman and even in the males.

If it is granted that toxæmias of pregnancy leave some permanent damage, it should be expected that the incidence of albuminurias (i.e.) the percentage of such cases under each parity should increase with parity; for example, a 6th para should run a greater risk of showing kidney damage than the 5th para more than the 4th and so on. But it is very interesting to observe from the following table that the tendency is quite in the opposite direction. There is decrease in the percentage from the primi to the 3rd para, and then from the 4th to 8th.

Parity	I	II	III	IV	V	VI	VII	VIII
Total Hospital Cases	901	712	574	410	294	199	133	91
Albuminuria Cases	42	22	17	16	11	3	5	2
Percentage	4.7	3.1	2.9	3.9	3.7	1.5	3.8	2.2

Chronic nephritis in the pregnant woman is comparatively rare in South India though such crippling diseases like ankylostomiasis, chronic malaria, chronic malnutrition and severe anæmias of pregnancy claim their toll in the pregnant women. Their comparative immunity is probably due to the fact that in the tropics, diseases like scarlet fever and diphtheria are very rare in the early years of the lives of these women.

I don't want to be dogmatic because no prolonged nor continued observation was possible in these cases which though they cleared up during the short puerperium, may have manifested signs of nephritis later on, though I do not consider that a probability.

Conclusion:—It is not my intention to give the impression that albuminuria is a benign condition of which much notice need not be taken. It is still too true that neglected cases of albuminuria or high blood-pressure run the very grave risk of terminating in the eclamptic fits and the symptoms mentioned should therefore be considered the danger signals of the graver forms of toxæmia of pregnancy. We have seen occasionally, even a case under strict institutional treatment suddenly working into fit.

I am irresistibly driven to the conclusion from the study that a very great majority of cases of albuminuria and high blood-pressure resolve completely during puerperium and a permanent renal impairment is rarely the result of toxæmia, particularly in the tropics, at least not to the extent reported in the literature. In the colder countries, the extra strain that is thrown on the kidney function because of the climate may probably be responsible for a higher incidence of such damage.

MANAGEMENT OF THE FRANK-BREECH PRESENTATION by Mary Cross, M.D., D.R.C.O.G., Br. Med. Jr., July 15, 1939, Pp. 113-114.

The frank-breech, or breech presentation with extended legs, is well known as a cause of stillbirth and neonatal death. In order to reduce this danger to the infant many methods of delivery have been tried, such as induction of premature labour, routine bringing down of a leg, routine forceps on the after-coming head, and even Cæsarean section; but all these procedures involve interference, and danger to the mother by increasing the liability to infection. Obviously such a drastic place in the treatment of this condition, as the operation itself carries a mortality risk that is four times greater than the maternal mortality rate as a whole.

In the series of 100 cases now under review the child mortality rate has been considerably reduced by using simple methods with no risk to the mother. In the first place, all unnecessary interference has been eliminated; and, secondly (remembering how the new and inexperienced house-surgeon in a maternity hospital usually has one or more stillbirths before becoming proficient at breech deliveries), a special effort has been made to provide a skilled and sufficient staff of attendants for each breech delivery. This has been easy to arrange in this particular series of cases, as the institution (a municipal maternity home) is served by permanent full-time medical officers. The home consists of thirty-five beds (ten ante-natal), and is a training school (for Certificate A) and also a postgraduate school for midwives, thus having an adequate staff of trained midwives.

From June 1931, until April, 1938, 113 infants were delivered as "breech with extended legs." In thirteen of these cases two or infants weighing less than 5 lb. were delivered, and for this reason have been omitted from the series. All thirteen were born alive, and suffered no ill-effects from their mode of delivery. The results of delivery in the remaining 100 cases are shown in the accompanying table, which indicates the parity of the mother, weight of the child, and cases in which there were other complications.

The management of the delivery is kept as simple as possible; there is no interference except fundal and suprapubic pressure, unless definite indications arise. Induction of labour is performed only for post-maturity or small pelvis, as the mature head stands the compression of delivery better than the pre-head stage. A leg is pulled down only when there is definite delay during the second stage, as the complete breech is a better dilator than the half-breech. In no case in this series was it found necessary to bring down a leg during the first stage of labour. Traction is not used, as this extends the arms and head. Hot towels are not employed, as they obstruct progress and make handling of the infant difficult: in no case has the child suffered from this omission. Forceps are used only when there is difficulty with the aftercoming head. They are, however, always boiled and ready for use in emergency. Episiotomy has been performed in most of the later cases of the series, especially in primiparæ, as it reduces pressure on the infant's head and also eliminates risk of a third-degree tear. It is done while the breech is distending the vulva.

Mode of Delivery

Delivery is allowed to proceed naturally until the child's body is born as far as its costal margin (fundal pressure being used only if progress is unduly slow). From this stage onwards no time is lost until the child's mouth is free, as the head begins to enter the pelvis and may press upon the cord. A loop of cord is not pulled down to feel for pulsation, as this not only wastes valuable time but may also pull the cord out of a safe hollow in the pelvis. The uterine contraction is at once aided by fundal pressure until the head leaves the uterus and enters the pelvic cavity; then the patient is rapidly anaesthetized with chloroform, so as to enable the head to be pushed firmly but slowly through the pelvis by suprapubic pressure. (Fundal pressure is of little use at this stage, and efficient suprapubic pressure is difficult with the patient conscious. Uterine contractions and bearing down are no longer of any use, as the head has left the uterus). As soon as the head is low enough its delivery is aided by the 'Mauriceau-Smellie-Veit' (or shoulder-traction and jaw-flexion) method. Once the mouth is free and the child can breathe the delivery through the outlet can be as slow as one pleases.

INDUCTION OF LABOUR by E. C. Wise, M.R.C.S., Br. Med. Jr., April 1, 1939, Pp. 665-667.

Artificial rupture of the membranes as a means of inducing labour has been employed for so many years that its value as an obstetric manoeuvre might well be expected by now to be precisely established. Goodwin (1937) reports its use 150 years ago, and states that Denman in 1793 was one of its earliest advocates. Yet it has not gained general approval, largely on account of the traditional association of "dry labour" with delay and difficulty. It seems possible that confusion has arisen from a failure to distinguish sufficiently clearly between the course of labour when the only abnormal feature is the early loss of liquor amnii, and the course when its escape is associated with other factors which really play the major and responsible part in producing difficulty. If the early escape of fluid could be fairly exonerated from the drawbacks for which it is commonly blamed, and if, further, its artificial production could be established as a reliable means of inducing labour, a valuable point would be reached for practical guidance. There are many situations in obstetrics where reliable control over the start and completion of labour can be calculated to lessen risk to mother and child or both. The difference in effort required to expel a foetus of, say, 6½ lb. and one of 8 lb. may be of vital service to a woman with morbus cordis. The same difference may save the foetus while contraction of the maternal pelvis exists. Many other instances occur to the mind, of which mention may perhaps be made of the great advantage of being able to prevent gestation from continuing beyond the normal period of forty weeks.

Indications for Induction in the Present Series

The indications for induction in this series of cases were: disproportion, 100 cases; at term to prevent post-maturity, seventy-one cases; toxæmia of pregnancy, forty cases; chronic bronchitis and various states of ill-health classified as maternal debility, twenty-six cases; post-maturity, twenty-five cases; morbus cordis, seventeen cases; hydramnios and twins, five cases; ante-partum haemorrhage, three cases. Total cases 287.

Method of Induction

Once the decision to induce labour was reached the method employed was carried out in the following stages. (1) A course of early continuous premedication with sulphate of quinine. (2) Preliminary admission to hospital. (3) The use of castor oil and an increase in quinine medication. (4) Artificial rupture of the membranes followed by an immediate and deliberate expulsion of liquor amnii.

Early Quinine Medication:—All primigravidae and those multigravidae with a history of defective uterine action in previous labours received 1½ grains of quinine sulphate three times daily during the last three weeks for which the pregnancy was allowed to continue.

Preliminary Admission to Hospital:—The routine for primigravidae selected for induction was admission to hospital five days before the anticipated date of artificial rupture of the membranes. For multigravidae this period was reduced to three days.

The Use of Castor Oil and Increased Quinine Medication:—At 6 a.m., castor oil 1 oz.; at 10 a.m., 2 p.m., and 6 p.m., quinine sulphate powders 10 grains; and at 5 p.m., a simple enema and a hot bath were administered to primigravidae on the day after admission (second day) and repeated on the fourth day; to multigravidae they were given on the second day.

Artificial Rupture of the Membranes:—This was performed on the fifth day in primigravidae, and on the third day in multigravidae. The operation was carried out in the labour theatre with all the usual antiseptic and aseptic precautions. The patient being in the lithotomy position, the operator passed the first two fingers of the right hand into the vagina, and then a finger through the os until the foetal head was reached. In some cases in which the cervix was very posteriorly placed it was necessary to hook it forward with the examining finger. A long stylet or vulsellum forceps was passed along the hand into the vagina and guided through the os until it was in contact with the foetal head. The membranes were ruptured and the liquor allowed to drain off. This was facilitated by slightly pushing up the foetal head and by abdominal pressure made by an assistant. A good flow of liquor is considered essential. Preliminary dilatation of the cervix was never required. The cervix was not exposed by a speculum previous to the introduction of the stylet or grasped with vulsellum forceps. Occasionally nitrous-oxide-and-air analgesia was used to allay nervousness in a primigravida, and on one occasion chloroform-and-ether was required. For the rest no form of anaesthetic was called for. In both primigravidae and multigravidae, if labour had not started within forty-eight hours after rupture of the membranes, the medication with castor oil and quinine powders was repeated. It is our experience that the part played by premedication in this method is of the utmost value. Preliminary contractions which are usually quite painless occur. The absence of pain in the early stages of labour in these cases is very striking. At the time of artificial rupture of the membranes it is almost invariably observed that the cervix is softened and "taken up", often completely, and in many cases there is commencing dilatation of the os.

Mode of Delivery

Labour terminated in the present series as follows:

Primigravidae (171 cases):—Spontaneous delivery, 120; delivered by forceps, fifty-one cases. The indications for forceps were: persistent occipito-posterior, nineteen cases; prolonged second stage, nine cases; prolapsed funis, one case; maternal distress, six cases; toxæmia, six cases; cardiac disease, nine cases; foetal distress, one case.

Multigravidae (116 cases):—Spontaneous delivery, 110 cases; delivery by forceps, six cases. The indications for forceps were: maternal distress, three cases; first child born by Cæsarean section, two cases; toxæmia, one case.

UTERINE INERTIA by V. N. Shirodkar, M.D., F.R.C.S., Professor of Obstetrics and Gynecology, Grant Medical College, Bombay Medical Bulletin, 15th July, 1939, Pp. 435-436.

How efficiently the uterine musculature is going to act in a given case is well nigh impossible to foretell. Many a labour is rendered abnormal at the critical hour by this sluggishness on the part of the uterus. If the pains are weak from the beginning, we call the condition uterine inertia. If they are strong in the beginning and get weak later, we call it uterine exhaustion. Uterine muscle normally keeps pace with the growing ovum and keeps on hypertrophying and elongating throughout pregnancy. Adequate supply of blood, certain hormones and salts are necessary for its growth.

Children born of the same parents and brought up under identical conditions do not show the same rate of growth; therefore it would be unusual to expect uteri of different women under varying states of health and nutrition to behave evenly.

Uterine muscle will act well if it receives a good blood supply which contains adequate amounts of glucose, calcium, oestrin and pituitrin. Besides these there should be no reflex inhibition. Bladder and rectum are supplied by the same nerves as the uterus and if former are distended and inactive we cannot expect the latter to be active.

The central nervous system has also a profound influence on the uterine contractions. If a patient is very nervous and anticipates good deal of pain and trouble during delivery there is a reflex inhibition of the uterus. You are well aware of a patient with anal fissures. He knows that each bowel action means a great deal of pain and discomfort. This inhibits peristalsis and makes his constipation worse. Same is the case in an elderly primipara who has been time after time told by her friends that pregnancy at an advanced age means trouble. She anticipates trouble, her nervous system is keyed up to a high pitch and this in turn produces reflex inhibition of the uterus. Morphia and other sedatives help these women by counteracting the nervous influences.

Once we grasp these important etiological factors treatment of uterine inertia becomes simple and rational. Except in cases of uterine exhaustion due to obstruction the treatment of primary and secondary uterine inertia is identical in general principles.

(1) Throughout pregnancy give your patient a diet containing milk, butter, green vegetable and fruits. In the last three months give her calcium, vitamin D, and a preparation containing iron and liver.

(2) Encourage walking and exercises for strengthening abdominal muscles.

(3) Prevent constipation or treat it with liquid paraffin or milk of magnesia.

(4) Try to impress on her that confinement is not as difficult and trying as her friends make her believe. Show her some of your case records of elderly women who have delivered normally and try to get them in actual touch with the discrete amongst them.

(5) Give them 2 grains of quinine three times a day after food in the last three weeks of pregnancy.

(6) A dose of castor oil should be administered as soon as pain begins.

(7) Ensure rest by chloral and bromide mixture. Morphia if necessary should be given. For instance if the pains begin in the afternoon and you feel that delivery will not take place the same night, let the patient have a quarter of a grain of morphia so that she sleeps well and gets up with good pains in the early hours of the morning.

(8) Some of these patients will not take nourishment by mouth and for such 100 ccs. of 25 per cent. glucose intravenously six hourly is very valuable. In some patients glucose by mouth produces flatulence and therefore may have to be avoided.

(9) Passing of flatus tube, turpentine enemas, catheterising a full bladder and periodic hot vaginal douches are valuable measures and should be tried as occasion demanded.

(10) Ovarian hormone oestrone (called oestria before) sensitises the uterine muscle to the action of pituitrin and therefore it is being given a trial at present with good results. Two tablets of Progynon may be given three times a day in the last three weeks of pregnancy and when the pains begin give five mg. of Progynon Forte or Ovocylin P intramuscularly every 5 hours. One unit of Pitochin diluted with 10 ccs. of normal saline may be given and repeated hourly if you are sure that there is no malpresentation or misfit.

CHLORAL HYDRATE, Brown and Gilbert's Midwifery, 1940, Edward Arnold & Co.

Chloral hydrate is the preparation which is most commonly used in midwifery. It produces a sense of drowsiness which passes into a condition resembling natural sleep from which the patient can be easily awakened. The usual dose is 15-30 grains. When given in larger doses the sleep is much deeper; the appreciation of pain is lessened although acute pain would prevent sleep. The respirations are fewer and the pulse is slowed.

Chloral hydrate is frequently employed in combination with potassium bromide, 20 grs. of each being given in an ounce of water. The doctor may order doses other than this in special circumstances. It has been thought that chloral hydrate has a specific effect on dilatation of the os, since it is very useful in cases of inertia in the first stage of labour. The drug is beneficial, however, only in so far as it induces sleep and rest and soothes an exhausted and nervous patient. According to Craner and O'Sullivan, it is useful when combined with nembutal to relieve the pains of labour.

PITUITARY PREPARATIONS. *Ibid.*

The posterior lobe of the pituitary gland produces a hormone which stimulates contractions of the muscle of the uterus when a patient is in labour; this substance is known as the oxytocic principle—the commercial name of which is pitocin. The posterior portion of the gland produces a second principle, named pitressin, which raises the blood pressure. In midwifery one wishes to employ the first of these two principles, and for this reason pitocin is used whenever it is desired to stimulate uterine contraction. Ordinary pituitrin contains both these principles and has been known to cause shock, believed to be due to pitressin contained in it.

MANUAL REMOVAL OF THE PLACENTA. *Ibid.*

Manual removal of the placenta must be considered one of the most dangerous operations in obstetrics. Its danger is aggravated by the fact that usually it is not undertaken except in cases of grave emergency, when the patient is almost moribund from loss of blood. The immediate dangers are shock and hæmorrhage and the remote danger is infection of the placental site. The introduction of the hand into the uterus for the purpose of removing the placenta is infinitely more dangerous than the introduction of the hand into the uterus for the purpose of pulling down a leg in a breech presentation. In the one case the hand is in direct contact with the placental site, being external to the placenta and the membranes; in the other case, the placental site is shielded from infection by the membranes as the hand is introduced into the amniotic cavity only. If the third stage of labour be carefully managed and its mechanism thoroughly understood, there should be no need for delay in removing the placenta manually when it is necessary. In most cases where it is necessary, the patient is already seriously ill from loss of blood, but if the midwife fully understands the process of the third stage of labour and can appreciate when it is likely to be necessary to remove the placenta artificially from the upper uterine segment, she will summon a doctor in time and manual removal of the placenta will be resorted to as an act of judicious treatment rather than an act of cowardice in the face of severe hæmorrhage. When it is removed after severe hæmorrhage the danger of infection is very great, as there is no doubt that the patient, anæmic from loss of blood, is extremely prone to infection as a result of lack of resistance.

FOREIGN MEDICAL NEWS

Our American Letter

(From Our New York Correspondent)

Xanthine Drugs and Angina Pectoris

There is abundant experimental proof that the xanthines, theobromine and theophylline, as well as other members of the series, are potent vasodilators of the coronary arteries. George V. LeRoy, Northwestern University Medical School, Chicago, showed in a report the influence of those drugs on patients with angina pectoris who were given aminophylline or placebos in varying amounts over a period of two years. In the general, aminophylline benefited 75 per cent. of the sufferers. Placebos and sedative drugs were reported beneficial by about 20 per cent. of the group. When patients who had been benefited by the use of aminophylline were given placebos or stopped taking the drug, about 80 per cent. experienced a return of symptoms within less than three months.

The amount of aminophylline administered was probably considerably greater than the doses usually prescribed. No patient was ordered to take less than 0.2 gm. three times a day unless it was found that the smaller dose was as efficient as the larger one. Furthermore, there was no hesitation in ordering daily doses of 0.8 or 1 gm. when a beneficial result did not occur.

Hypertension and Kidney Extract

Dr. Irvin Page, Director of the Lilly Laboratory for Clinical Research, Indianapolis, reported to the American College of Physicians on "distinctly encouraging results" in the treatment of high blood pressure with a purified extract derived from the kidneys of cattle. It has been found in recent years that the kidneys of animals and man produce a substance, named renin, which combines with another substance in the blood stream, described as an activator and produced by the liver, to produce a third substance which has been called angiotonin.

The properties of angiotonin are such as to indicate that it might be the chemical cause of hypertension. The kidneys, furthermore, produce a substance which counteracts angiotonin and lowers blood pressure in hypertensive rats, dogs and human beings. By preparing an extract from which the precursor of the blood-pressure-raising substance (renin) had been largely eliminated, a potent concentrate of the kidney substance-lowering blood pressure has been obtained. This extract, after trials on animals, has been administered to 19 human patients suffering from extreme forms of high blood pressure.

While the results were distinctly encouraging, Dr. Page stated, the problem of producing the kidney extract in sufficient quantity has not been solved yet. Eight to ten cubic centimeters of the extract are given human patients once a day, and the high blood pressure begins to fall in eight to ten days after administration and goes down gradually to nearly normal.

Angiotonin has been produced in crystalline form. Work is now in progress to determine what the molecule of angiotonin is made of and how its atoms are arranged. Such determination, it is hoped, might lead to the creation of a chemical molecule that would neutralize or counteract the action of the angiotonin. The normal kidney produces such a substance that inhibits the action of angiotonin.

War and Research

World activity in chemical research has slumped about 13 per cent. since the outbreak of the War in September 1939, according to a report by Professor E. J. Crane, of Ohio State University. The decline compares with a drop of about 23 per cent. in the year following the beginning of the World War in 1914. The chief reason for the lesser effects of war lies in the notable shifts which have taken place in the centres of chemical investigation. The United States and Russia have grown markedly in chemical activity, while Germany though still important, has lost its leading position since 1918.

During 1939, about 27.5 per cent. of the reported scientific investigations of chemical interest issued throughout the world came from United States laboratories, an increase from 20.7 per cent. over 1913. Russia, a small factor in chemical research before the World War, has climbed from a chemical research output of 2.5 per cent. 1913 to 11.1 per cent. in 1939. Germany in 1913 led by a wide margin with 34.5 per cent. of the world's chemical papers, but in 1939 dropped to 18.4 per cent. The output of the British Empire has remained approximately constant. It was 14.4 per cent. in 1913 and it is 14 per cent. now.

French chemical activity dropped from 13 per cent. in 1913 to 9.1 per cent. in 1939 and to something far less since the collapse of France. All other countries put together accounted for 15 per cent. of the published reports in 1913 and for about 20 per cent. of them in 1939. Of these other countries, the leading producers, in the order named, are Japan, Italy and Holland, with Japan showing steady growth from an almost negligible position in 1913.

Yellow Fever in Brazil

Success by the Rockefeller Foundation in its endeavours to halt the spread of the malaria-carrying *Gambusia* mosquito and of yellow fever in Brazil, and the preparation of more than a million doses of yellow fever vaccine for the Anglo-Egyptian Sudan, the United States Army and the United States Public Health Service, have been described by Dr. R. B. Fosdick, President of the Foundation. Dr. Fred L. Soper, representative of the Foundation in Brazil, has been in charge of the direction and administration of the offensive, and a staff of over 2,000 doctors, technicians, scouts, inspectors, guards and labourers have been enlisted in the battle.

The discovery that yellow fever can be transmitted in the jungle by carriers other than the *Wedes ægypti* mosquito, Dr. Fosdick says, does not minimize the significant part which the *ægypti* mosquito plays in the distribution of the disease among human beings. It is

not too much to assert, he adds, that, if in urban areas this insect were brought under control as it has been in Brazil, the world could avoid the threat which in these days of fast transit might easily develop into a cataclysm in East Africa, in India and the Orient, to say nothing of parts of the Americas, should the virus of yellow fever break through the barriers of quarantine, vaccination and medical vigilance.

At the request of the British Government the Rockefeller Foundation has sent to the Anglo-Egyptian Sudan 250,000 doses of the yellow fever vaccine developed in the laboratories of its International Health Division and is preparing to send an equal amount in the near future.

Our Canadian Letter

(From Our Own Correspondent)

Meningitis in Halifax

In August 1940 the city of Halifax, Nova Scotia, experienced the beginning of an epidemic of meningococcic meningitis which gradually increased in intensity during the next six months, reaching an apparent peak of case incidence during January and February 1941. The total number of hospitalized patients during this period was 93, of whom 82 were treated with sulfapyridine. Seven deaths occurred in the entire sulfapyridine-treated group: 1 of the deaths was a patient with diabetic acidosis, 3 occurred shortly after admission, and 1 was attributed to obstructive hydrocephalus, which appeared as a late complication. In the other two cases the disease progressed without complications but terminated fatally in spite of sulfapyridine and specific serotherapy.

Sulfadiazine has been employed as the sole specific agent in the treatment of 13 patients with meningococcic meningitis and 1 with meningococcemia with arthritis but without meningitis. According to a publication of Dingle and Thomas, Boston, and Morton, Halifax, one patient with meningitis died ten hours after admission. The remaining 13 patients recovered promptly and completely.

The same general plan of treatment was followed in all cases. Four gm. of sulfadiazine was administered orally in the first four hours, followed by 1 gm. every four hours. Patients unable to take oral medication were given the same doses of sodium sulfadiazine in physiologic solution of sodium chloride intravenously. Blood levels of free and total sulfadiazine were determined between the third and the sixth day. No anti-meningococcic serum or specific agents other than sulfadiazine were employed. Fluids were administered orally or parenterally in amounts sufficient to permit excretion of approximately 1,500 c.c. of urine daily. Diagnostic lumbar puncture was performed on admission, but the procedure was repeated only for definite indications such as signs of increased intracranial pressure or failure of response to therapy.

Shock and Adrenal Insufficiency

Shock may be considered to be a phenomenon of adrenal insufficiency, according to J. C. Meakins, Montreal, Canada. Shock is induced by exhaustion of the adrenal glands attempting to combat the deleterious effects of the excessive amounts of histamine or histamine-like substances liberated in the body. A direct attack upon the condition of shock would be to supply adrenal substance. However, neither adrenalin alone nor desoxycorticosterone have so far proved adequate. Whole adrenal or cortical extract will protect against shock, but up to the present time the supply of such substances has not been sufficient.

Protection of the various systems of the body affected by the shock reaction, with administration of what adrenal extract is on hand, is the best method of treatment. This consists of supplying fluids abundantly, by infusions of saline, glucose and water; transfusions; oxygen and heat. Recently, blood serum concentrated to a fourth or less of its volume has been used in place of whole blood or saline injections. The purpose of this is to increase the osmotic pressure of the plasma and draw the fluids back into the circulation.

Chemotherapy and Physical Therapy for Neurosyphilis

Marin, Montreal, treated 220 patients suffering from neurosyphilis, chorea, multiple sclerosis, gonorrhea and other diseases with a combination of vaccine, chemotherapy and hyperpyrexia. His treatment consisted of an injection of tryparsamide followed immediately by a session of five hours of artificial fever at 105°F. Some days later the patient is given an injection of fever-producing vaccine (such as pyrifur) and of bismuth. This procedure is repeated for ten weeks, after which the patient is treated with pentavalents or neoarsphenamine and bismuth compounds. The 220 patients received 1,318 treatments of about five hours each in a total of 7,568 hours. There was one death.

The combined therapy produced general improvement. Restlessness, insomnia and headaches were lessened or disappeared; in tabes, lightning pains and vomiting decreased or disappeared. In dementia paralytica the remissions usually occurred between the fifth and the tenth session of pyretotherapy; their percentage of full remissions was 54. The 50 neurosyphilitic patients were under treatment from 6 to 18 months. Before treatment there were 68 per cent. of strongly positive fluids as compared with 26 per cent. after. There are now 22 per cent. of negative fluids, whereas there were none before treatment was started. The weakly positive and doubtful fluids, which at the onset were 16 per cent., are now 30 per cent. It is logical to expect that many of these will soon increase the proportion of the negative group. The weight of many emaciated patients increased, and there was improvement in muscular strength or in gait.

INDIAN MEDICAL NEWS

Our General Letter

Recruitment to the I.M.D.

Your readers may be aware that owing to the efforts of Drs. A. D. Mukharji and Manohar Lal Kapur, President and General Secretary of the All-India Medical Licentiate's Association, the Government have sanctioned a civil allowance of Rs. 50/- and change of designation to Assistant Surgeon. But their main demands, viz., a scale of pay of Rs. 250-10-450 and King's Commission for the licentiate with over 10 years of service or practice, still remain to be met. It is reliably learnt that the President and the General Secretary would call a meeting of the prominent leaders of the licentiate to review the present position and to take such action as may be deemed necessary. Meanwhile, Dr. Mukharji took advantage of the visit of Director-General, Indian Medical Service, to Calcutta on the 20th August and impressed on him once again the imperative need of the Government meeting the minimum demands of the Association which are neither excessive nor exaggerated. The Director-General has agreed to meet at Simla the representatives of the Association for a full and frank discussion on the subject. The real situation is, as the *Antiseptic* has put it effectively, "the Government must realise that the medical licentiate in private practice hold a great stake in the profession and that they are not likely to barter it for a position which neither adds to their dignity nor enhances their future prospects."*

Raw Drugs and Railway Freight

The Indian Chemical Manufacturers' Association, Calcutta, points out in a press communique that the railway rates for liquid and light powdered medicines, 90 per cent. of which are used in hospitals and dispensaries located all over India, are particularly high as 65 per cent. of the weight charged as medicine is only packing material needed for long distance transport. This matter has been under correspondence between the Association and the Railway Board for the last 12 years without any tangible result.

Inferiority Complex

Sir P. C. Ray, who replying to the address presented by the Indian Chemical Manufacturers' Association at Calcutta on 13th August, on the occasion of his 81st birthday celebration, said that he knew a large section of the people still have an inferiority complex whenever the question of choosing between foreign and Indian-made chemicals and medicines is concerned, "This is a positive handicap," he continued, "for the growth of the Industry and should be removed by all possible means. All my life I have tried to remove this inferiority complex. It had been my only wish to demonstrate that Indians could organise and establish chemical concerns to manufacture products which are in no way inferior to foreign goods."

Would the practitioners of our country take note of this timely warning and avoid prescribing drugs of foreign manufacture?

* Since the receipt of this letter, the Simla Conference has taken place, an account of which appears elsewhere. Ed.

After-Care of T. B. Patient

A new ward for the after-care of T. B. patients was opened at Madanapalle Sanatorium on August 26 by the Vicereine. This was made possible by the munificent donation of Rs. 10,000 by Miss Theodore Lazarus. "This part of the scheme," said the Vicereine, "of the general fight against tuberculosis, is one which appeals to me particularly, owing to my connection with the Papworth Sanatorium and Village Settlement in England. This scheme is one which will provide a help to the Indian sufferer. If he can make up his mind to leave the hospital with his family to his new home in the Colony, where he can be under medical supervision, to ensure his progress towards recovery, he will be doing himself and his fellow-sufferers a good turn."

Medical Inspection of Schools in Orissa

Medical examination of school children in High and Middle Schools in Orissa is conducted by a staff of Medical Officers consisting of the School Medical Officer of the rank of an Assistant Surgeon and the Assistant School Medical Officer of the rank of Sub-Assistant Surgeon, says a Press Note issued by the Government of Orissa. During the last year selected Lady Medical Officers were required to examine the girl students in the three important towns of Cuttack, Berhampore and Parlakimedi.

During the year 1940 medical inspection was held in 36 schools of 3,579 students of whom 2,294 disclosed some defect or disease. The most common ailments detected are: Malnutrition 19 per cent. of the cases examined; enlarged spleen 12 per cent.; enlarged tonsil 11 per cent.; carious teeth 8 per cent.; defective eye-sight 7 per cent.; pyorrhoea 3 per cent.; and leprosy 1.1 per cent.

Incidence of leprosy was found to be one in 89. Careful record is kept of the results of clinical examination of each student. The students who disclosed defects were recommended for necessary treatment. The Headmasters communicated the results of the medical examination to the parents and guardians of children affected. Out of a total of 1,193 old defectives nearly 754 were found to be free from their previous defects. The School Medical Officer reports that although educated parents have shown keen interest in the treatment of their wards according to the recommendations made by him, there are still a large number of guardians who have been found apathetic in taking necessary steps to keep their wards under a prescribed system of treatment.

The School Medical Officer also delivered 219 lectures in hygiene to the students of high schools. Every student appearing for the Matriculation Examination is required to attend a course of ten lectures. The lectures delivered cover a range of subjects such as anatomy, physiology of the human body, personal hygiene, body nutrition and balanced diet, causes, early symptoms and prevention of the common diseases. Advantage was taken of the summer vacation to deliver a course of lectures to the Primary School teachers in selected centres of each district. Three hundred and two teachers and 12 inspecting officers attended such a course of instruction.

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T. C. Basu Chowdhury,

Prosadpur House,
Agra, 5-6-'41

Secretary,
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Prize Rs. 35 0 0

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thesis
Subject:—PYELITIS, CAUSES,
SYMPTOMS, TREATMENT
ETC.

Prize Rs. 25 0 0

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P. R. Trivedi, D.T.M., L.C.P.S.,
Hon. Secretary,
Gujarat Branch—Ahmedabad,
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Military Hospitals in India

The Government of India, states a press note, have decided as a temporary measure, to recruit 300 civil doctors for full-time duty in local military hospitals. These doctors will be divided into two categories, (1) those for duty in one military station, and (2) for duty anywhere in a military district.

In order not to interfere with recruitment to the Emergency Branch of the I.M.S., the selection of candidates will be restricted to doctors who are over 45 years of age or are medically unfit for general service.

Our Bombay Letter

The Nero of Bombay

Nero is fiddling when Rome is burning, and the College of Physicians and Surgeons, Bombay, is, like the Nero of old, apparently enjoying its own recent achievement of increasing the Licentiate's course to 4 1/2 years after I.Sc.—a course just six months less than the M.B., B.S.—while the hearts of the thousands of licentiates are burning in despair over this question. It is well known that the organised medical profession in India has come to the conclusion that their salvation lies in having only one uniform standard of medical education throughout the country and has been fighting during the last few years for reaching this goal. Even the various provincial councils—Indian Medical Council including—and Governments, have accepted this in principle. The Bombay Medicoes are therefore exasperated at this action of the College of Physicians and Surgeons, and in utter desperation have appealed to the Government to abolish the College forthwith and institute a representative State Medical Faculty in its place. They have also requested the Government to stop new admissions to Medical Schools from next year till they can be converted into colleges. We do not know what action the Government would take on this representation. One, however, wonders how even the prominent leaders of the profession like Drs. Jivraj Mehta, A. S. Erulkar, Mrs. Dadabhoi, Chamanlal Mehta, amongst others, could be outnumbered and outwitted (?) by a majority of reactionary group in the College Council (which consists of 24 members all told). It is obvious that the authorities of the Bombay College of Physicians and Surgeons are not playing the game, fair and square.

Health of Sind

The state of health in this Province during the year 1940, according to the official review, does not compare favourably with that of 1939. The number of births recorded was 81,992 showing an increase of 1,025 over the recorded births in the year 1939 and an increase of 4,623 over the figures for the year 1938. But there was a rise in the number of recorded deaths which rose from 44,784 in the year 1939 to 53,360 in the year 1940 showing an increase of 7,576. Cholera prevailed in all districts except the districts of Sukkur and Upper Sind Frontier. All districts in the province were affected by smallpox. Increased mortality was recorded in almost all the principal groups under which vital statistics are shown.

During the year under review 354 cases of, and 227 deaths from, cholera were reported as against 6 cases and 3 deaths in the previous year. The district most affected was Dadu where out of 152 cases, 104 proved fatal.

Smallpox: This prevailed in all districts, the most affected being Hyderabad where out of 1,253 cases, 432 proved fatal. The other district seriously affected was Thar Parkar where 1,091 cases with 212 deaths occurred.

Plague: The province was completely free from plague during the year under report as was the case in the previous year. Ratting operations were continued as usual throughout the year in all the important municipal towns.

Public Health Propaganda: No special staff has so far been entertained exclusively for carrying on public health propaganda. The importance of this activity is not overlooked and every opportunity is taken to give instruction to the public in matters affecting health, nutrition, and the prevention of disease. This is arranged by the erection of public health stalls at Ruralvince. A qualified clerk from the Head Office and an Inspector of Sanitation and Vaccination are put in charge of the public health stalls, who explain to the visitors the significance of the exhibits. Lectures are also delivered to the people who assemble at these shows. It has been noticed that the public health stalls have proved of interest and receive all-round appreciation. A separate staff for this is absolutely necessary, and a scheme in this connection has been submitted to the Government and accepted by them in principle.

General: Every effort is being made to impress upon Municipalities the importance of improving the registration of vital statistics. As it would not be possible for the small Municipalities to appoint medical registrars of births and deaths, a simple suggestion has been made to some of the Municipalities. According to this, the appointment of a "Registration Karkoon" is contemplated. The suggestion has been accepted by three Municipalities, viz., Tando Adam, Kambar and Jacobabad.

Arrangements have been made at all Government Hospitals for the free microscopic examination of sputa, on the recommendation of Registered Medical Practitioners, of patients suffering or suspected to be suffering from tuberculosis.

EPITOME

Ind. Med. Gaz., July 1941	PAGE
(1) Toxic complications of sulphanilamide therapy— <i>Rajam and Vasudewa Rao</i> ..	385
(2) Cardiac sounds and murmurs in severe anemia— <i>D. C. Gupta</i> ..	392
Perforation of a Meckel's diverticulum with gastric mucosa— <i>Kini</i> ..	396
Multiple primary epidermoid carcinoma— <i>De and Tribedi</i> ..	397
Arneith count— <i>Dharmendra and Das Gupta</i> ..	406
A note on the fevers of the typhus group— <i>Woodhead and Dutta</i> ..	407
Pathogenesis of bronchiectasis— <i>Viswanathan</i> ..	413
Taking of blood for transfusion— <i>Crowal and Others</i> ..	416
Ring-worm of the scalp— <i>Dey</i> ..	416
(1) Rajam and Rao analyse 6,070 cases undergoing sulphanilamide therapy for toxic complications. Out of these 1,765 or 29.08% of cases showed toxic manifestations. Of these fever account for 11.78%, giddiness 3.3%, headache 1.81%, nausea 1.89%, agranulocytosis 0.05% and dermatitis 0.94%. They find that toxic symptoms appear at about the end of the first week of therapy, and disappear when the drug is withheld or changed to another derivative of the same. They point out that agranulocytosis, though not common, is a very grave and unpredictable complication. The preventive and curative measures they advise are	
(1) Nicotinic acid orally or by injections.	
(2) Plenty of glucose and fluids.	
(3) Pentose nucleotide injections.	
(4) Non-exposure of naked skin to direct sunlight during sulphanilamide treatment.	
(2) Gupta analysing 35 cases of severe anemia with particular reference to cardiac sounds and murmurs found that	
(1) the systolic murmurs are very common, well marked at the apex.	
(2) the diastolic murmur is only occasionally met with and it is usually a late diastolic beat heard at the left side of the sternum at the 4th intercostal space about the nipple line.	
J. I. M. A., July 1941	
(3) Chronic mastoiditis— <i>Tirumal Rao</i> ..	401
Chemotherapy of bacterial diseases— <i>Ghosh</i> ..	405
Lesion of the optic nerve in vitamin B ₁ deficiency— <i>Raman and Abbu</i> ..	417
Menstrual disturbances and the A. O. vaccine— <i>Kapur</i> ..	422
Ambivalence of sex hormones in therapeutics— <i>Pillai</i> ..	425
(3) Tirumal Rao describes lucidly, with case illustrations the development and course of the suppurative inflammation of the middle ear. He classifies them as follows:	
(1) Acute otitis media and acute mastoiditis.	
(2) Chronic otitis media and ch. mastoiditis.	
(3) Intracranial complications arising from (1) and (2).	
The victim of ch. mastoiditis, he writes, may go about for long without the slightest idea of the seriousness of the disease, and so long as the drainage is free there is little pain or discomfort.	
The chief objective signs which afford indication for surgical exploration of the mastoid are:	
(1) A discharge which remains fetid in spite of treatment.	
(2) A posterior marginal or attic perforation indicating the presence of bone disease.	
(3) Presence of polypus or granulations which recur rapidly after removal.	
(4) Subperiosteal mastoid tenderness, swelling or the presence of a sinus.	
(5) Facial paralysis.	
He recommends radical mastoid operation, but is of the view that primary object of surgical intervention, namely, prevention of intracranial complications, has not been fulfilled as satisfactorily as it ought to be.	

Cal. Med. Jr., July 1941

(4) Foreign bodies in the stomach— <i>Chatterjee and Maitra</i> ..	341
Epidemiology of cholera— <i>Sanyal</i> ..	349
Prognosis in heart disease— <i>Majumdar</i> ..	361

(4) Chatterjee and Maitra give a very interesting account of the swallowing of foreign bodies, accidental, designed and suicidal. They also refer to the narratives of extraordinary prowess shown by some people who could swallow indiscriminately deadly poisons, powdered glass, nails, etc., and come out of the ordeal unharmed. But the authors question whether these would be harmless in the long run. In one of their cases the foreign bodies removed during operation weighed 2 lbs. and 8 ozs., consisting of iron nails, bits of glass, and mercury beads. This was a case of a Hata-yogi who claimed supernatural powers, but who, after a time, developed epigastric pain, persistent vomiting, hiccup and rapid emaciation. An operation was performed on him with the above result, but he expired on the second day after operation.

Antiseptic, July 1941

(5) Role of interstitial fluid in renal failure of cholera— <i>Banerji</i> ..	523
Change of type of some diseases as clinically observed— <i>Lahiri</i> ..	528
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Role of insects in the causation of diseases— <i>Deshmukh</i> ..	539
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Theory and applications of bacteriophage— <i>Bhattacharji</i> ..	547

(5) Banerji points out that the two immediate factors of control of pH concentration in extra-cellular fluid are the concentration of free carbonic acid and of the plasma bicarbonate. The loss of interstitial fluid in cholera constituting hemo concentration, hypochloremia, and disturbance of acid-base equilibrium plays an important role in the filtration through the glomerulus. This, the author writes, in addition to the capillary reaction in the kidney, forms the basis for renal failure in cholera.

Patna Jour. of Med., July 1941

(6) Chemotherapy of cerebro-spinal meningitis with M. & B. 693— <i>Aikat</i> ..	103
Convulsion therapy of schizophrenia— <i>Varma</i> ..	113
(7) Vitamin C nutrition in kala-azar— <i>Hai</i> ..	120
Severe headache due to intestinal amebiasis— <i>Prasad</i> ..	123
Arsenical dermatitis in syphilis— <i>Lahiri</i> ..	128

(6) Aikat gives detailed case notes of 12 established cases of cerebro-spinal meningitis treated with M. & B. 693. Of these 11 were cured and 1 died. He is of the view that supplementary treatment with serum serves very little useful purpose.

(7) Hai observes that among 71 cases of kala-azar there was definite diminution in the level of excretion of vitamin C in the urine, and that a majority of these patients were found to be suffering from microcytic hypochromic type of anemia, and epistaxis and bleeding from the gums. He therefore advocates, besides the routine treatment, a generous vitamin C diet in the form of oranges, lemons, guavas and tomatoes.

Med. Digest, July 1941

Treatment of goitre— <i>Bajaj</i> ..	195
A note on obstetrical emergencies— <i>Chowhan</i> ..	202
Problem of foreign body— <i>Desai</i> ..	203

Sind Med. Jour., June 1941

Toxic idiopathies— <i>Ahuja</i> ..	1
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Med. Bull., July 19, Aug. 2 and 16, 1941

Clinical pathology as a guide to treatment— <i>Billimoria</i> ..	433
Tetanus— <i>Yodh</i> ..	485
Evolution of liver therapy— <i>Dey</i> ..	468
Sulphapyridine and banana in the treatment of diarrhoea of children— <i>Coelho</i> ..	497

SPECIAL JOURNALS

Ind. Jour. of Pediatrics, July 1941

- Xerophthalmia in children—*Hass and Others* .. 139
- (8) Butter milk as an infant food—*Meulemans and Hass* 158
- Aleukemic lymphatic leukemia—*Banerjee* .. 175

(8) The authors are of the view that the administration of properly prepared butter milk to many hundreds of infants in the hospital wards, O.-P. depts., and infant welfare centres in Batavia has shown that it is quite satisfactory for exclusive artificial feeding of infants.

Leprosy in India, July 1941

- Studies of the lepromin test—*Lowe and Dharmendra* 77
- Investigation on the biochemistry of leprosy—*C. S. V. Maniam* 104

Ind. Jr. of Ophth., July 1941

- (9) Chemotherapy in Ophthalmology—*Shroff* .. 77
- Physiological Bitemporal Hemianopia in Pregnancy—*Miss Karim Khan* 85
- Treatment of Glaucoma—*Hansraj* 87
- Allergy in Ophthalmology—*Pendse* 90
- Reopening of the Cicatrized Trephine Hole—*Bhave* 99

(9) Shroff discusses the effects of various sulphanilamide compounds on different infections of the eye and comes to the following conclusions:

- Gonorrhoeal Conjunctivitis—Sulfapyridine or Sulfathiazole.
- Trachoma—Sulfanilamide.
- Beta H. Streptococci—Sulfanilamide.
- Staphylococcus—Sulfathiazole.
- Pneumococcus—Sulfapyridine or Sulfathiazole.

The author points out that B. pyocyaneus infections are not amenable to Sulfanilamides.

Annals of Bio. Chem. and Exp. Med., June 1941

(Only selected articles are summarised below)

Ray and Banerji examined 138 individuals of different strata of society with the biphotometer to assess their level of

Vitamin A nutrition. Of these only 8 showed deficient dark adaptation. One of them was suffering from night-blindness and was cured of it after being supplemented with cod liver oil. Clinical signs of vitamin A deficiency were, however, absent in all the subjects examined. Supplements of cold liver oil with lemon juice greatly diminished the threshold values showing an improved dark adaptation in deficient as well as in normal cases.

Ahmad studied the calcium metabolism of groups of rats by examining the histological structure of the dentine and the predentine of the incisors of the animals. He observed that administration of 2 c.c. of orange juice improved the normal utilization of calcium. But the effect of orange juice was not entirely due to its ascorbic acid content, as the administration of pure ascorbic acid did not lead to the normal calcification of the dentine.

Ind. Jour. Med. Res., July 1941

Chatterji and Mitter examined 130 swabs collected post-partum from consecutive cases of confinement. Of these 61 yielded hemolytic streptococci, and they suggest that the primary source of these organisms is the throat of the human being.

Dogra discusses the incidence of peptic ulcer in India. The greater incidence of peptic ulcer in Madras (143 per 100,000 of the population), Bihar (37), Bengal (33) and Orissa (29), is noteworthy in contrast with the rest of India. It may be stated that in all these provinces rice is the staple diet, whereas the conditions in the rest of the country are different.

Dhurandhar working on the value of guinea-pig inoculation test in tubercular affections comes to the following conclusions:

- Strains of human tubercle bacilli isolated from cases of pulmonary tuberculosis vary considerably in their virulence.
- Guinea-pigs showing massive caseation in the body do not necessarily lose weight or show a rise in temperature.
- Inoculation of 1,000 organisms or less of different strains failed to produce an infection in 30 to 36 per cent. of animals.
- From a diagnostic point of view guinea-pig inoculation test cannot be considered as 'the court of last appeal.'

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- Make up your programme of work for the next year after mutual consultation.
- For further details please see next page.

31ST CONFERENCE AND SCIENTIFIC EXHIBITION

of the

ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION, AHMEDABAD

Information to Delegates and Visitors

Both the Conference and the Exhibition will be held this year at Ahmedabad on 23rd, 24th and 25th December, 1941.

The Conference will be opened by Colonel G. G. Jolly, C.I.E., V.H.S., I.M.S., Director-General of Indian Medical Service, on 23rd December 1941.

The elected delegates, and visitors, to the Conference are requested to kindly intimate to Dr. Keshavalal J. Bhatt, 235, Gashiram's Pole, Ahmedabad, the General Secretary of the Conference, their date and time of arrival. Satisfactory arrangements for their boarding and lodging are being made.

As usual, a scientific section will be conducted on the last two days of the Conference at convenient hours, and each section will be presided over by an eminent medical man. This section is open to all medical men. Those who want to read scientific papers or lecture on scientific subjects are requested to send their manuscripts, and a summary of the same besides, to Dr. P. R. Trivedi, L.C.P.S. (Bom.), D.T.M. (Cal.), Vadilal Sarabhai, General Hospital, Ellis Bridge, Ahmedabad, so as to reach him at least a fortnight before the Conference.

An Exhibition is also arranged for the benefit of medical manufacturing firms, to help them to exhibit their products to the pick of the medical profession who will hail from all parts of India. The size of the booths and the rates thereof are published in the next column.

An illustrated description of the City of Ahmedabad and its hospitals will be published in the November Supplement of the Journal for the information of delegates and visitors.

The name of the President of the Conference will be announced in the November issue of the Journal, as soon as the election, which is now going on, is over.

To establish a healthy liaison between the All-India leaders of the Association and the Bombay Provincial Branch, the 3rd Bombay Provincial Conference has been arranged to be held on 24th and 25th December. All the provincial delegates to this Conference are requested to muster strong, and the Reception Committee requests the All-India delegates and visitors to attend this Conference also, and help them in their deliberations.

The dates announced in this notification are provisional and will be confirmed in the next issue of the Journal.

Further information will be gladly supplied on request.

JAMIAT RAM B. DESAI,
Chairman of the Reception Committee
52, Pritam Nagar, Ahmedabad, 21-9-1941

An Appeal

to the Medical Manufacturing Firms

This Exhibition, organised, as usual under the auspices of the All-India Medical Licentiates' Association on the eve of its Annual Conference, will be opened on 23rd December 1941, and continued for a week from the date of opening.

Needless to say, this is indeed an unique opportunity for all the reputed medical manufacturing firms to exhibit their products to the elite of the medical profession from all parts of India, who will gather at Ahmedabad to attend the 31st Annual Conference of the Association. You will thus have the useful chance of your representatives exchanging views with the delegates and visitors to this Conference on many of your therapeutic preparations, surgical appliances and accessories. Many of the famous specialists of our country will also attend this Conference and Scientific Section. It is hoped that this personal contact will be of mutual benefit.

Stalls of the size 14' x 12' each will be erected, according to demand. The rate of each stall is Rs. 25/- for the whole session. Additional accommodation can also be provided at extra cost and on sufficient notice. Half the charges are strictly payable in advance.

Since the stalls are limited in numbers, you are kindly requested to register your stall in advance to avoid disappointment.

For the convenience of your representatives, arrangement for their boarding and lodging will be made by us at concession rates in a first-class Hotel close by the Exhibition, if timely intimation is given to us.

All correspondences and remittances may kindly be addressed to Dr. P. R. Trivedi, L.C.P.S. (Bom.), D.T.M. (Cal.), Secretary, Scientific Section, Dalia Building, Ellis Bridge, Ahmedabad.

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For Director.

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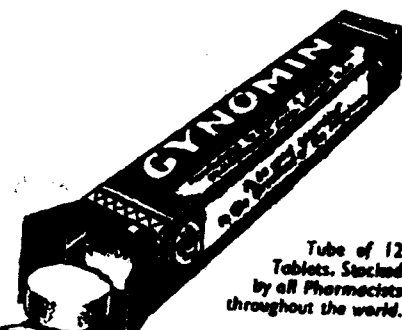
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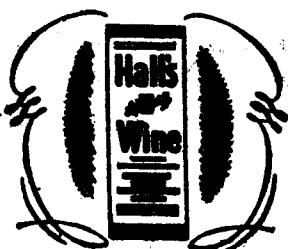
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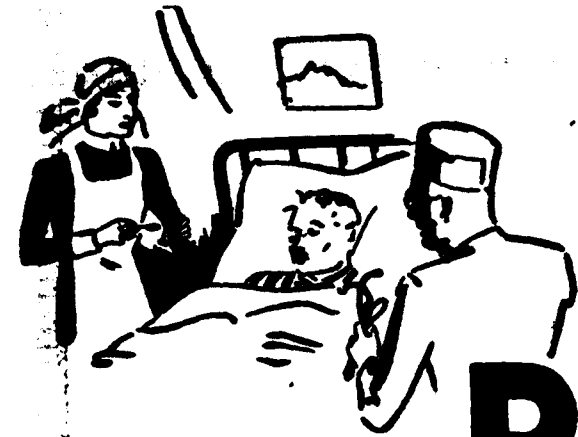
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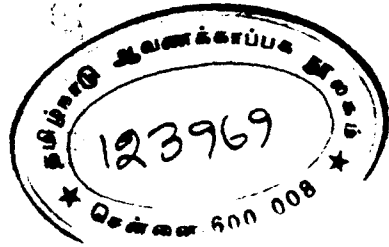


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- This absence of precipitate at all stages of the digestion of Brand's Essence indicates that the system absorbs it with a minimum of effort. The stimulating properties of the Essence take speedy effect owing to the high degree of solubility of the natural protein.
- Even when the gastric juices are enfeebled by acute and chronic disease, there is always enough of the digestive ferments present to deal with the protein present in the Essence. For this reason, it may confidently be prescribed in conditions involving minor degrees of hypochlorhydria.
- Brand's Essence liberates and strengthens the gastric juices. It provokes neither irritation of the delicate lining membranes of the stomach nor the spurious stimulation induced by alcohol and similarly-acting drugs. Most of the resultant free acid is absorbed by the soluble protein. This is present in sufficient quantity to protect the stomach membranes and thus diminish the discomfort of food digestion.
- The Essence can be taken in large quantities without causing thirst or diarrhoea, or throwing a strain upon the kidneys.
- There is practically no acute or chronic condition in which it cannot be given with safety and advantage.

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INDICATIONS:

In all conditions of calcium deficiency e.g. rickets, teething, deficient growth, anaemias, pulmonary tuberculosis, dental caries, convalescence, sprue, pregnancy, etc.

CONTAINS	
Calcium Lactate	3.5 gr.
Sodium Lactate	2.5 gr.
Dicalcium phosphate	2.0 gr.
Ferri et Ammon Citras	1.0 gr.
Vitamin D	100.0 units.



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WITH IRON AND VITAMIN D.
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**Coughs, Bronchitis, Asthma,
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Control the cough that weakens your patient.

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தவனினைத்தாள்.

கேள்விகள் :

ப. எண் :

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S.F. 259A-1,00,000-30-1-84.

LEXI

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Snake-bite : Lexin inhalation and

Opium Poisoning : Lexin inhalatic

Influenza : Put a few drops on hand now and then till relief.

Hysteria } Inhale as above ; or put
Epilepsy }

Cholera: Inject 2 c.c. intramuscularly
intravenous.

Collapse : Intravenous injection 1 c

Trauma and Surgical Shock } Intravenous injection

Bleeding from any Orifice: Injec

Asthma: In extreme dyspnœa—injection
Only one injection gave prompt

Pains of Cancer : Inject 2 c.c. intra

P. BANEJ, mungam, muna