MISCELLANY

OF

The Trichinopoly District Medical Association

(REGISTERED)

:: JANUARY 1936 ::

Ourselves

The 'MISCELLANY' has completed a year of its existence and whether it has been useful to practitioners, is known only to themselves. Instead of being a white-elephant on the resources of the Association as was feared by some at the commencement, it is not only self-supporting but is meeting some of the routine expenses of the Association. It is hoped that practitioners will take more interest in the Journal by contributing extracts and interesting case notes. It is also hoped that readers of the 'MISCELLANY' will patronise products advertised therein.

TRICHINOPOLY,
1st February 1936.

P. A. S. RAGHAVAN,
Secretary.

THE TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION

(REGISTERED)

Local Anaesthesia

(Adapted from the Clinical Journal January 1936)

The risks of Local Anaesthesia if simple precautions be taken, are negligiable, and the after effects are almost nil. Another advantage is that the operator himself can do both.

The commoner procedures for which Local Anaesthesia may be used are the removal of sebaceous cysts, operations of the fingers and toes, removal of Ranulae and Salivary calculi, foreign bodies in the eye and needles in other parts of the bdy, circumcision, hæmorrhoids and fissures, skin grafts, empyema and instrumentation of the urethra.

To appreciate Local Anaesthisia, it would be well if every operator had some small proceedure performed upon himself under Local Anaesthesia before administering it to others and he would then be a in better position to know the patient's attitude and fears. It is always advisable to delay operating until complete Anaesthesia is present either by giving the solution a longer time to act or by injecting more or by increasing the strength of the solution.

If Local Anaesthesia is to be used rationally the relative sensibility of the various tissues should be known or studied. Thus the skin is very sensitive, while the fat is relatively insensitive; facia and muscles come some where between the two. Periosteum is almost as sensitive as the skin; vessels and nerves, while not particularly sensitive to cutting, are very sensitive to the application of pressure forceps, twisting or traction. Nor must it be overlooked that structures rendered completely anaesthetic in the zone of the operation may extend well beyond that zone, so that, traction upon them will sill produce pain.

Freezing

A purely local anaesthesia may be produced by freezing the part. This is usually and conveniently accomplished by an ethyl chloride spray. Complete solidification of the parts should, if possible, be avoided, since this not only renders them hard and difficult to cut, but also damages their vitality and may lead to sloughing. The correct time to make the incision is just short of the freezing point-admittedly difficult to judge without a good deal of experience. The method is extensively used for making rapid incision into small abscesses, whitlows, etc., and it has the advantages of being quick and easily applied Its disadvantages are that the pain of thawing is often equal to that which an incision would have produced, while the devitalization of the tissues may lead to a spread of infection, and necrosis. It is obviously applicable only where a small incision has to be made rapidly, and does not allow of any dissection or exploration.

Cocaine

The oldest, cocaine, is a natural product which has an intense anaesthetic effect. Unfortunately it is a fairly toxic material, and so its use by injection has been largely abandoned It has however, two important properties which render it valuable for specific purposes. These are its power of acting when applied to the surface, especially of mucous membranes, and its vaso-constrictor effect. For these reasons it is used to produce anaesthesia in the nose, conjuntival sac and urethra. The solutions commonly employed to produce surface anaesthesia range from 5 to 10 per cent., and in some instances even to 20 per cent., but it must never be overlooked that in such strengths the solution is very toxic and may cause collapse. Cocaine should never be used for injection.

Novocaine

Novocaine is throughly satisfactory for all but surface application. It is seven or eight times less toxic than cocaine, and can, therefore, be safely used in fairly large quantities. The usual strength for injection is ½ to 2 per cent, the former for extensive infiltrations, the latter for regional anaesthesias.

It is a synthetic product which, unlike cocaine is stable to heat, so that the solution can be sterilized by boiling—a very important practical point. If used in 0·75 per cent, solution with adrenalin, large quantities may be safely injected; as much as 5 oz. have frequently been used without ill-effect, although it would be inadvisable to give such doses at one injection, nor would they ever be required in minor surgery.

The mention of adrenalin makes it necessary to refer to its action when added to the anesthetic solution. By its vaso-constrictor effect adrenalin prevents the rapid absorption into the circulation of the anaesthetic. In this way not only are the toxic effects of the solution much diminished but the anaesthetic is retained locally, so that the period of anaesthesia is prolonged. The cutting down of the blood-supply to the part is also of great advantage surgically in preventing loss of blood and giving a clear operative field. For these reasons adrenalin must never be omitted from any anaesthetic solution which is to be injected locally. It is supplied in a strength of 1 in 1000 and of this about 5 minims to the ounce of anaesthetic solution may be added. The natural product cannot be sterlized by boiling, and must, therefore, be added to the solution afterwards; this constitutes a weak point in the technique, but the newer artificial products will withstand boiling for a sufficient time to render them sterile.

Novocaine gives a rapid anaesthesia which is painless in its induction, and which lasts sufficiently long to enable any minor operation to be performed.

Pantocain

(Pantocain is a local Anaesthetic of the Novocain series. It is ten times less toxic than Cocain and ten times more powerful than Novocain. Another advantage over Novocain is that it can be used for Superficial Anaesthesia (*i.e.*) of the mucus membrane. For infiltration Anaesthesia 1 in 1000 solution is sufficient and Anaesthesia last for 4 to 5 hours—Ed.)

The Misuses of some common remedies

(Adapted from the 'Praetitioner' January '36)

Digitalis

No drug is more loosely used than digitalis. The idea that it should be prescribed whenever the heart's rate is increased, its rhythm is irregular, or there is a murmur, is grotesque. It seems to be forgotten that it is a poison in many ways, and not a magic cordial, and that it benefits the circulation chiefly by depressing the conduction of impulses passing from auricle to ventricle. As a matter of fact, it has only a limited field in treatment; and the chief indication for its use is the presence of congestive heart failure. The most dramatic effects are seen when this is associated with auricular fibrillation; indeed, its reputation in heart disease was founded on its success in this particular combination, though it was not till the work of Mackenzie and Cushny that this was recognized. Neverthless, it should also be given to patients with congestive failure who retain normal rhythm—a rare event except in hypertension—though here its effects are seldom, if ever, as marked as when there is auricular fibrillation.

Digitalis has no effect on simple tachycardia due to nervous toxic (including thyrotoxic) and anaemic states. It may exaggerate innocent irregularities of rhythm, such as sinus arrhythmia and that due to extrasystoles; and in any case these need no treatment. It will not restore normal rhythm in established auricular fibrillation, as is often believed, nor will it stop individual attacks of paroxysmal techycardia, unless due to auricular flutter, nor prevent attacks when given continuously. In acute rheumatic carditis and established valvular disease alike, whatever the murmurs may be, it is useless unless congestive heart failure is present as a complication. It has no place either in the treatment of post-operative shock or of syncopal attacks. Opinion has been much divided over the value of digitalis in pneumonia. In a recent statistical analysis of 1,456 cases, however, Cohn Lewis concluded that its routine administration does not influence the course of events, Only

in the rare cases complicated by auricular fibrilation or auricular flutter did they find it beneficial. This conclusion is of great interest, for it confirms the truth of Mackenzie's views, which he propounded over twenty years ago.

Since the pharmacopeial preparations of digitalis have been standardized, the powdered leaf in pill form and the tincture are all that are generally needed. They are both cheaper than the best propreitary preparations, are reasonably stable, and are of assured activity. The infusion has such practical disadvantages that its use should now be abandoned. The tincture of strophanthus also is a redundant preparation; for it does not keep when diluted with water, and its active principles are not absorbed with certainty. This latter objection also applies to squill and, clinically, its cardiotonic action is rarely effective. If a rapid digitalis action is needed in heart failure, (with severe vomiting), strophanthin or digoxin should be given intravenously; there are few occasions however, when such therapy casts the die between life and death, and its importance has been much exaggerated.

Strychnine

Strychnine is still much used in the belief that it has a favourable action in certain forms of circulatory failure especially shock. There is no evidence for this. In animals strychnine has no action upon the circulation in doses proportionate to those given to patients other than to cause a trivial rise in blood pressure through medullary stimulation. Even this is not produced in man, either in health or disease) and its use as a cardiac stimulant is not justified.

Caffeine

Drugs of the caffeine series have a most complex effect on the circulation of animals. They tend to raise blood pressure by stimulating the vasmotor centre, tend to lower it by dilating peripheral vessels, and also cause tachycardia through direct action on the heart muscle. In man the net results are remarkably slight and inconstant, indeed, one of us, working with the late Prof. Cushny some years ago, found no demonstrable effects

upon either the pulse rate or blood pressure of patients from even intravenous injections of caffeine citrate in ordinary doses. Such evidence shows how slight is the foundation for the wide belief in its virtues as a circulatory stimulant.

Camphor

Camphor is another drug much used now in various forms as a cardiac stimulant. Yet Heard and Brooks found that it had no effect upon either the pulse rate or blood pressure in patients, even when given hypodermically in doses up to 50 grains in oil. It is hard to believe then that it has any value as a cardiac stimulant in emergency. The truth of the matter is that it has no more effect on the heart and circulation than has the subcutaneous injection of any mild irritant such as ether.

The Drug Treatment of Angina Pectoris

The drug treatment of angina pectoris has till lately been haphazard, and there has been no general agreement upon the comparative value of remedies used either for continuous or immediate treatment. Recently, however, Evans and Hoyle systematically tested the efficacy of various drugs believed to reduce the frequency or severity of attacks if used continuously, as well as of those used in attacks. As regards the former, their results were surprising. Using a placebo as a control, they found that of all the drugs tested—sodium nitrite, mannitol hexanitrate, erythrol tetranitrate, potassium iodide, luminal, chloral, morphine, papaverine, phenacetin, diuretin, euphyllin, belladonna, digitalis, lacarnol, and harmol—not one proved to be more efficacious than this. They concluded that the use of these drugs in continuous treatment was thus unfounded and should be abandoned.

In assessing the comparative value of drugs used for the relief of pain in individual attacks, they tested the following: glyceryl trinitrate (trinitrin) in tablet form, in the 1 per cent. alcoholic solution (liquor glycerylis trinitratis), and in solution in oil, its proprietary preparations: natirose dragees, nitrolingual capsules (Pohl), and trinitrin caffeine pills (Dubois), as well as

amyl nitrite, sodium nitrite, chloroform, brandy, and carminatives.

Trinitrin in tablet form they found to be easily the best remedy of all. This was not only on account of its efficacy in relieving pain, but also for the almost complete absence of disagreeable symptoms following its use, its harmlessness, even if taken regularly at short intervals, its portability, and its cheapness. Another and even more important asset, is its value for the immediate prevention of attacks; for example if an anginal subject has to perform some act, which from experience he knows likely to induce an attack, he can almost certainly prevent the pain, and without additional risk, by taking one or two tablets (gr. 1/100) a minute or so beforehand.

Amyl nitrite was found to be much less effective in relieving pain; it commonly led to unpleasant general symptoms, and it was valueless for the immediate prevention of attacks. Moreover, the glass capsules are often difficult to break, and their use attracts attention. For these reasons amyl nitrite holds only a minor place in routine treatment, and should only be tried in those exceptional cases in which rapid relief is not obtained from trinitrin. Sodium nitrite, chloroform, brandy, and carminatives they found to be much inferior remedies.

It must, however, be emphasized. that, unless trinitrin tablets are taken properly, the results will be disapointing. The drug is absorbed far more rapidly by the mucous membrane of the mouth than by that of the stomach, and, to get the best effects, it is essential for the tablets to be chewed thoroughly and allowed to dissolve in the mouth rather than swallowed immediately. If these conditions are observed, they rarely fail to give relief. In view of their very transient effect, however, it need scarcely be added that their occasional administration, e.g., thrice daily without regard to the incidence of attacks, is valueless.

Nitrites and Iodides in Hypertension

The action of nitrites is so transient or so slight in doses that can be tolerated that it precludes their continous administration as hypotensives. A recent addition, a bismuth subnitrate

has also proved disappointing. Apart from a possible temporary use to relieve symptoms in certain "hypertensive crises," nitrites have no place in the treatment of hypertension.

It is curious how the belief that iodides reduce blood pressure persists. Over a generation ago Stockman and Charteris, in a classical paper, proved that they had no effect in man even in massive doses. A few years later Coley confirmed the truth of their observations. Later still Allbutt, Mackenzie, and others insisted on their uselessness. No satisfactory evidence of their value in hypertension has ever been put forward, and yet to-day they still have a general vogue. Almost certainly such improvement as may occur during iodide administration is no greater than can be obtained with any placebo; for instance, Aymano recently found that 33 out of 40 cases of hypertension improved when treated daily with a few drops of dilute hydrochloric acid.

Expectorants

It is a hard saying, but it is doubtful if, on balance, expectorants do not do more marm than good. Most of them act reflexly by irritating the gastric mucous membrane, and to produce a more abundant bronchial secretion, must be given in doses sufficient to cause nausea not a consummation to be desired in an ill patient. In the small doses commonly used, if there is an effect at all, it is often merely a "disordered stomach", as Fishberg sarcastically observes. But it may be argued this objection cannot be brought against alkalis. It may be asked, however, if alkalis have in fact any expectorant action in patients. Massive doses of them—enough sometimes to induce an alkalosis—are given in the treatment of gastric and duodenal ulcers without evidence of increased bronchial secretion. Again, it may be urged, that iodides at any rate are above suspicion. This is indeed the case in iodine-sensitive patients. In others, as is well known, enormous doses can be tolerated without iodism resulting, of which increased bronchial secretion is a part. The fact of the matter is that both clinical and experimental actions of the expectorants badly need re-investigation. Many of the older clinical observations

are palpably fallacious, and the best results of animal experiments are either negative or contradictory. Moreover, in such experiments there has seldom been any attempt to imitate the conditions met in disease. Even if it be granted that expectorants are sometimes effective, they are commonly misused in certain diseases. In so far as they can only influence the character and quantity of secretion from the bronchial tract, their chief use must be in bronchitis. In lobar pneumonia unless there is an associated bronchitis, their use is irrational even during resolution, for most of the exudate is absorbed rather than expectorated.

Volatile Oils and Inhalant Antiseptic

All volatile oils are irritants and week antiseptics. When experimentally applied directly to the bronchial mucous membrane they increase its secretion, if the concentration is sufficient to cause irritation. When they are inhaled, sufficient reaches the respiratory tract to produce this effect-their relative values however, have never been compared, and, curiously, some e.g., oil of turpentine and terpine hydrate, are said to reduce bronchial secretion. Given by mouth the oils are excreted by the bronchial mucosa in such minute traces to have only a negligible effect. It is more than doubtful if volatile oils can act as bronchial antiseptics even when inhaled. As they have no selective action upon the bacteria found in the respiratory tract, an effective antisepsis would only be possible at the cost of prolonged irritation and even damage to the tissues. Moreover, the concentration in the inspired air required to secure this is far beyond that allowed by their volatility.

To summarize the use of volatile oils; so far as they stimulate cough by tracheal irritation and have some slight expectorant action they have a certain value when inhaled, for thereby accumulated secretions which serve as a pabulum for organisms are got rid of. In this way they indirectly diminish foetor which their own pungent odours also mask.

Belladonna and Atropine

Belladonna and atropine are still much used with the object of reducing the bronchial secretion in the early stages of acute

bronchitis or broncho-pneumonia. Even if enough is given to do—this surely a rare happening—it is doubtful if the patient is benefited. As they increase the heart rate and stop sweating their use may, in point of fact, be undesirable.

In another rarer condition-acute pulmonary œdema the value of atropine is also open to question. Here the fluid comes from the alveoli, on which atropine doea not exert any action. The drug is therefore valueless unless there is an associated bronchial spasm.

Fever Therapy in Venereal Desease

(Adapted from the British Medical Journal August, 3rd, 1935.)

Pyrogenic or fever therapy has come so much into the limelight in the treatment of venereal disease of recent years that the appearance of a symposium on fever therapy in the *Proceedings of the Mayo Clinic* for March 27th, together with two articles on the treatment of gonorrhoea by this means appearing in the Journal of the American Medical Association (May 18th), is particularly apposite. Many views have been put forward in answer to the question why artificially produced fever gives such beneficial results in certain morbid conditions. Probably the most important factor is the lethal effect of high temperatures on the invading organisms; but, in addition, it has been shown that fever favours phagocytosis, diminishes the potency of toxins and stimulates the development of immune bodies. At different times various observers have recorded almost miraculous cures of gonorrhoea in patients who have suffered from intercurrent attacks of some acute specific fever, but it was Wagner-Jauregg in 1918 who applied the principle to the treatment of G. P. I. by malaria. The two conditions, above all, which benefit from fever therapy are para-syphilis—especially G. P. I.--and gonorrhoeal arthritis. Physical methods, such as diathermy, of raising the body temperature have been used in the treatment of G. P. I., but on the whole they do not seem to have yielded such good results as malaria therapy, so that factors other than a simple rise of temperature are probably

ıvolved. In any case there can be no question that artificially roduced fever has revolutionized the treatment of G. P. I. For he various manifestations of gonorrhoea many forms of fever reatment have been devised. Local heating—if possible beyond he thermal death-point of the gonococcus—has been carried out n the urethra and its adnexa by means of water-heated or lectrically heated instruments and by diathermy applied to he affected part. A general raising of the patient's temper- ture has been accomplished by various means, such as the ntra-muscular or intravenous injection of vaccines of the coli- yphoid group, of proteins such as milk, and more recently of of Dmelcos vaccine; these therapeutic measures often produce emarkable results in gonorrhoeal arthritis. In the articles nentioned above Hench and Slocumb report a series of cases of gonorrhoeal arthritis treated by enclosing their patients in the ıypertherm chamber of Simpson and Kettering at a temperature of 106 degrees—107 degree F., for five to eight hours. Cure was obtained in 88 per cent. of the acute cases and 43 per cent. of the chronic, and 29 per cent of the latter were also considerably improved. It seems generally agreed that failure is due to insufficient height of the fever, too short a period of pyrexia, or occasionally to a particularly resistant strain of gonococcus. Stuhler treated twenty-nine cases of simple gonorrhoea by similar methods, with cure in twenty-five and improvement in four. No complications were observed in this series. On the other hand, Bierman and Horowitz treated gonorrhoea in the female by intense prolonged heating of the pelvic organs. A systemic temperature elevation to 105—106 degree F. was brought about by means of one and a half to one and three—quarter hours. The vaginal temperature was maintained at 110 degree —112 degree F. for three and a half hours. An average of three sessions caused disappearance of gonococci in nineteen out of twenty-three cases. Contra-indications to pyrotherapy are few: elderly and obese patients and those suffering from cardiovas- cular or pulmonary disease should not be subjected to it. Bye- effects are uncommon, although the treatment is somewhat exhausting, and some patients complain of weakness and malaise, as is only to be expected. Constant skilled supervision

is essential throughout the period of pyrexia. No one will deny the beneficial effect of malarial therapy on G. P. I. As regards gonorrhoea less work has been done in the matter of fever therapy, but the theraml death-point of the gonococcus seems to hold out definite hopes and success, which would appear to depend on the possibility of devising a simple and safe method of raising the patient's temperature to the optimum point and maintaining it there for a sufficient time. Physical methods appear to be the most desirable, since with them it is easier to control the degree and duration of the pyrexia. Similarly generalized heating of the patient's tisses is likely to prove more satisfactory than localized heating, since it ensures that all invading organisms are reached. The "Kettering hypertherm", as used in the Mayo-Clinic, seems to be the best instrument devised so far, but unfortunately it is not yet on the market. (Diathermy to the prostate or cervix in variably cures Gon. Arthritis Ed.)

The Surgical Treatment of Elephantiasis

(Adapted from the 'Travancore Medical Journal 1935)

A woman was admitted six weeks ago suffering from advanced elephantiasis of the right leg. The leg above the ankle measured 21 inches and was firm. The swelling extended from the dorsum of the foot to just below the knee joint. Sir Harold-Gillies has recently published observations he has made to show that the lymphatics of the skin are capable of providing a complete lyphatic return for a limb. Upon this assumption I attempted to devise an operation suitable for this case. Obviously the skin used must come from a part not yet blocked by filaria, and it must have a good blood supply. A rectangular strip of skin ten inches long and 1½ inches wide was cut from the inner aspect of the right thigh leaving its lower end attached at the knee joint. The flap was dissected up including the deep fascia. A long tunnel was then made deep to the fascia at the knee joint down into the gelatinous tissue of the leg. A small 1 inch incision was made in the middle of the leg down to this tunnel and a long pair of curved Kockkers forceps passed

up. The end of the rectangular flap was seized and pulled down into the gelatinous tissue, skin surface deep, the raw surface facing outwards. All the raw areas were closed by drawing the skin edges together with silkworm gut sutures. The leg was then compressed by elastoplast bandages. In a week the firm elephantoid tissue had become more flabby and the girth at the ankle had reduced from 21 inches to 20 inches. In three weeks the leg had practically emptied itself of excess fluid and the skin hung in flabby folds. The elastoplast bandages were removed and in a few days the sagging pendulous skin of the calf began to fill though the dorsum of the foot continued to become smaller. Elastoplast bandages were again applied and when the leg is again completely empty the sagging skin will be excised.

It is too early as yet to say whether this operation spells new hope for the sufferers of extreme degrees of elephantiasis. I hope to publish a series of cases with after histories when I have collected sufficient material but the remarkable drainage in the case recorded justifies further experiments in this direction.

(BY IAN M. ORR, M.D., F.R.C.S., (EDIN.)

Methylene-Blue in Dyspnoea

(Adapted from the British Medical Journal Oct. 5th '35.)

H. SCHLUNGBAUM (Deut. med. Woch., June 14th, 1935, p. 945) has given intravenous injections of methylene-blue (10c. cm of a 1 per cer cent. solution) to several patients whose pneumonia was associated with distressing dyspnoea. In most cases considerable relief was obtained directly after the injection or even during it, the respiration becoming quieter, the patient's anxious expression disappearing, and a sense of relief being felt. Cyanosis frequently gave place to a red flush, and in four cases the injection was immediately followed by pallor of the tip of the nose. The beneficial effects of the treatment usually lasted twenty-four hours, after which return of the cyanosis was an indication for another injection. In five cases one injection was

sufficient to tide the patient over the most critical phase. Discussing the rationale, the author remarks that, despite may investigations at differnt times the mode of action of methylene-blue in embarrassed respiration still remains obscure. Probably the drug has no direct effect on the morbid processes responsible for the dyspnoea. But even if the action of methylene-blue is only symptomatic, the more or less transitory relief it gives from the distress of severe dyspnoea warrants its employment.

Prognosis and Treatment in Pre-Eclampsia

(Adapted from the British Medical Journal Sept. 14th 1935.)

D. V. RAISZ (Zentralbl. f. Gynak, July 13th, 1935, p. 1634), in 1,000 ante-natal examinations, has measured the pressure in the cutaneous blood vessels by the instrument described by Hertrog (Deut. Arch. f. klin. Med., 1929, 164). He had previously found that even in those cases of pre-eclampsia which clinically appear most threatening eclamptic convulsions do not occur if the pressure keeps below 50 mm. Hg. He now concludes that, whereas the degrees of albuminuria, oedema, and arterial tension are by no means indicative of the severity of the pre-eclamptic toxaemia or the likelihood of an eclamptic fit, the estimation of the skin vascular tension is almost an infallible guide to prognosis and the efficacy of treatment. With a pressure of over 50 mm. acceleration of labour alone will not avoid eclampsia; but where severe symptoms are coupled with a pressure of less than 50 mm. operative intervention is unnecessary. If venesection in pre-eclamptics reduces the cutaneous pressure below 50 mm. operative treatment is called for; otherwise the customary therapeutic measures must be set going.

On Liver Nourishment and the Blood Condition

BY PROF. J. PAL

Wiener Klinische Wochenschrift, 1928, No. 5

When one considers the question exactly, from the original alimentary problems of treating pernicious anaemia with the daily administration of liver, there has developed an organo-therapeutic treatment. Liver contains various substances, food substances, vitamines, and also irritants (hormones). Liver extract is not only a specific agent for pernicious anaemia but also one which stimulates the formation of erythrocytes, provided that the effective substances are administered in sufficient quantity, and that a stimulable haematopoetic system is present.

The formation of blood colouring matter does not proceed parallel with formation of erythrocytes, with the giving of liver. This is most marked with secondary hypochrome anaemia, also in cachexias such as tuberculosis, carcinoma, lymphogranulomatosis, in as much as the erythrocyte count increases decidedly, where as the haæmoglobin remains unchanged. With pernicious anæmia, the lack of hæmoglobin is not in the foreground; hæmoglobin bearers are lacking. There is a dissociation between hæmoglobin and formation of erythrocytes in both hypochrome and hyperchrome anæmia. The argument against Minot's opinion that cases of apparent pernicious anæmia which do not respond to the administration of liver are not pernicous anæmia at all is that not only pernicious anæmia but almost every form of anæmia responds to liver nourishment but only when the bone marrow can be stimulated. To call a case of anæmia cured, the relation between erythrocytes and hæmoglobin must have become normal, and must remain so, permanently. Treatment must take two problems into consideration, the formation of erythrocytes, and the production of haemoglobin.

Parenteral Treatment of Pernicious Anaemia

BY DR. A. SCHECHTER

(Wiener Klinische Wochenschrift. 1933, No. 9)

The author states that liver contains various therapeutic agents, and it is still too early to assume a single effective substance. The use of the injected liver preparations appears necessary because especially the very advanced cases, where a rapid response is vitally necessary, often do not respond to peroral treatment, although this does not indicate that the production of blood in the bone marrow is impossible. The parenteral administration of liver extracts allows of independence from lack of intestinal absorption. Procythol pro injectione Sanabo has proved to be very effective. The parenteral administration of liver extract is a decided improvement in the therapy, in as much as it is almost always possible to get along without blood transfusion, even in very advanced cases. Special attention should be called to the rapid increase in the erythrocyte count when liver is given parenterally. whereby intravenous injections have proved to be of less value than the intra muscular administration. Correspondingly large doses should be given in the beginning. It should also be mentioned that the injection therapy is decidedly cheaper than the daily administration of liver extracts.

The Trichinopoly District Medical Association

(REGISTERED)

The 7th Inaugural meeting of the above Association was held at 5 p.m. on wednesday the 15th January '36 in the Golden-Rock Railway-Hospital, Trichinopoly when about 40 doctors attended. Dr. C. E. R. Norman the President of the Association who was 'At Home' to the members and extended a special welcome to Lt. Col. Newcomb, Surgeon-General-with the Government of Madras who was present on the occasion. The Surgeon General made a few remarks congratulating the Association on its activities and the cordiality prevailing amongst the medical men, there. After thanking the Association for giving the opportunity of meeting so many medical men and after bidding fare-well he departed.

Dr. C. E. R. Norman moved a resolution which was carried unanimously sending fraternal greetings to the Tinnevelly District-Medical Association on the occasion of its Annual-Gathering.

Dr. P. A. S. Raghavan, the Secretary moved a resolution that the Trichinopoly District Medical Association be affiliated to the Indian Medical Association. This was seconded by Dr. R. Sambasivan, and was passed without any opposition.

Dr. V. Iravatham of Thirukkattupally demonstrated an interesting case of "Septicaemia" in a boy aged 10 and Dr. Norman demonstrated a case of "Empyema" in a boy of 10 operated upon in the Golden Rock Railway Hospital and later treated by Ultra-violet-Rays.

Dr. P. A. S. Raghavan then delivered a lecture on 'Ultra-Violet-Ray-Treatment giving his personal experiences and quoting from different authorities. He emphasised that ultra-violet-ray treatment was a specific in Rickets, Tetany, Surgical Tuberculosis, Erisypelas etc., and could usefully replace other treatments in skin diseases as Eczema, Lupus acne, boils adenitis Etc. It may also be used as an adjunct in the treatment of all

other diseases especially of anaemias syphilis, Asthma, intestinal-Tuberculosis, and general debility. After a few remarks by Dr. R. Sambasivan, and the President's concluding remarks and with a vote of thanks the Host the meeting terminated.

TRICHINOPOLY,
28th January '36.

P. A. S. RAGHAVAN.
Secretary

Jegam & Co., Trichinopoly.

MISCELLANY

OF

THE TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION

(REGISTERED)

FEBRUARY 1936

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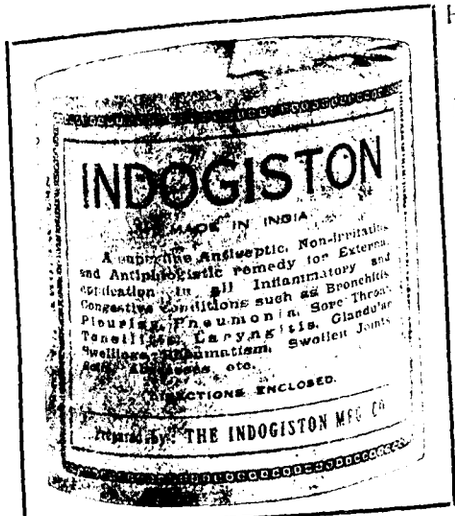

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much effect on the phlegmatic child as the most valetudinariam adult. The failure with children became successes with increased dosage. Further, what psychological mechanism can be found for those two cases who suffered from serum sickness? Finally, I cannot help being strongly influenced by the observation that the deeper the pigmentation obtained the longer the immunity conferred.

How, then, does it act? It must act obviously through changes brought about in the epithelial tissues, the capillary blood, or the superficial nerves. While admittedly the interfrity of the axon reflex may be necessary for erythema production, claims put forward for both raising and lowering the sympathetic tone by irradiation seem equally groundless. Although waves of 3,400 to 3,900 reach and are stopped by the blood, I can find no convincing evidence of significant beneficial action thereon. It is evident that erythema is produced and maintained by some substance formed in the epithelial tissues. Can histamine or H. substance be the agent? Absorbed into the general circulation it should increase vagotonus, even to the point of surgical shock. This would supply an explanation for the vagary of case, except that it happened once only, and no other such cases were seen. To cover all the clinical observations it would be necessary to postulate that normally the H. substance activates an over-compensatory flow of an antagonist—say adrenaline—to which the relief is due, but that on one occasion there was not enough adrenaline immediately available to compensate. Certainly a cat injected with histamine responds with an increased out put of adrenaline; with the suprarenal medulla destroyed, a thirtieth of its normal lethal dose causes irremediable collapse.

Turning to the underlying allergic nature of asthma, one cannot help being attracted by Hindle-Smith's hypothesis. He suggests that exposures to ultra-violet rays are in effect mild, "protein shocks" which gradually aid libération of a protein normally foreign to the tissues. Though clinically there is similarity between the end results, my objection to this theory is that neiher the two patients who received overdoses nor in any of the others was there produced anything resembling protein

shock reaction. Effective protein therapy should provoke a reaction after each injection, sometimes slight, sometimes severe. Ultra-violet ray exposures, producing no such reactionary phenomena, nevertheless give the same relief and immunity. I therefore suggest the following mechanism, which involves the relation between melanin and adrenaline.

It is notorious that a sudden shock, such as is experienced in a narrowly averted accident, will cut short an asthmatic attack, presumably by a sudden flooding of adrenaline into the circulation. On the other hand, we know that prolonged strain, caused by heavy exertion, or even by business worries, such as might drain the suprarenals of their secretion, is often followed by an asthmatic attack. Also prolonged strain, worry, or a septic focus will cause more rapid loss of pigmentation than normal.

Can ultra-violet rays have any action on the adrenaline content of the blood? Adrenaline itself cannot be formed in the epithelial tissues near the capillaries, or it would cause vaso-constriction, whereas in fact erythema obtains. Let us assume that the parent substance of both adrenaline and melanin (which we will call dopa-substance) originates in the epithelial cells, and that the action of ultra-violet light stimulates the production of this dopa-substance. It is carried in the blood stream to the suprarenals, where part is converted into adrenaline, which proceeds to maintain sympathetic tone. Excess of the dopa-substance is converted and fixed by the oxidase in the epithelial cells to form melanin granules, which are thus a store of potential adrenaline. We might even imagine the melanin granules, by their shading effect, easing off the production of dopa-substance. When the body's call for adrenaline lowers the dopa-substance content, as in conditions of strain, fatigue, and sepsis, melanin is reconverted into dopa-substance and the suprarenals are supplied with more raw material. Also, the disappearance of pigment allows increased production of dopa-substance by the action of light. With diseases of the suprarenals we should expect more dopa-substance in the blood stream than they could convert to adrenaline, and this excess would be stored as pigment.

This mechanism would account for the comparatively poor results in the case of blond patients, and for the long immunity enjoyed by the well pigmented. Also, it might be invoked to account for the immunity experienced at high altitudes, by reason of the greater wealth of ultra-violet rays in the solar spectrum at those heights. Unfortunately, even this mechanism fails to explain all the clinical phenomena. For example, in a case during his asthmatic attack, was apparently suffering from acute suprarenal dysfunction; which means either that there was an indequacy of dopa-substance, or else that the suprarenals were failing to convert it to adrenaline. The fact that he did not pigment in an Addisonian manner does not necessarily indicate the latter; it may have been too slight to be noticeable. He was given suprarenal extract (empirically) by mouth, and this was followed by improvement. But we do not know the real effect of suprarenal extract given by mouth. It may be the adrenaline content that is absorbed, or a ferment-in which the suprarenals are temporarily deficient—for converting dopa-substance into adrenaline. Whichever it may be, the whole scheme breaks down when the patient—on regaining his suprarenal function and normal blood pressure develops an attack of asthma. One would have expected him to do this earlier, when his adrenaline production was at a low ebb. The only possible (and to my mind rather weak) plea is that he may not have had the allergic provocation.

Abdominal Pain

Adapted from the clinical lectures delivered by St. Col. [illegible] M. R. C. P. I. Ms. to Students of the Madras Medical College.

Many pains are referred to abdomen and are not true abdominal pains, like referred pain from tne lungs and pleura. Again good many cases of pneumonic pain are diagnosed as appendicitis.

The pain may be muscular as one gets after severe coughing and after severe strain.

Pain may be of the nature of girdle pain, that is hyperaesthesia owing to irritation of nerve roots as happens in herpes zoster, and transverse myelitis.

True abdominal pains may be classified into four varietis:

1. Catastrophic,
2. Periodic, or episodic—various sorts of colic coming on at intervals.
3. Intermittant—Colic comes on more or less at the same time of day, i. e., daily recurrence—pains of ulcers connected with taking food,
4. Continuous.—which comes on over long intervals without any intermission.

1. Catastropic: Perforation of a viscus bringing about peritonitis, intestinal obstruction, acute pancreatitis, and one often includes acute appendix which very often passes into perforation. These demand operation atonce and the diagnosis of the condition is very often difficult and of very little importance. Acute haemorrhagic pancreatitis is never diagnosed before abdomen is opened. It is important to operate soon without wasting time on discussion.

2. Periodic: This includes various sorts of colic. A Intestinal colic: This of course occurs under a large variety of conditions, which can by no stretch of imagination be called periodic. There are only 2 true periodic colics, and these are *a.* lead colic, and *b.* mucomembranous colitis of neurasthenic individuals. Apart from these 2 severe pains one gets severe colic in enteritis and other forms of colitis, dysentery, etc. The

explanation is obvious. B. Biliary colic: Usually occurs in women, 30 years of age and over. Pain always starts in the epigastrium, radiates to the back and right shoulder; usually accompanied by vomiting and very often by jaundice. C. Renal colic: Due to increased pressure tension in renal pelvis. Here the pain is in the lumbar region, radiating to the groin, and produciug retraction of the testis; and accompanied by vomiting as a rule, and is generally due to renal calculus and is followed by *hae maturia*, and occasionally by the passage of stone, though more often stone gets left behind in the renal pelvis. In some cases as in tubercular kidney the colic is due to inspissated pus and blood clot.

D. The other forms of periodic pains are appendicular and pancreatic colic. They are rare and pancreatic colic is very rare, and is diagnosed when stone is visible in X-Ray.

E. Dietel's crisis: is due to kinking of ureter in people with movable kidney. In a large percentage of cases there is an abberrant renal artery passing behind the ureter and kinking is more likely. Pain is severe and resembles renal colic except that pain radiates more to the back than to the groin. Pain is accompanied by vomiting and scanty urine, and sometimes a tumour may be detected in the loin, in which cases one gets intermittant hydronephrosis. With the subsidence of pain there is passage of urine and the tumour if present diminishes or disappears.

F. Persistant blocking of the ureters by other causes: Ureter may be stenosed without any symptoms; something happens and the ureter passes into intermittant contraction which sets up the cycle again. Such ureteral conditions may exist in cases of:—

1. Stenosis from ulceration.
2. Pressure by tumour, (more apt to occur at the brim of the pelvis.)
3. Pressure of a stone in the ureter.

If the blocked ureter is on the right side it is very apt to be mistaken for appendicitis. Note that there is no fever.

G. Abdominal angina: this is said to occur in elderly male members with high blood pressure and arterial degeneration. The points by which it can be recognised are:

1. Nature of the individual.
2. Pain related to same causes as angina, as physical and mental exertions, and emotions except anger, over eating, extra-large meal. The pain of the same radiates down the left arm as in ordinary angina. Patient complains of great pain, flatulence and distension; and pain is relieved by passing of flatus.

H. Gastric crises: We don't see often as tabes is very rare. Severe attacks of epigastric pain, may last for several days, and usually a marked zone of hyperasthesia over the stomach is seen. Chloretone in large doses is seen to be effective in these cases. (10 grs. every 4 hrs.)

Morphia may be needed and patient may become habituated.

(1) Pains referable to pelvic organs: as in salpingitis. Pain is apt to radiate in front of the thigh.

(3) Intermittant pains. Most important cause is gastric ulcer. Comes on $\frac{1}{2}$ hr. to $1\frac{1}{2}$ hr. after meals according to the distance of the ulcer from the cardia. Pain disappears spontaniously before next meal and is relieved by taking alkalies, or by vomiting. This pain hardly ever wakes a patient from sleep though it may prevent him getting sleep. The pain in duodenal ulcer comes on long after meal (3 or 4 hrs.) Therefore it occurs just before next meal—hunger pain —i. e.— pain relieved by taking food or alkalies. The pain very often wakes up the patient after he has gone to sleep. The other diagnostic points of the ulcer are: Skin is very often hypersthetic over a certain spot of epigastrium (not frequently seen). Frequently there is a tender spot just right or left of the line joining the blood. In gastric ulcers haemetamesis is present. X-Ray may aid in either of these cases. There are 3 theories about the pain of the peptic ulcers:

1. The pain is due to direct irritation of the ulcers by food. Nobody believes in this. The only point in favour of this theory

is that the pain come on in time proportionate to the distance of the ulcer to the cardia.

2. Due to irritation by acid. The point in favour of this is that it is relieved by alkalies or by diluting the acid by taking some liquid or by taking food. Against it we have that by giving the patient HCl the pain is not made worse. Typical hunger pain occurs in persons with achlorhydria. Again in gall bladder lesions where there is no question of ulcers at all pain is relieved by taking alkalies.

3. Due to increased intra-gastric tension due to reflex peristalsis and possibly to reflex spasm of the pylorus. Spasm results in achalazia of the pylorus. The pain is a constant pain and not a colicky pain; and peristalsis results in motility which gives colicky and not continuous pain.

Probably the pain is due to a combination of 2 and 3.

The second form of intermittant pain includes:

1. Gastralgia--a stomach pain in the absence of any organic lesion. Profound anaemia so called anaemic-gastralgia.

2. Hysteria: In this the patient complains of severe pain and also vomiting. Treatment is the same in both--absolute rest isolation from friends, toning up the patinet by massage and iron tonics, and give frequent small feeds. Some times it may be required to feed through the duodenal tube.

Pain due to cholecystitis; chr. appendicitis: Sometimes due to presence of stone in the kidney. Any of the 3 may simulate gastric ulcer closely. The chief differences are that pain dose not come on with such regularity, no free occult blood or haematemessis; and X-Ray findings.

(4) Constant pains. One gets constant pains in carcinoma of stomach or any other organ, or reteroperitineal *sarcoma*. One gets it in the perforation of any ulcer; adhesions form and drag a viscera when moved giving rise to pain; and also in other forms without ulcer. One gets it also in increased abdominal pressure as tumour, large spleen, ascitis, and so on. We get it in visceroptosis. Some particular neurasthenics suffer from pain that is only relieved by wearing a belt.

Carbolic Acid as a Gastric Sedative and as an Expectorant

J. C. Lyth calles attention to the value of carbolic acid as a gastric sedative. Many years ago he had a case of uraemia in which the principal symptom was persistent uncontrollable vomiting. Ordinary sedatives failed to act and morphine was contra-indicated. In his 'Materia Medica' Hale-White gave in a list of antiemetics carbolic acid. Lyth, therefore, in desperation gave a two minim dose. The vomiting immediately ceased. Since then he has found carbolic acid consistently effective, and looks npon it as the best gastric sedative, with the possible exception of adrenalin. He uses it not only to check vomiting, bnt also in many cases of gastritis from whatever cause. In inoperable carcinoma of the stomach, used with morphine, it gives great relief.

As a cororollary to its use as a gastric sedative, carbolic acid is useful as sedative expectorants appear to act refexly from the stomach, and carbolic acid is no exception. No doubt the favour it once held in cases of phthisis was due to this action. It is particularly useful in combination with ipecacuanha, as it enables large doses of the latter to be given without producing vomiting.

(From British Medical Journal, 1935, ii, 903)

External Haemorrhoids

(Adapted from the 'Practitioner' February 1936).

External haemorrhoids result from dilatation of the external haemorrhoidal plexus. As stated, the plexus lies at the anal verge and is covered with skin; this type of haemorrhoid is therefore sensitive. External haemorrhoids present two main types:—

(1) *Thrombosis* of part of the external haemorrhoidal plexus —producing a very painful visible swelling at the anus.

(2) *Hypertrophied anal skin tags* which result either from repeated attacks of thrombosis or from infection due to trauma or scratching.

External haemorrhoids exist apart from the internal variety but may be associated with them.

Acute thrombosed external haemorrhoid (anal haematoma). As the result of straining either at stool or work or sitting on a cold seat, congestion of the external plexus may occur, resulting in actual rupture of a subcutaneous vein at the anus. Thrombosis ensues and the blood clot may be both under the skin and in the lumen of the vein. The patient experienees sudden pain at the anus and feels a swelling. On examination, a tense rounded blue swelling is seen under the skin. There may be several thrombotic piles present. The swelling is acutely tender and there may be associated muscle spasm. Very occasionally a linear induration from it may be felt passing upwards in the anal canal. This is due to thrombosis of a connecting vessel lying in a column of Morgagni.

Treatment.—If the swelling is seen soon after its occurrence it should be excised. This is easily done by infiltrating the subjacent sphincter with proctocaine and removing the skin over the clot. The clot is removed and search is made for other smaller clots which must also be extracted. A small flat wound is left which is kept clean and dressed daily The patinet has no after-pain whatsoever owing to the prolonged action of the anaesthetic solution.

Hypertrophied anal skin tags. Fibrous skin tags at the anus may not give rise to any symptoms other than difficulty in keeping this region clean. The skin surface, however, may become abraded, and infection with swelling, oedema and tenderness, and sometimes the formation of an abcess results. These tags may be excised in the same manner as the acute thrombotic variety. In mild cases the application of lotions diminishes the swelling.

The following are useful lotions :—

R/Strong solution of lead subacetate	...	60 minims
Cows' milk	...	to 1 oz
R/Strong solution of lead subacetate	...	8 minims
Methylated spirit	...	120 minims
Recently boiled and cooled distilled water		to 1 oz

It is important to remember that other cutaneous conditions occur at the anus—such as peri-anal warts, condylomas, primary chancre and epithelioma. Furthermore, an oedematous skin tag may be due to a fissure or an inflamed crypt.

Successful treatment of all ano-rectal conditions depends upon accurate diagnosis, careful selection of cases, thorough pre-operative ann post-operative care and gentleness.

Fistula in Ano

(Adapted from the 'Practitioner' February 1936).

Treatment

The pre-operative preparation for rectal cases is arranged to obtain a relatively clean and empty rectum by the time of operation. The patient is given a suitable aperient two nights before operation, and on the following evening a soap and water enema. On the morning of operation a rectal wash-out of half a pint of plain water is given, five ounces being introduced at a time, and the first amount being syphoned out before the second five ounces is introduced. The peri-anal region should be shaved and washed thoroughly with soap and water and the remainder of the cleaning performed in the theatre. A pre-operative injection of morphine 1/6th grain and scopolamine 1/150 grain is suitable in the majority of cases.

Operative treatment.—There are two essentials to be considered in the operative treatment :—(1) the laying open of the fistula, including division of the part of the sphincter involved ; and (2) the provision of adequate external drainage.

In the first case the level of the internal opening will probably have been determined during the previous examination of the patient. As mentioned above; the majority of fistulae have internal openings at the level of the intermuscular sulcus (low level anal fistulae). This necessitates the division of the subcutaneous part of the external sphincter only, a matter causing no anxiety as this part of the sphincter is of no essential consequence for anal control and continence. In these case a low

spinal anaesthetic is ideal, the relaxation and anaesthesia are excellent and in practice there are no ill-effects.

For those fistulae with internal openings higher up in the anal canal in the region of the ano-rectal ring (high-level anal fistulae) an accurate determination of the position of the ring in relation to the opening should be made. If there is any doubt before operation that the ano-rectal ring may be involved, then it is a wise precaution to use general rather than spinal anaesthesia. The spinal anaesthetic gives such complete relaxation that it is impossible to determine accurately the position of the ring.

With regard to the amount of sphincter that can safely be divided, all the muscles below the ring, which include the sub cutaneous and superficial external sphincter, the lower part of the internal sphincter, and the longitudinal muscle, can be divided provided the upper part of the complete ring is left intact. As a word of caution, it should be remembered that the ano-rectal ring has rather less muscle anteriorly than posteriorly on account of the sling pupo-rectalis portion not completing the circle.

There is no particular advantage in the two-stage, silk-thread method, which is intended to hold the muscles together in inflammatory fibrous tissue created by irritation from the ligature, so that there is little separation when they are divided. When used on fistulae entering below the ano-rectal ring it serves no purpose, as these muscles are not essential to continence. If used to include the whole of the ano-rectal ring, the method is no safeguard at all if the complete ring be at a later stage divided.

When the whole of the ano-rectal ring is divided by what ever method, irremediable incontinence will result. The only safeguard is an accurately-trained finger to determine the level of the ring, and the recognition of the fact that in those cases (fortunately rare,) in which the internal opening is above the ring, the fistula is inoperable.

When this stage of the operation is completed, submucous extensions should be sought for and laid open by strangulating silk ligatures.

The second consideration is that of external drainage. This is devised to obtain as flat a wound as possible in order to prevent third intention healing by falling together of the sides of the wound. Healing by first and third intention is an unsatisfactory procedure in this part of the body, and the aim should be to obtain second intention healing by a flat granulating wound. The wound outside the annal canal should be much larger than the anal wound as it heals much more rapidly, and should be of such a size that the last part to be healed is outside the anal canal.

In dealing with the ano-rectal fistulae large external wounds have to be made in order to obtain as flat a healing wound as possible, and certain anatomical considerations have to be taken into account when designing these wounds. The ischio-rectal fossae are surrounded by bony prominences, the tuber ischii laterally and coccyx posteriorly, and it is not a satisfactory procedure to remove skin overlying these bones. The wounds have therefore to be designed by taking skin as far laterally as the tuber ischii, but not over them, and then cutting backwards to the lateral side of the coccyx, removing at the same time the skin over the whole ischio-rectal fossae. In exceptional cases of very deep fistulae it may be found necessary to remove the coccyx in order to obtain larger external drainage. During this part of the operation subcutaneous tracks are sought for and dealt with by open drainage. After the operation the wound is dressed with flat pieces of gauze soaked in an antiseptic solution and the bowels are confined for three days. Post-operative care and dressings are very important. Hot baths twice a day followed by irrigation of the wound with weak peroxide and eusol is the usual routine. The wound should then be dressed with flat pieces of gauze soaked in eusol. Tight packing of the wound should be deprecated as it tends to make the sides of the wound fibrous and the healing in consequence is very slow. When the wound is clean, oily or greasy dressings

are preferable as this cause less trauma to the ingrowing edge of skin than other forms of dressing. For large, deep wounds a form of Winnett Orr treatment may be adopted, the wound being lightly packed and only the top soiled dressings being changed each day. During the time of healing the wound should be inspected from time to time by the surgeon to determine that it is completely flat and that there is no bridging, sinus formation or pocketing. In this way satisfactory healing can be ensured, although in some cases it may take months to be accomplished.

The Medical Treatment of Peptic Ulcer.

BY T. ZOD BENNETH, M.D M.R.C.R.

(*From the 'British Medical Journal, January 11th 1936.*)

The medical treatment of Peptic ulcer must needs be long. It is obvious that a chronic ulcer placed in an actively moving part, such as the wall of stomach or duodenam and frequently bathed by active digestive ferments must be a difficult lesion to heal firmly and permanently. Besides a peptic ulcer is often present and active without causing any symptoms at all and particularly, a few days of strict treatment will sometimes remove all symptoms. Hence the necessity for collaboration of the doctor, and the patient during a long period for a permanent healing. Strict medical treatment applied over a sufficient period, is extremely satisfactory in all but a small percentage of cases.

(1) *When Pain is prominent*:—It indicates that ulcertion is very active. X-Ray and other examination shuld not be undertaken until the pain has disappeared. The orthodox and logical treatment is to keep the ulcer as far as possible at rest and free from the irritation of corrosive gastric juice.

On an ordinary diet the normal stomach contracts 6000 times daily; by giving small fluid feeds these contractions are reduced by 80%. By keeping the patient in bed, the body requirements as regards food are reduced to a minimum. Hence at this stage: Patient must be in bed, with hourly feeds not exceeding 3 to 4 ounces to be selected from the following.

Citrated milk, eggs and milk, milk flavoured with coffee, Arrow-root, Bengers food, Allenbury's, Glaxo, Ovaltine, strained milky vegetable and syrups. These may be changed from hour to hour in order that this patient may not get tired of any one food.

BELLADONA is a valuable drug for diminishing gastric secretion but must be given when the stomach is empty. Otherwise much larger doses are required, which produce unpleasent symptoms such as dryness in the mouth etc. (Five to seven minims of Tinc. Bellodana in an ounce of water when the patient first wakes up in the morning.) It should not be repeated.

ALKALIES:—Prescribe after every other feed. (If given after every feed, the total amount may be sufficient to cause diarrhoea).

Re/Mag. Carb. Pond	1 part
Mag. Carb. Levis	2 parts
Creta prep.	3 parts

Sig:—A small teaspoonful in water half an hour after every feed.

OPIUM:—If pain is very severe and *in the absence of any suspicion of Perforation.*

R/ Tinct Chloroform et morph. Co.	m VII
Aqua	ad oz SS

After a few days with the treatment pain usually disappears and a few hourly feeds may then be left out gradually increasing the remaining feeds (i.e.) 6 oz milk with a dose of alkali one hour after each feed from 8 a.m. to 8 p.m.

2nd Stage. Pain has practically disappeared. No vomiting or bleeding (test for occult blood) and the ulcer is beginning to heal. Very slowly add to the usual feeds small amount of the following foods at about the normal meal time.

Thin crisp 'oven' toast with butter,
Breakfast biscuits or rusks with butter
Soft milk pudding such as rice tapioca etc.
Ice-Cream, Honey, eggs, custard

In a fortnight the patient can usually be allowed to get up daily but not go out of his house.

Final Stage. The average course of treatment in uncomplicated cases should include about 3 weeks strict treatment, three weeks convalesecent treatment and a further three weeks during which the patient is doing light work on a well regulated diet.

3. THE FINAL STAGE. This well regulated diet should be planned to suit the requirement of every individual. For this two factors are of primary importance. (*a*) *The time of meals*:- It should be so spread that the stomach is never very full and never empty of every thing save corrosive gastric juice: three light main meals a day with a snack in the middle of the morning between lunch and dinner and in the late evening. (*b*) *The physical quality of food*:—Fluid foods of high nutritive value and foods which will go easily into semi-solution if placed in a glass of water are the most suitable. Alcohol and tabacco are forbidden. A small amount of alcohol may be allowed and tobacco better avoided; and if not possible must be allowed in strict moderation.

FORBIDDEN FOODS:—These are several but chiefly they are (*a*) all hard raw fruits and vegetables and pickles. (*b*) rough meat poultry, game, or fish. (*c*) the less digestable starchy foods. (*d*) jams containing pips and skins. (*e*) strong condiments. (*f*) cheese.

SELECTION OF CASES FOR SURGICAL TREATMENT:—The indications are, 1. perforation, 2. severe recurrent haemorrhage, 3. pyloric stenosis and hour-glass contraction, 4. deep ulceration with adhesion to the neighbouring organs as shown by X-Rays, 5. possible malignancy, 6. relapses in spite of medical treatment, 7. economic-factors, where effective medical treatment is not possible. In some of these for certain reasons operation may be contra-indicated. The medical treatment as mentioned before should have been carried out over a long period and with certain precautions, 8. cases with some degree of obstruction.

The final diet must contain plenty of fluids and easily liquefied foods. The partially obstructed stomach tends to become over loaded in the late hours of the day and hence the more substantial food should be at breakfast and lunch and the evening ones correspondingly deminished. In pyloric stenosis alkalosis (headaches. nausea, vomiting) is apt to occur, and so the amount of alkali should be limited to some milk and alkalies like prepared chalk. All foods must be fluid for a month at least. Duodenal feeding has achieved some brilliant successes in cases of this type and present little difficulties in carrying out. Many patients do not find it unpleasant after the first few days.

The Trichinopoly District Medical Association

(REGISTERED)

A monthly meeting of the above Association was held at 5 P.M. on Saturday the 22nd February '36 in the E. R. High School, Trichy when about 45 members were present. Dr. T. V. Srinivasan was 'At Home' and Capt. Sangham Lal presided. Before the commencement of the proceedings the Chairman moved a resolution of condolence on the death of the late King. George V and this was passed all standing in silence. The next resolution also was moved from the Chair and expressed regret at the sudden death of Lt. Col. Bholanauth. This was also passed all standing in silence. After welcoming the two new members the Secretary proposed sending fraternal greetings to the District Medical Associations of Tanjore and Madura for their Annual Gatherings. Dr. Iravatham of Thirukkattupally demonstrated a case of Hip-Joint disease and Dr. Kalamegham demonstrated a fracture at the Shoulder-Joint treated with Aeroplane splint.

Dr. P. Chokkalingam Pillay delivered an interesting lecture on 'Leprosy—Diagnosis and Treatment'. He stressed on the early diagnosis of the disease when treatment was more effective. Anaesthetic depigmented patch was the earliest sign of the nerve variety and thickening of the ear lobe of the skin lesion. In addition to hygienic mode of life, chaulmagroo oil in its various forms was the specic for the disease. There was an interesting discussion following the lecture and the various cases demonstrated.

With a vote of thanks to the Host, the Lecturer and the Manager of the premises the meeting terminated.

TRICHINOPOLY,
23rd February 1936.

A. S. RAGHAVAN,
Secretary.

தமிழ்நாடு ஆவணக்காப்பக நூலகம்,
எழும்பூர், சென்னை-600 008.

தவணைத்தாள்.

சே. எண் :

ப. எண் :

வழங்கிய நாள். (1)	திரும்பிய நாள். (2)	வழங்கிய நாள். (1)	திரும்பிய நாள். (2)

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MISCELLANY

OF

THE TRICHINOPOLY DISTRICT

MEDICAL ASSOCIATION

(REGISTERED)

MARCH 1936

MISCELLANY
OF
The Trichinopoly District Medical Association
(REGISTERED)

MARCH 1936

Rickets

(Adapted from the 'Practitioner' February 1936.)

Principles of Treatment

The cure of rickets is now a simple and a satisfactory process, but it may be valuable to discuss the manner of treatment. There are four ways in which the curative agent can be supplied: (1) by correcting the diet to include a greater proportion or vitamin-D-containing foods, such as liver, milk, eggs, butter and fresh green leaves ; (2) by adding to the diet a rich source of natural vitamin, such as the liver oil of cod or some other fish ; (3) by adding to the diet artificial vitamin in the from of irradiated ergosterol or calciferol ; and (4) by irradiating the patient's skin with sun shine or the rays of the ultra-violet lamps. There can be no doubt that the remedy of choice is to correct the diet of the child, and add to it cod-liver oil. It is not sufficient to rely on irradiation of the skin without correction of the diet. The diet necessary to prevent and probably sufficient to cure rickets is simple enough. One-and-a half pints of milk, the yolk of two eggs, two ounces of liver, meat or fish, with butter and an average helping of fresh green salad or vegetables contain calcium, phosphorus and vitamins enough for any growing child. It should not be beyond the wit of man to provide each day such a diet for every child in the country ; In the presence of active rickets the cure should be hastened by giving liver oil. The dose will naturally depend on the severity of the diease and the environment of the child. For mild rickets in a sunny part of England one teaspoonful daily may suffice ; With such treatment it takes from ten to fifteen weeks to cure rickets. It should not be necessary to resort to the use of emulsions of diluted oil. They are expensive, bulky, and varying in their contents of cod-liver oil. Most children learn to like cod-liver

oil unless the mother herself dislikes it and shows her dislike in her facial expression.

If it is desired to use vitamin concentrates or pure vitamin D itself, the potency of the preparation should be considered. The standard of potency in common use is that of "international units", and an average curative dose should provide about 1,000 units twice or thrice a day.

In some circumstances it is necessary to take active steps for the prevention of rickets. For children on a good diet in good surroundings and spending part of each day out of doors nothing more is required. But to a young premature infant of whatever social class extra vitamin should be given; otherwise they are prone to rickets. Within a month of birth cod-liver oil should be started and continued daily until the child is normal in weight and eating a mixed diet. The same precautions should be used for any child confined indoors, particularly during the winter months, for not always does breast milk or cows' milk contain sufficient vitamin.

It is of practical importance to record that recent measures for improving the diet of children is beginning to show good results. Severe rickets is now a rare disease in this country. It is hardly ever to be seen in rural children or children of the well-to-do. It lingers in the midst of our industrial towns, but the actual incidence of it has never been carefully computed by X-Ray examinations on any large scale. In the summer of 1932 I found it to be present in 5 out of 103 children taken for examination from the streets of Newcastle, but I have reason to believe that there has been a great improvement since then. If the incidence of rickets is to be taken as one of the means of assessing the social or dietary conditions of the people, it should be realized that it is now mainly to be seen, not in infants, but in older children of two or three years. With a little administrative activity there is no reason why it should not become as rare as scurvy within a year. Even now rickets is almost as a tale that is told, and it is safe to predict that within a few years it will be seen, as infantile scurvy is now seen, only in the children of food cranks or of parents of low mentalily.

Hypervitaminosis

The isolation of vitamin D in the pure crystalline form now known as calciferol and its increasing use in artificial vitamin preparations has raised the problem of overdose, of which the clinical results are named hypervitaminosis. Cases have been described of excessive calcification of the kidneys and arteries in infants who have been suspected of having been overdosed with the preparations. Indeed, there was some who go so far as to say that herein lies the explanation of some forms of arterial degeneration of later life. It must be conceded that theoretically such a possibility exists when cod-liver oil, vitaminized foods and ultra-violet radiations are given to pampered well-fed children, but in practice such a possibility must be rare. A recognition of it, however, may have the salutory effect of placing the treatment of rickets on a scientific and quantitatively accurate basis.

Birth of a Chimpanzee

J. Wyatt reported in the Obstetrical Section of the Royal Society of Medicine on the birth of a chimpanzee in the Zoo. The 12-years-old mother had started to menstruate when she was 8 years old. The entire menstrual cycle lasted about 26–28 days, the menstruation 4 days, the last one from 4th to 8th June, 1934. She had sexual intercourse daily from 11th till 20th June. Towards the end of August she had attacks of fury, yelled, threw herself on the ground, and bit her limbs. She quietened down after the administration of Calcium. At the end of December the mammae began to swell, and she pulled often at the maillae, apparently to pull them out. The pain started on February 15th, and with her fingers she tried to help the expulsion of the embroyo. After $4\frac{3}{4}$ hours the head was born. The mother now pulled out her young by its neck. The placenta was only born 36 hours later, spontaneously. The young chimpanzee, which had not looked for its mother's breasts, was then put to them, and was nursed every 3 or 4 hours. The mother changed him to her other breast after he had ten minutes at one. *(Brit. Med. Journ., April 6th, 1235)*

Thermometric methods for diagnosing death

The fear of a false apparent death (especially of premature burial) has always been great. Means of preventing this, less drastic than incising the heart and less primitive than the mirror before the mouth, have long been sought. The Marques d'Ourches offered a prize in 1868 to the person who invented an instrument or discovered a method which could be used by even the most uneducated person. The knowledge of an infallible test might be of the greatest value in lonely regions where no doctor was available. The low temperature of a corpse has been considered as a means of determining whether life was extinct. The deeper regions of the body of a person only apparently dead must evidently maintain a fairly high temperature when the surface has already become cold, because of the practical cessation of the peripheral circulation.

Nasses (1841) and van Hengel (1848) constructed instrument in order to show the internal temperature. The last one, a Belgian, gave his instrument the barbaric sounding name of abiondeiktys. The instrument was barbaric too—a tube had to be introduced at least 50 cm. (20 inches) into the rectum.

Bordier has recently indicated a method which depends on the same principle. The method can be applied with on ordinary portable diathermy apparatus. One electrode is put on the abdomen, the other one on the thighs, and the current put through. The temperature remains constant or drops in the case of a corpse. A rise of temperature occurs if blood and lymph circulation are still present, between the two poles; a rise of one or one and a half degree in the armpit can be observed after a quarter of an hour. There is also the advantage that the eventual exhisting minimal circulation is encouraged by the diathermy current. No ordinary fever thermometer, but an alcohol thermometer must be used. The disadvantage of this method is that some corpses keep their temperature such a long time post-mortem, especially in cases of asphyxia or hyperthermia, and then it is particularly important to exclude false death Doubt will also often occur in delirium tremens, sunstroke,

traumatic lesions of nervous centres, intoxications, tetanus. etc. The fatal moment is usually obvious in the other diseases where post-mortem rises of temperature occur—for instance, cholera, typhoid fever, tuberculosis of the lungs, etc.

(Chronica Medica, July, 1934)

Diabetes

A connection exists between the degree of acidity of the gastric juices, and sugar-matabolism. A certain amount of glucose causes a greater increase of blood-sugar in an acidity and hypo-acidity, than it does in normal or excessive acidity. The tolerance of many diabetics can be improved by normalising the acidity of the gastric juices through the administration of HCL per os.

(Wiechmann. D.M.W., 1935, page 749)

The Artificial Heart

We have artificial limbs, artificial eyes and teeth, and now news about an "articificial" heart comes from Russia. It is an apparatus invented by Broyoechanenko and Jankowsky, and improved by the Moskow Institute of Blood-transfusion. Professor Terebinsky has performed a few operations on the heart of animals with the aid of this artificial heart. He opened three ventricles, and was thus able to reach the valves for operation. This operation only lasted 4½ minutes, and during this time heart and lungs were substituted by Broyoe-chanenko's apparatus.

Professor Terebinksy started these experiments on dogs a few years ago and all the animals are still alive and under observation in the Institute. Tests have proved that all operations have been eminently successful. The next step will be to ascertain whether such operations are possible on human beings.

(Wetsjernjala Moskwa, ref. Viribus unit., 1935.)

Remarks on the Ogino-Knaus Theory

The theory of the rhymthmic temporary sterility of women during the menarche is still a centre of interest. Statistics were made in the women's Clinic of the Univercity of Brelau regarding 416 women, who became pregnant after one single cohabitation on an absolutely definite day in the menstrol cycle From this only 51% of all women appeared to have a perfectly regular cycle, and 63% had a more or less regular one. The fertilising coitus took place:

In	62	women on the	1st— 5th	day of the cycle	14·9%
,,	132	,, ,,	6th—10th	,, ,,	31·7%
,,	119	,, ,,	11th—18th	,, ,,	28·6%
,,	64	,, ,,	19th—25th	,, ,,	15·4%
,,	29	,, ,,	26th—30th	,, ,,	7·0%
,,	10	,, ,,	31st—35th	,, ,,	2·4%

Conception is thus practically possible on any day of the cycle, though it occurs mostly between the 6th and 18th day (60·3%). The similarity of the percentages of the regular cycle (51—63%) and the period of conception between the 6th and the 18th day is very remarkable and confirms Ogino's theory. But the statistics show that the practical value of periodic abstinence is not very great.

(Weinstock, Zentralbl. f. Gynak., 1934,50)

Unilateral Dysmenorrhœa

(By Mils H. Phillips)

This is a title that has been accorded to a group of cases that have pain on one side of the abdomen only in association with menstural periods. Two principal conditions causing such a pain are,

(1) Localised cornal Adenomyoma,
(2) Hæmatometra in the rudimentary horn of double uterus.

Obscure Fevers in Childhood

(By Wilfred Sheldon, M. D. F. R. C. P.)

Fevers in childhood may be classified as.

(1) Simple high fever,
(2) Recurrent fever and
(3) Continuous fever.

1. Simple high fever may be due to

(*a*) dehydration of the new born, while the child is waiting for mother's milk to appear. The temperature may be high and it settles down as soon as fluid is given.

(*b*) Teething. Lancing the gum where the tooth is likely to erupt may act as a therapeutic test whether or not symptoms are due to teething.

(*c*) Otitis Media. It not uncommonly happens that temperature is present for 3 or 4 days and an explanation is forth-coming after this by a profuse discharge from the ear. Where a paracentesis tympani is not possible it is simpler to instruct the mother to apply warm fomentation to the ear at nights.

(*d*) Throat infections. Children take food even in severe throat trouble and nothing but a complete examination will reveal a follicular tonsillitis that may be the cause of a high fever.

(*e*) Glandular fever. Blood examination shows a mononuclear leucocytosis.

(*f*) Urinary infections—a routine examination of urine will show pus cells. Examination for albumen is neither essential nor conclusive and just a drop of urine is more than enough.

(*g*) Central Pneumonia. It is difficult to diagnose the condition and help may be obtained by a history of a single bout of vomitting at the onset which is a useful accompaniment in two conditions only—acute pneumococal infection and acute tonsillitis.

(*h*) Constipation. The degree of upset varies inversely with age and in infants may cause convulsions.

(*j*) Round worms epecially a dead round worm.

Recurrent Fever

(*a*) General upset of the alimentary canal, with coated tongue and offensive breath and the passage of offensive motions. A bitter alkaline mixture and a rearrangement of the child's dietetic life will set right the condition.

(*b*) B. Coli Urinary infections.

(*c*) Recurrent appendicitis. Before advising laparatomy one should think of the following conditions and exclude them:—

i. Acnte throat infections,
ii. Threadworm infections and
iii. Tuberculous glands in the lower end of the mesentery.

Continuos Fever

(*a*) Rheumatic fever with involvement of the heart,

(*b*) Tuberculosis—clinical examination may be negative and the two auxiliary aids most useful for a diagnosis are X-Ray and Tuberculin test. The latter is useful under 3 years of age. It is well to do a blood sedimentation test, for in an infection, a rate above 10 m. m. in the first hour is to be regarded as abnormal.

Treatment of Infantile Paralysis

(Adapted from the 'Practitioner' February 1936.)

(*a*) *Serum treatment*:—Innumerable reliable experiments have established that monkeys can be protected from developing the paralysis of poliomyelitis by the injection of convalescent serum from man or monkey administered in the preparalytic stage. Such serum is valueless, however, once the paralysis has developed.

In practical therapeutics human serum from three sources may be used: (1) that from patients who are in the stage of convalescence from an acute attack of poliomyelitis; (2) that from persons who have passed through on attack some time previously even up to ten or twenty years; and (3) that from normal adults with no history of having suffered from the disease. The first is "convalescent serum," and the second "human immune serum," or "human antiviral serum." The loose use of the term convalescent serum for both types has lead to some confusion.

The Lister Institute hold a small supply of human antiviral serum. This has been obtained from healthy donors who have previously passed through an attack of the disease and laboratory tests on susceptible animals have proved that the serum contains the specific antiviral substance.

No disease due to a filtrable virus is known to be benefited by an anti-serum after clinical symptoms have developed. Unless this fact is constantly borne in mind there is real danger that a valuable therapeutic advance may fall into disrepute. The administration of serum in the presence of paralysis is futile. The serum, therefore, must be administered in the preparalytic stage and the routes of administration that may be employed are intrathecal, intravenous and intramuscular.

The Medical Research Council recommend that the amount of serum which is injected intrathecally should be less by a few c. m. than the quantity of cerebro-spinal fluid that is withdrawn. The intrathecal injection should be followed at once by a dose which is given by preference intravenously; the intramuscular

route is also suitable, but absorption is less rapid. There need be no hesitation in giving the serum intravenously, because the use of human serum seldom gives rise to more than negligible reactions; neverthless the serum should be injected slowly. The amount of serum that is given by the combined routes should total 50 c, m. If the symptoms have not subsided within 18 hours, an additional 50 c. m. should be given intravenously. A total dossage of 100 c. m. of the serum should be considered to be adequate. Whatever may be the route of administration, the serum should be warmed to body temperature before being injected.

(*b*) *Lumbar puncture.* This is another form of treatment that also demands attention. As has already been noted, the cerebrospinal fluid is usually under increased pressure, so that the relief of this pressure is a rational procedure and has some symptomatic benefit. Some go so far as to say that this may further exercise a favourable influece in preventing the development of the paralysis or at least in modifying the progress, at any rate it is of definite value in minimizing the effect of increased pressure on the already injured neurones. Only sufficient fluid should be withdrawn to allow the pressure to return to normal. It has been noted in Australia that the withdrawal of large quantities of fluid during the preparalytic stage may have actually determined involvement of the spinal cord. Lumbar puncture may be repeated at twelve to twenty-four hour intervals, so long as the pressure remains high.

The prophlylactic use of sernm. This is of growing importance. The Lister Institute have prepared a serum from immunizined horses with the virus of poliomyelitis. Tests have shown that this serum possesses a high content of antiviral substance and that it is capable of protecting susceptible animals against infection with the living virus. This serum is likely therefore to be effective in the prophylaxis of poliomyelitis when an outbreak occurs in a school or institution. Recently supplies of this serum were sent to Denmark for use in a serious outbreak of poliomyelitis. This serum is best administered intramuscularly, never intrathecally, and will produce a passive

immunization lasting only a few weeks. On account of its higher content of antibodies it is necessary to give only 10 c. cm. and in the presence of an epidemic this dose should be repeated every two weeks.

(After paralysis has set in, muscles must be prevented from atrophy by Diathermy and Sinusoidal currents.)

The Anaemias of Nutritional Deficiency

(Adapted from the 'Indian Medical Gazette February 1935.)

Treatment

In prescribing for anaemias arising from nutritional deficiency, the realisation that one is treating a patient with a generally deficient nutritional state should be paramount. The anaemia is often but one symptom of the defective nutrition. For example, in pernicious anaemia the tongue and neural symptoms are dependent on deficiency, and in 'idiopathic' hypochromic anaemia, dystrophy of the nails and alteration in the mucosa of the uterus, leading to abnormal bleeding, appear to be of nutritional deficiency origin. The atrophy of the papillae of the tongue in the latter condition as well as certain other manifestations, quite probably are not due to iron deficiency *per se*, but they may be decreased by iron therapy, perhaps because of the better appetite that ensues, which results in partaking of a better diet. Here again, however, more knowledge is needed, for example, concerning the possible interrelated effects of iron and the vitamin B complex.

The object of treatment is not only to eradicate spmptoms or place them under control, but also to restore reserve supplies and the patient's nutritional state to normal for the rest of his life. The aim must be not only to return the haemoglobin and red blood cells to normal levels and keep them there but also to maintain the blood normal in all respects so that the colour index, cell size and volume are normal. But the amount of material necessary to accomplish this may be less than the amount needed to prevent the development or progress of other

disorders, such as neural manifestations in pernicious anaemia- an important point to appreciate. With liver extract, stomach or other preparations effective in pernicious anaemia, the common error is to give too little, particularly after the blood has become approximately normal. Each case is an individual problem. Indeed, the amount of parenterally given liver extract required in macrocytic anaemia may vary tenfold. The variation for the optimal does of iron is apparently less. The cases requiring the largest amount of iron are severe ones of long-standing 'idiopathic' hypochromic anaemia, while among the cases responding maximally to one-third or even one fourth of this amount are those of chronic blood loss without achlorhydria or chronic dietary or digestive disorder. In the former condition maintenance of iron therapy is often necessary to prevent relapse; in the latter state the patient is truly cured when the blood and body reserves become normal and he continues to take a satisfactory diet. In practice it is wise to use a large dose, one certain to cover the patient's requirements. Recovery should not be delayed by economy of a relatively inexpensive remedy. To give somewhat too much iron does no harm, except in rare instances of distinct intolerance.

Remedial substances for many nutritional deficiencies may be given parenterally as well as orally. Thus, optimal amounts can easily enter the body and defective absorption be overcome. Some of these substances, such as liver extract, are in the range of from fifty to hundred times as effective by the parenteral route. This route is the one of choice for liver extract in sick individuals, those requiring large doses or those with spinal cord lesions. The procedure is economical and convenient, and it gives assurance of sufficient material entering the body on selection of an appropriate dose for the given patient.

There is no need for the parenteral use of iron except perhaps, in an extremely rare case. A distinctly effective daily dose parenterally is close to a toxic dose. Thus the injection of small doses every few days is to be deplored. The problem of what preparation of inorganic iron or liver extract or allied substance to use resolves itself into choosing any one of many

effective preparations and giving an appropriate amount of that particular preparation for the given patient. The daily dose of the iron salts is variable, the maximum for iron and ammonium citrate being in the range of 6 gm., and of ferrous sulphate in the range of 1 gm. Among available liver and allied products there is a wide difference in potency when compared with whole calf's liver or with the amount of material from which an extract originally came. The use of liver extract and iron together should be judiciously decided. The development of hypochromic red cells or a lag in haemoglobin production in a patient with pernicious anaemia calls for both. Some patients, particularly benefited by iron, may perhaps have recovery speeded by the use of these two substances. The effectiveness of sub-optimal doses of iron with liver in hypochromic anaemias may be no greater than an optimal dose of iron. The addition of Whipple's liver factor to iron may be distinct value in certain cases. The important matters to bear in mind are that either liver extract of the type effective in pernicious anaemia or iron will be the chief agents to use and that combinations employed at random will often waste the patient's money and may prevent an understanding of the needs of the patient. It must be remembered, also, that treatment means still more than administering substances to offset deficiency. Satisfaction with great improvement in the patient is not enough; he must be made as well as possible. All aspects of the case must be attended to, including the individual's manifold problems of thought and action.

Prevention

The prevention of illness is much simpler and more desirable than successful therapy of the sick man. A diet nicely adjusted with respect to all its constituents at an optimum—not a usual—level permits development of the organism to proceed uninterruptedly and the health of the individual to be maintained as near the optimum as possible. Ideally, nutritional defects should be detected when individuals begin to pass into the zone of suboptimal nutrition and thus prevent the development of disease. At present this state is

usually difficult to prove but often can be suspected, particularly by a detailed study and careful evaluation of the dietary history. The physician should appreciate when he prescribes a diet for one reason or another for more than brief periods of time that it must be complete. It is not very rare to be able to detect nutritional disturbance due to prescribed diets as, for example, for peptic ulcer and chronic nephritis.

Certainly a good diet throughout life will aid in the prevetion of anaemia. Consideration of such matters as are mentioned later will do likewise. A careful study of near relalives of a pernicious anaemia patient may reveal in one or more of them gastric achlorhydria with or without slight abnormality of the blood, although the individual considers himself well. In view of the familiar incidence of pernicious anaemia, the presence of achlorhydria in such a case may indicate a 'latent' one of pernicious anaemia. Liver therapy for that person may prevent, perhaps the development of distinctive disease. The frequency of hypochromic anaemia during the first year of life in babies born of anaemic mothers may be minimized if such infants, are given small doses of iron as a routine procedure. The development of hypochromic anaemia in pregnancy is common. Iron administration frequently can prevent the development of hypochromic anaemia in the child. Anaemia will also become less frnquent if an attitude is taken that all edentulous individuals must have properly fitted false teeth and that the diet for all patients with 'chronic' indigestion should be very carefully regulated. It is of great importance to recognize the frequency with which repeated losses of menstrual blood in slight excess of normal, lead to anaemia, as well as repeated small losses of blood from any source. Attention given early to this state of affairs will also minimize the the occurrence of anaemias.

Conclusion.

The practice of prevention is the ultimate goal of the physician. Success often depends on inherent interest, on attention to detail and on an understanding of the aetiologic and physiologic mechanisms involved in a given case. There is much more to be learned about the anaemias and nutrition. With the progress of knowledge there should be much less suffering from disorders due to, or associated with, nutritional deficiency.

Madura Medical Association

(REGISTERED)

A General Body meeting of the above Association was held at the Government Hospital, Madura on 4th April 1936 at 5 p.m. Twenty-two members were present. Dr. E. W. Wilder, M. D., presided. The following resolutions were passed :—

1. Minutes of the previous meeting and the statement of receipts and expenditure concerning the Annual meeting held on 7—3—36 were read and passed.

2. Resolved that this association do join the TAMIL DISTRICTS FEDERATION.

3. Resolved that in our opinion the establishment of a College of Physicians and Surgeons is not necessary for Madras Presidency carried by 16 to 6.

4. It was resolved unanimously to send its fraternal greetings and best wishes to the "CHETTINAD MEDICAL ASSOCIATION" on the occassion of its sixth Annual gatjering to be held on 9th April 1936 and Drs. E. W. Wilder, A. N. Menon, and the Hon. Secretary were elected to represent this Association at their Annual Gathering.

Dr. A. N. Menon, spoke about the "Revival of the Local Branch of the *Red Cross Society* by Mrs. Priestley and requested the members to volunteer to give lectures under its auspicies.

Dr. Narayana Iyer presented cases of *Interstital Keratitis* in acquired syphilis.

With the usual vote of thanks to the lecturers and Chairman the meeting terminated at 7-30 p.m.

M. N. RAJAN,
Hon. Secretary.

The Trichinopoly District Medical Association

REGISTERED

A monthly meeting of the above Association was held at 5 P. M., on Saturday the 29th March '36 in the E. R. High School, Trichinopoly when about 35 members were present. Rao Sahib Dr. T. C. Joseph, Municipal Health Officer, Trichinopoly presided on the occasion. Dr. N. S. Krishnamurthy was 'At Home'.

A resolution conveying fraternal greetings on the occasion of the Annual Gathering of the Chettinad Medical Association was moved from the chair and carried unanimously.

The Secretary welcomed Dr. T. R. Subramanya Iyer of Manaparay who had newly joined the Association.

Dr. V. Subramanyam, Hon. Dental Surgeon of the Government Head Quarter's Hospital delivered an interesting lecturer on 'Oral Hygiene.' He impressed upon the necessity of having a clean mouth with healthy gums and teeth. He also explained the various methods of keeping them neat and clean. He traced the various diseases which were usually due to the unhealthy condition of the mouth. Dr. T. S. Balasubramanyam spoke a few words on the necessity of having a balanced diet with adequate vitamins and said that hand pounded rice was not only more useful for general health than mill polished rice but also good for the gums and teeth. The lecturer answered a few questions raised by some members on the treatment of various diseases of the gums and teeth. With a few remarks from the chair and a vote of thanks to the Host, President, Lecturer and the Manager of the E. R. High School for leading the premises the meeting terminated.

TRICHINOPOLY,
23rd March '36.

P. A. S. RAGHAVAN.
Secretary.

Jegam & Co., Trichinopoly.