

The Madras
Medical College
Magazine

2439



MAY 1936

Vol. XV, No. 3.

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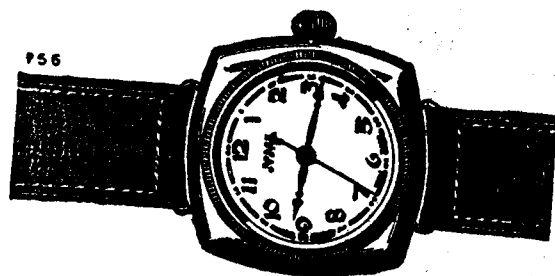
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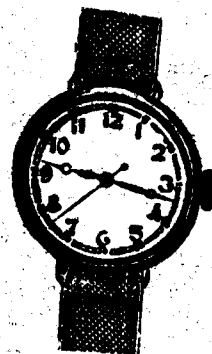


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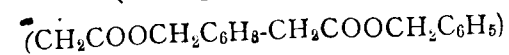
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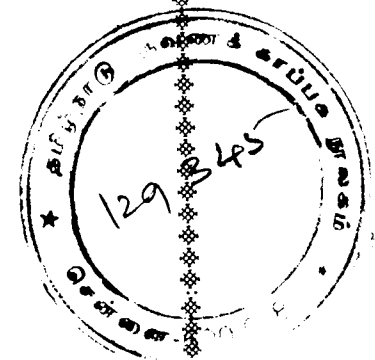
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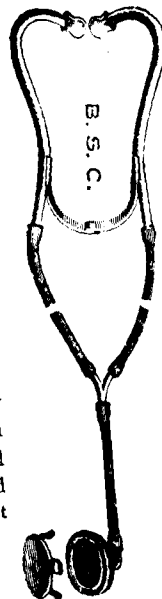


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THE MADRAS MEDICAL COLLEGE MAGAZINE.

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Stones in right ureter. This patient had a ureterocele which was filled with stones. Diathermy cauterisation of the ureterocele was done and patient passed 60 stones.

THE MADRAS Medical College Magazine

VOL. XV

MAY 1936

No. 3

Visualisation of the Urinary Tract for Diagnosis*

BY DR. N. MANGESH RAO, M.B.C.M., F.R.C.S.,

Surgeon, Govt. General Hospital, Madras.

It is necessary to visualise the urinary tract to clinch the diagnosis. This may be done by direct methods with the help of a special instrument as the urethroscope and cystoscope or by indirect methods with the help of X-rays.

For this purpose the urinary tract may be divided into two parts, the upper and the lower, the upper one consisting of kidneys and ureter and the lower consisting of the bladder and urethra.

The upper part has to be visualised only by indirect methods in which the co-operation of an expert roentgenologist is necessary. Occasionally it may become necessary to examine the kidney by direct vision after exposing the organ.

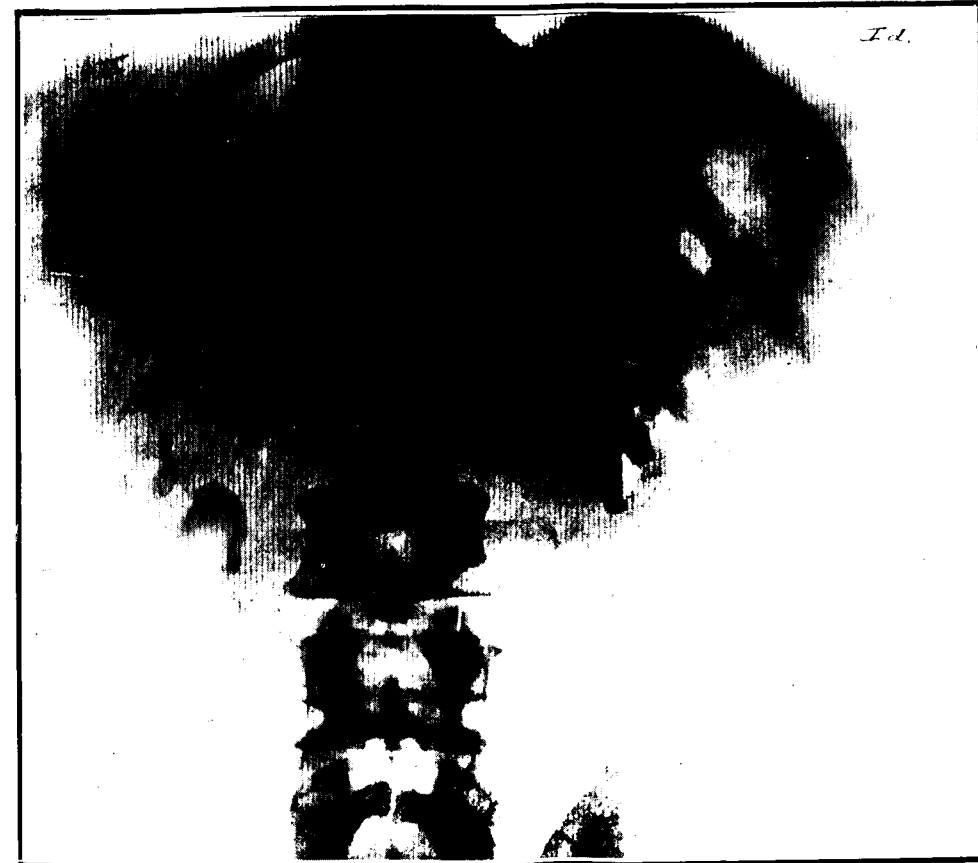
Prior to the advances made in roentgenology, diagnosis of diseases of this part of the tract was very poor. It is now possible to make a fairly correct diagnosis of surgical lesions of upper urinary tract. The introduction of organic iodine compounds, with a selective affinity for the kidneys without causing any damage to the body organism or the urinary tract, has been of the greatest advantage to the Urologist in his diagnosis.

* We are indebted to Dr. J. C. David, Editor of the Madras Medical Journal, for the plates.

For taking radiograms it is essential that the intestinal tract should be emptied of foreign material and gas. It is advisable to give the patient a good laxative two days prior to the examination and place him on a non-gas forming soft diet on the previous day. Fluid in-take should be restricted for 12 hours prior to intravenous pyelography. The colon should be emptied of gas on the previous evening and on next morning by enemata and pitressin.

First thing to do is to take a plain antero-posterior radiogram of abdomen and examine it. If it shows too much gas in the intestines, further enemata should be ordered to render the field clear. This plain radiogram may show distinct opacities due to renal, ureteric or gall stones, or calcified glands etc. Radiograms taken in two directions often help in diagnosis. Urinary calculi are seen in the line of the pelvis and ureter in an antero-posterior radiogram and these shadows are seen just anterior to or superimposed on that of the vertebral column in a lateral view, while shadows of gall stones lie nearer the anterior abdominal wall. The shape of these shadows and their density are often a guide. A pyramidal shadow denser in the centre with its pointed end directed downwards and slightly inwards opposite the transverse process of 2nd lumbar vertebra is more likely to be a stone in the renal pelvis than anything else. A dense fusiform or date-stone shadow in the line of the ureter is more likely to be a ureteral stone. Shadows of calcified tubercular glands are usually crenated and irregular. Diagnosis may be made more certain by excretion pyelography, by passing opaque ureteral catheters and by retrograde pyelography. There are certain calculi as of pure urates, uric acid and cystine which give no shadows, but their presence can be ascertained by the above methods where they may appear as negative shadows and filling defects.

Excretion Pyelography.—There are two well known organic iodine compounds, Perabrodil and Uroselectan B, are



Intravenous pyelogram. Right Kidney good excretion. Left Kidney shows a giant stone. No excretion.



Intravenous pyelogram. Hydro-ureter right side. Left Kidney not visualised.



Giantstone Left Kidney. A small stone in right kidney.



Intravenous pyelogram showing dilatation of left renal pelvis and a dilated ureter suggestive of stricture ureter lower down.

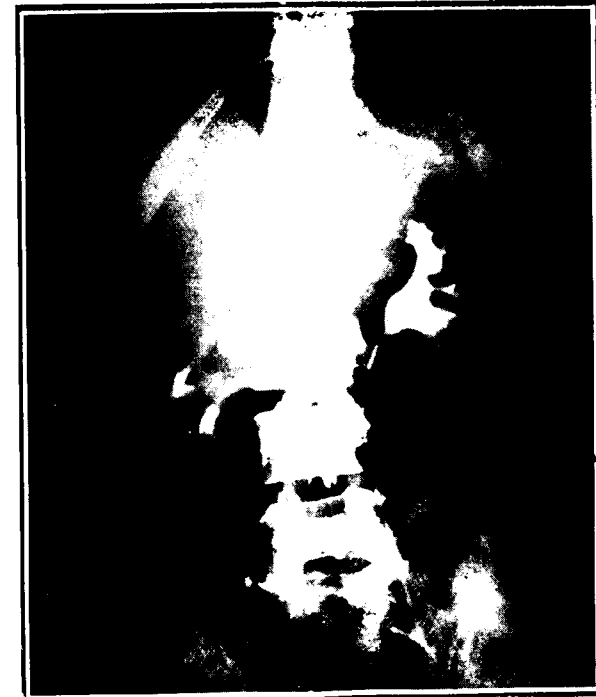
used for this purpose. Both have about 50% of iodine content. Both are now put up in ampoules ready for intravenous injection on the roentgenological table. The syringe to be used should be boiled in distilled water and the ampoule warmed to body temperature by being placed in warm water. The tourniquet used for injection if left on till the injection is over and then removed, helps in a higher concentration of the drug reaching the kidneys and hence better pictures result. The injection itself takes about 30—40 seconds. The drug can be used in children and infants, the doses being proportionately smaller.

The advantages of excretion pyelography are obvious. Easy visualisation of upper urinary tract without the necessity of urethral instrumentation which is either difficult or impossible in children and often contra-indicated in some cases in adults, *e.g.*, in acute and chronic sepsis of lower urinary tract, tuberculous nephritis, severe haemorrhages from urinary tract, where ureters have been transplanted into the colon, in ureteral obstructions, in bifurcated ureters, where the urea clearance is low and where instrumentation is likely to be followed by severe reaction. In addition to this excretion urography gives a fair indication of the functional capacities of each kidney and both sides being visualised simultaneously can be easily compared. In conditions of hydronephrosis, there is no risk of rupture but delayed pictures of 1 to 2 hours should be taken. Relationship of intra-abdominal tumours to the urinary tract can be visualised with advantage in diagnosis and operative treatment. The contra-indications are only few *e.g.*, severe disease of liver, acute infections of urinary tract, acute and chronic uraemia as shown by a high blood urea and low urea clearance. Iodine idiosyncrasy is rare with this drug. If possible screening should be done and pictures taken when the urinary tract is well visualised. Usually two small spots are seen at first in the renal region. These gradually increase in size and outline the calyces and pelvis. Next the image of

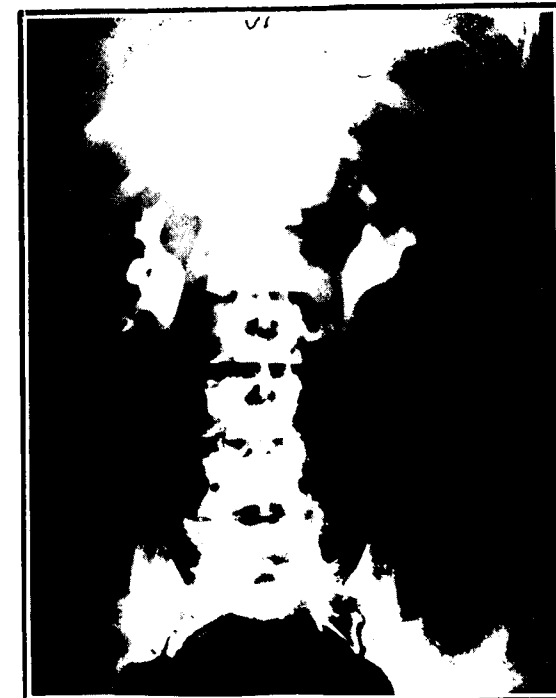
renal pelvis becomes continuous with that of ureter. This is the period of maximum elimination and a picture should be taken now. This ends the diastole of renal pelvis. With the onset of its systole the ureters become visible and the bladder slowly fills out. Both sides should be compared carefully to determine the normal from the abnormal. There is often an alternating activity in the kidneys, when one is in systole, the other may be in diastole. Pictures are best taken at 8 to 10 minutes, 20 min. and 45 minutes with a picture of the bladder between the first and second pictures. The bladder should be emptied before the second and third pictures, so as not to obscure the lower ends of ureters. Ureteral compressions, before the second and third pictures, is one of the best methods for improving images as it increases concentration by stasis. But the compression should be applied simultaneously to both ureters, should be equal and at the same levels. This is best done by an inflated rubber bag being pressed over the supra pubic region. However this is not indicated in every case but only where an early lesion is suspected or where an intensity of the image is desired. Compression may show dilatations in the ureters which otherwise would not be noticed.

The interpretations should be done jointly with the Radiologist guided by the clinical signs and symptoms of the case. A good image indicates a well functioning kidney and a poor image means a poorly functioning kidney. Absence of an image in all pictures may mean the absence or destruction by atrophy or anuria of the kidney. If only the calyces and pelvis are seen but not the ureter and the former appear dilated, it would indicate a block at pelvi-ureteral junction by stone, growths, pressure by artery, pressure by growths outside or kinks in the ureter etc. If the affected side can still be visualised even after the healthy side shows no shadows, it may mean a partial block repairable by a plastic operation.

Hydronephrosis.—The minor calyces become convex towards the renal paranchyma and appear as knobs. A



Retrograde pyelogram showing right renal pelvis deformed with a low placed kidney.



Retrograde pyelogram. Note dilatation of middle calyx and irregularity of right ureter from early tuberculosis.



Retrograde pyelogram. Left ureter and pelvis dilated.



Stone in left ureter with retrograde pyelogram. It shows a slight dilatation of ureter.

flattening of the curved inferior border of pelvis with inward bulge of pelviureteral junction becomes evident. Finally the pelvis and calyces become enlarged and rounded.

New growths—In the early stages some minor calyces are blotted out especially the upper ones and the outline of pelvis becomes distorted.

Tumours of renal pelvis are shown by filling defects or a complete obliteration of pelvis in the presence of some dilatation of minor calyces.

Calculi in ureters of uric acid and cystine may appear as filling defects or negative shadows or as ringed shadows when the pelvis has emptied.

Megalo-ureter with hydronephrosis.—It is the result of prolonged partial obstruction low down in the ureter when unilateral. When bilateral with a dilated bladder the obstruction is in the neck of bladder or prostatic urethra but with a contracted bladder it is due to tumours in the pelvis causing compression of both ureters.

Sometimes shadows extraneous to urinary tract may get super-imposed on that of the urinary tract and cause a doubt. Hence we advise that a preliminary plain radiogram should always be done.

The picture of the bladder may show presence of diverticula, etc. The shape of bladder often gives some information. In the absence of obstruction lower urinary passage a strong bladder picture indicates a good condition of the kidneys and a weak bladder picture shows a poor condition of the kidneys.

A single diseased kidney may be met with occasionally. It is in such cases that intravenous pyelogram is a good guide of the danger of any surgical intervention including urethral instrumentation.

One is able also to make out congenital deformities and defects of urinary tract such as horse-shoe kidney, fused kidney, misplaced kidney etc.

Ascending pyelo-ureterography

This has to be done by a Urologist as it can be done only with the help of a cystoscope.

It should be undertaken only for confirming a diagnosis as in the case of tumours of kidneys, tumours of renal pelvis, polycystic kidney or other abdominal tumours. The contra-indications for this procedure are :—

- (1) Cases of renal inefficiency as shown by high blood urea and low urea clearance as in bilateral renal disease.
- (2) Acute inflammation of lower urinary tract.
- (3) In severe chronic urinary sepsis as cystitis, pyelonephritis etc.
- (4) Very old people and young children.

It should never be attempted where diagnosis by other means can be definitely made. It should be used as an accessory method to excretion pyelography where diagnosis is uncertain. Retrograde pyelography is not advisable in tuberculous nephritis. In advanced cases of diseases of kidneys a retrograde pyelogram if indicated should be done only on the diseased side. If the healthy side is irritated by the sodium iodide, there is a liability for the blood urea to rise. The trauma caused by the introduction of ureteral catheter is liable to set up a temporary congestive obstruction in the ureter of the only healthy kidney.

The patient is given a hypnotic as bromide grs. 20-30, luminal etc., two hours prior to cystoscopy. Local anæsthesia with pentocain or a small low spinal anæsthetic is given and the cystoscope is passed under aseptic precautions. After a survey



Retrograde Pyelogram. The right kidney has dropped down to the level of sacro-iliac joint and its convex border turned inwards. A case of floating kidney fixed in its new position. She was operated on and kidney fixed in proper position.



- Retrograde Pyelogram in a case of tumour in right iliac fossa. The index finger is between the tumour and right renal pelvis. The kidney is in its normal position.



Stone in bladder and a stone in left ureter.



† Stone in left ureter into which two opaque catheters were passed for dilating it.

of the bladder etc., opaque ureteral catheters are passed and urine collected for bio-chemical and bacteriological examinations. Then a plain picture is taken showing up in ureters by the presence of opaque catheters and their relation to other shadows. Next 5 to 10 ccs. of opaque medium are injected by gravity method. The pain or ache elicited in the patient by distension of renal pelvis is the warning to stop further injection. If small sized catheters are used overdistension is avoided as the fluid can run down the ureters by the side of the catheters. The possibility of rupture by overdistension at any weak spot in the pelvis and ureter should be kept in mind. The medium used may be a sterile solution of sodium iodide 12.5 per cent strength or better still 15 per cent uroselectan B, as being non-irritating and giving denser shadow. It is necessary to fully distend the renal pelvis to avoid mistakes in diagnosis, the only exception being a hydronephrosis. The normal renal pelvis takes about 5 to 7 ccs. and anything above 10 ccs requires care in injection. Gravity method is best as it sustains the distension. Any pain in the back is a warning to lower the tubes and stop injection.

Reactions are liable to follow as pain, nausea, shivering, hæmaturia and fever.

Diagnosis of early tumours of kidneys, polycystic kidneys, tumours of renal pelvis is more certain by this method. The relationship of upper urinary tract to abdominal tumours is better visualised by this method.

Calculi translucent to X-rays may be seen as negative shadows and as ringed shadows after emptying the renal pelvis. If after emptying the pelvis 4 ccs. of air be injected such calculi and ulcerating growths stained by the iodide may be brought into better relief.

Visualisation of Lower Urinary Tract

BY DR. N. MANGESH RAO, M.B.C.M., F.R.C.S.

Surgeon, Government General Hospital, Madras.

This should not be undertaken in acute urethritis or cystitis until the conditions have subsided under conservative treatment.

This part of urinary tract is well visualised by direct visual examination with the aid of special instruments.

Anterior urethra.—It should be anaesthetised with pentocain 0.2 to 0.5 per cent with the addition of a few drops of adrenalin. The anterior urethroscope is a simple tube with a terminal light on a carrier and a proximal eye-piece for magnification. By the aid of a small bellows air-distension of urethra is done. The tube is first introduced with an obturator as far as it would go. Then the obturator is removed and replaced by the light carrier attached to an eyepiece. As the urethroscope is being withdrawn, the mucosa is carefully examined while it is gently stretched out by air distension. With this instrument soft infiltrations, ulcers, strictures, etc. can be visualized well and topical applications can be carried out.

Indirect visualisation, after injecting lipiodol and taking radiograms may be done. But the information gained by this is incomplete and inferior to direct visualisation. However pouches, diverticula and strictures can be visualised by this method.

Posterior Urethra.—This examination should be done under a low spinal or caudal anaesthesia. A posterior urethroscope



Röntgenogram showing a stone impacted in prostatic urethra.



A left ureterogram. The fluid is seen passing around the stone and up the left ureter.

of the irrigating type with a terminal light and a telescope (as Geiringer's) is the simplest giving a direct view. A Cystourethroscope of the irrigating type gives a right-angled view. McCarthy's Foroblique Panendoscope is the best both for examination of bladder and posterior urethra. It gives a more satisfactory view of verumontanum and floor of urethra than can be obtained by the other two instruments. It is also more useful for operative treatment.

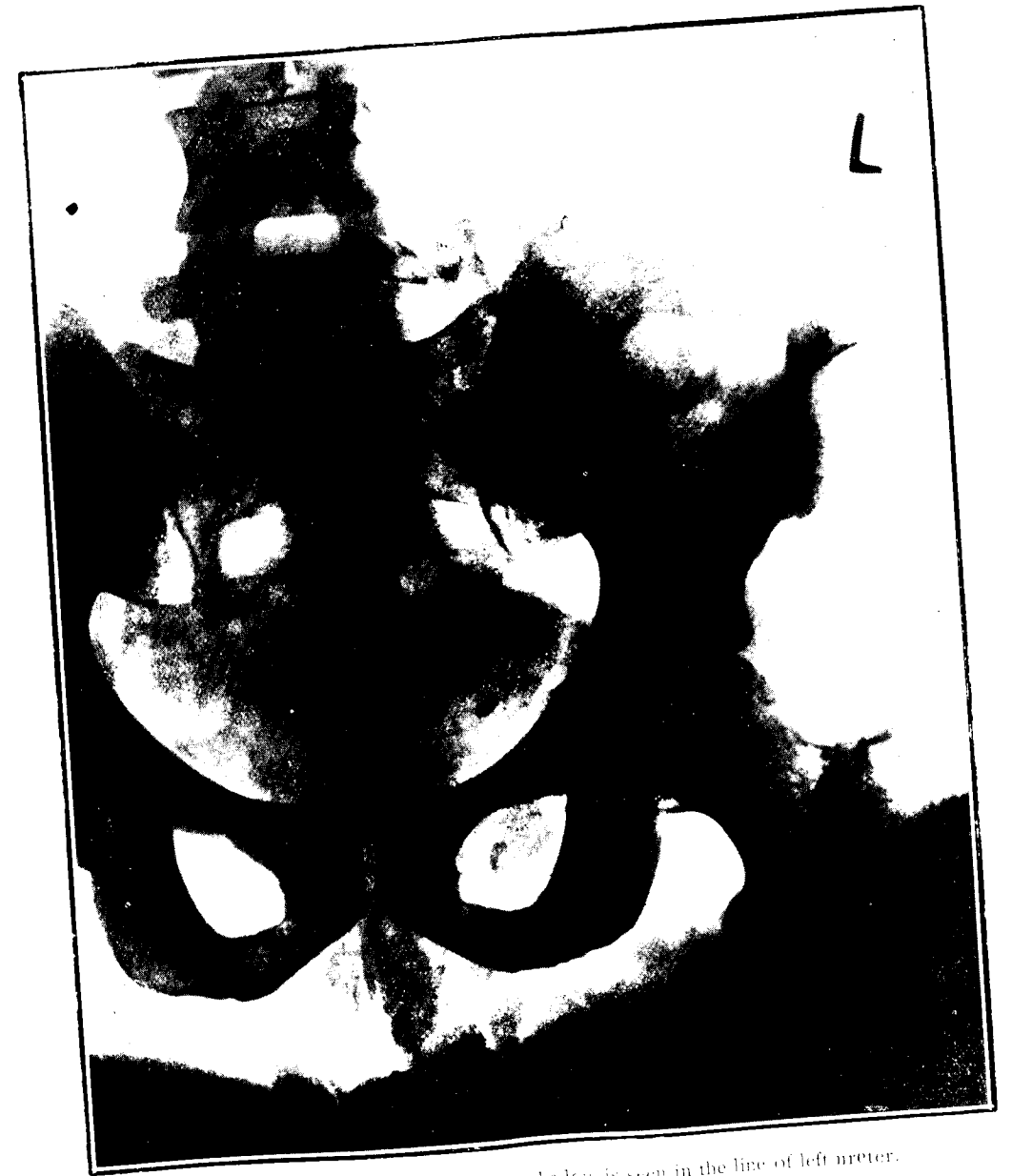
The distension of the urethra is done by irrigation with a mild antiseptic as cyanide of mercury 1/8000. This not only distends the urethra but keeps the field of vision clear. The fluid passes into the bladder. All types of obstruction at the neck of bladder are seen clearly. The normal appearance of vesical outlet is that of a circular lumen with a wrinkled border. A wide open sphincter is seen under a spinal anæsthetic or in cord lesions from lack of nerve control. Variations in this are caused by different types of prostatic enlargements. Enlargement of both lateral lobes converts it into a vertical slit, a middle lobe makes it crescentic, concave downwards. If both lateral lobes and the middle lobe are enlarged, the lumen appears like an inverted Y. Any œdema of the part accentuates these changes owing to polypoid projections into the lumen. Cases of suprapubic prostatectomies show very irregular lumen and sometimes annular strictures. Prostatic bars are distinctly made out in the floor of the lumen. Running from the internal meatus to the crista galli are seen normally a few delicate folds of mucosa in the floor. In bar formations this part is found raised as a smooth elevation. The crista galli ends at the upper part of verumontanum. Verumontanum is about 15 mm. long and 3 mm. high and is made of muscular and erectile tissue. On the summit of this is a little depression which is the entrance to the utricle. Just anterior to the utricular opening are the tiny openings of the ejaculatory ducts which can often be identified only by a fine catheter. On either side of verumontanum are two depressions known as prostatic

sinuses into which open the ducts from the lateral lobes of the prostate. The ducts of the middle lobe open above the verumontanum.

The normal colour of mucosa here is a little deeper than that of the bladder. Congestion of verumontanum due to inflammation or sexual mal-practices may be noticed. Granulations at the mouth of utricle, ulcers in the flood, polypi and papilloma that give rise to frequency of micturition, etc., may be seen and treated. Sinuses leading to lateral lobes of prostate may be seen on the lateral walls. Openings of false passages and fistulae may also be seen. Fine opaque catheters should be passed up these and sodium iodide solution injected for fully visualising the tracts by a roentgenogram. Congenital valves are best seen by this instrument. Diathermy fulguration of polypi, papillomata, granulations and topical application of drugs could be carried out under direct vision.

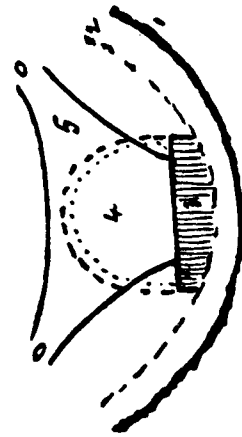
Indirect Visualisation.—A plain roentgenogram may show prostatic stones or stones impacted in prostatic urethra. Fistulous tracts opening in the prostatic urethra have to be visualised by passing fine catheters into them through a urethroscope and injecting sodium iodied solution.

Bladder.—Direct visualisation is the best and is done by cystoscopy. A retrograde viewing telescope in addition to the ordinary one is of great advantage. With the former, one can visualise the vesical aspect of the sphincter for an enlarged middle lobe, etc. Of this type a Swift Jolly is the best. With a cystourethroscope both the bladder and posterior urethra can be examined. In males the irrigating cystoscope is introduced and bladder is lavaged till return flow is clear. Where bleeding is present the bladder after emptying is slowly filled with half a drachm of adrenalin 1/1000 diluted with one pint of water. If the field is still dim, it should be emptied and filled with sterile liquid paraffin. As this does not mix with urine or blood one can make out the source of bleeding. In women it is better to

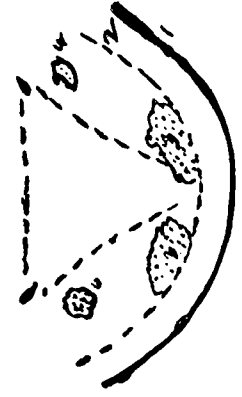


Plain roentgenogram. An opaque shadow is seen in the line of left ureter.

Diagram to interpret Pneumo-cystogram.



1. Outline of symphysis and bony brim.
2. Outline of air distended bladder.
3. Shadow of bar.
4. Outline of shadow of enlarged middle lobe.
5. Outline of trigone when hypertrophied.

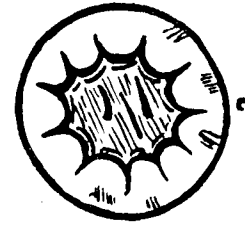


1. Outline of bony brim.
2. Outline of air distended bladder.
- 3-4. Malignant growths.
- 4-4. Enlarged prostatic lobes with a middle lobe.

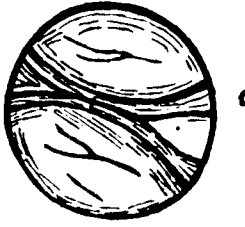
Diagrammatic Views through an Antigrade Posterior Urethroscope.



1. Floor of posterior urethra with upper part of Verumontanum and a small papilloma.



2. Normal view of vesical outlet from urethral aspect.



3. Enlarged prostatic lobes and upper part of verumontanum.



4. Enlarged prostatic lobes with a middle lobe.

Visualisation of Lower Urinary Tract

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lavage the bladder and full it before introducing the cystoscope. Bladder should be distended with 8 ounces of fluid in males and 10 ounces in females. Where bladder is irritable from chronic cystitis gradual distension should be done. A spinal or caudal anæsthesia is the best. Where blood clots are present, it is better to evacuate them by Bigelow evacuator before any examination is undertaken. Cyanide of mercury lotion 1 in 8000 is quite clear and also a good antiseptic and non-irritating. A regular examination of the whole of bladder should be done and charted out. Most pathological conditions are found round the ureteral openings, trigone and neck of bladder. A general survey of lateral walls and superior wall is done. Then the *Bas Fond* and ureteral openings are carefully examined and compared with each other. Next the trigone and neck of bladder are examined. After this ureteral catheters are passed up the ureter for visualising ureters and renal pelvis. If openings of diverticula are seen an opaque catheter should be laid into them and roentgenogram done.

1. *Indirect visualisation*.—A plain radiogram would show presence of stones in the bladder or lower end of ureter and sometimes the contour of bladder as well in alkaline cystitis owing to deposit of calcium phosphates on the wall.

2. *Cystograms*.—The bladder is filled with 200 to 300 ccs. of a 10 per cent sodium iodide solution and radiograms in different planes are taken. These would show filling defects by growths and presence of diverticula.

3. *Pneumo-cystograms*.—After completely emptying the bladder 200 to 300 ccs. of air are injected through a fine catheter and radiograms taken. Complete filling is necessary, stopping when patient complains of discomfort or the piston of syringe is pushed out by contraction of bladder. In taking radiograms an angle of 15° to 25° is given so that the lower margin of bladder is seen $\frac{1}{4}$ inch or more above the symphysis pubis. A posterior film is taken with the central ray directed

upwards and forwards so as to project the coccyx and sacrum above the field. A low kilo-voltage tube of 40 to 50 K V. is used. This brings out in relief enlargement of prostate, bars, diverticula and even fasciculation of bladder. Foreign bodies that were not visible are rendered visible by contrast. If a sodium iodide cystogram was previously done growths stained by that solution are distinctly brought out in relief.

1. A normal bladder gives an ovoid pneumogram of 300 ccs. capacity, and its base is seen parallel to the upper border of symphysis.
2. A simple mid-lobe hypertrophy is seen as a smooth edged ovoid projection into the bladder going well above the symphysis pubis. Lateral projections are seen in hypertrophy of lateral lobes.
3. Irregular projections from bladder base line are usually those of malignant growths. Such ulcerating growths are brought out well if previously stained by sodium iodide solution.
4. Calculi in the prostate, bladder and lower part of ureter are made more clear.
5. Growths as papillomata are seen as shadows lateral to the trigone.
6. Bars at the neck of bladder are shown as transverse shadows just above the symphysis pubis.
7. Foreign bodies, small stones not clearly visible in an ordinary radiogram become distinct and clearer.
8. Diverticula are brought out clearly.
9. Defects caused by tumours and cysts outside the bladder are clearly seen.



Pneumocystogram showing an enlarged middle lobe and hypertrophy of right lobe of prostate.

Common difficulties in breast feeding and how to overcome them.

BY Dr. M. B. PRABHU,* M.D., M.R.C.P. (E.), M.M. (LOND.),
Government Hospital for Women and Children, Madras.

Breast feeding is the most suitable form of feeding for the infant. The milk of the mother is the ideal food for the young of the species. A child brought up on mother's milk thrives better than a child brought up on artificial foods though now and then, one meets with a child who has done well on artificial foods from birth. Even in the latter case, if the infant had the advantage of breast milk it would have done better. The necessity for mother's milk is particularly great during the early months of infancy and more so when the baby is underweight. A breast fed infant has nearly 3 times as much resistance against infection as an artificially fed infant and infantile mortality in artificially fed infants is nearly 4 times as great as in breast fed infants.

There are few occasions when breast feeding is contra-indicated on medical grounds. More often certain difficulties of a minor nature stand in the way of successful nursing by the mother.

These latter can be classified thus :—

A. Mechanical causes—

B. General causes—

in the mother
in the child
in the mother
in the child

Mechanical causes.—These in the mother comprise defects in the nipple. Cracked nipples are a common cause. Sucking by the infant causes great pain to the mother and if persisted will lead to infection of the nipple and breast.

Common difficulties in breast feeding

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Occasionally a retracted nipple leads to difficulty in feeding. At times a nipple is too hard for the infant to draw the milk from. The latter is the case when a middle aged woman gets a baby for the first time.

Treatment.— Prophylactic treatment is easier and more successful than curative. Care of the nipples must be an item in antenatal care of the mother. Very often this is considered a trivial point and only when lactation begins are the difficulties fully realised. The nipple must be made soft by rubbing it with lanoline. I consider clarified butter (ghee) to be equally suitable. Rectified spirits were recommended to harden the nipple. This make them hard no doubt but they are liable to crack. In these cases where the nipples are retracted, gentle traction must be applied during pregnancy to draw them out. Where a middle aged person gets a baby for the first time and if the child finds it hard to draw out the milk, it has been suggested that an older child may be put to the breast to make the nipple softer. In practice it is not so very easy.

When the nipples are cracked, they are painted with Tr. Benzoin Co. and a nipple shield till the cracks have healed.

Mechanical causes in the infant are hare-lip and cleft palate. With a minor degree of cleft palate it is surprising how an infant learns to draw the milk from the mother and swallow it. Where it cannot, the milk should be drawn and the child fed with a teaspoon. General condition of the child may make breast feeding difficult. Premature and weak children find it hard to draw the milk. In such cases the milk has to be drawn and the infants fed until they are strong enough to draw the milk themselves. Sometimes if the mother gently holds her breast to the infant's mouth and slowly squeezes the milk into its mouth, the child will slowly learn to draw the milk.

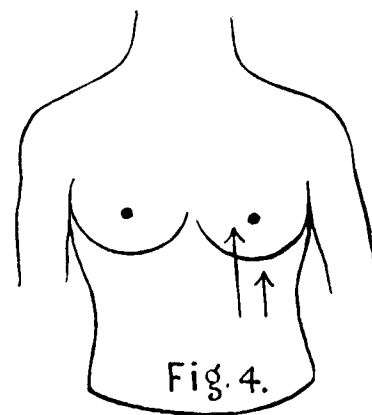
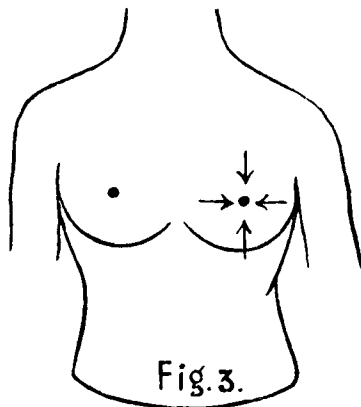
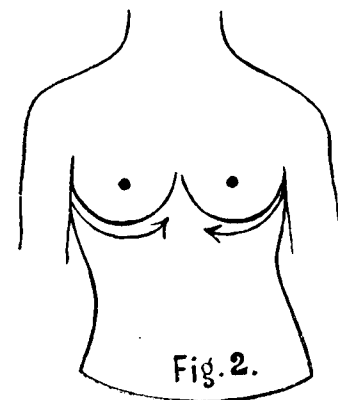
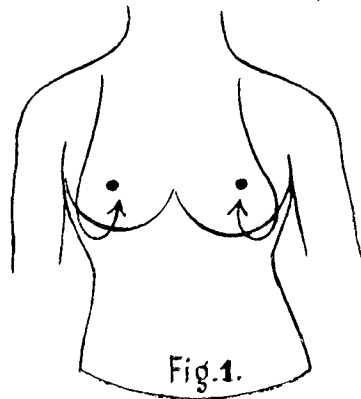
The mother may not have enough milk due to malnutrition or disease. In these cases, feeding the infant at the breast will

be a drain on the mother's health, whereas weaning the infant has its attendant risks. In such cases, the mother should be treated for the complaint and be allowed to breast feed the child provided thereby both mother and infant do not suffer.

Now I come to the third group, a fairly large group, where both mother and baby are healthy and where breast feeding should present no difficulties whatsoever. In actual practice however, cases are not infrequent when the problem of breast feeding becomes so difficult as to tax the abilities of the physician. Text Books emphasise the importance of breast feeding and then beyond saying that artificial feeding should be resorted to where the former has failed, do not give the details of the methods for successful breast feeding.

Mother and baby are both healthy and there is insufficiency of breast milk. This condition is more and more on the increase. It is found both in the rich and poor. I have been surprised to see healthy mothers who have all possible comforts and conveniences not having enough milk for their baby before it was hardly four weeks old. The treatment for this condition is both general and local. General treatment consists in giving mother enough fluids. Giving barley water, flavoured and sweetened if necessary, is a good old remedy. Do not, overfeed her. Her digestion will be upset and there will not be sufficient increase in milk. Rich or poor, let her take the foods she is accustomed to take with the proviso that sufficient amount of fluids are taken. Cotton seed or its preparations are reputed to increase the milk; sometimes they do, sometimes they fail. Pituitrin injections increase the flow of milk. In my experience it has not been successful.

Local measures to the breasts to increase milk are effective. They are easy and cost nothing. It is surprising what good results can be obtained by these simple methods. Vigorous sucking by the infant is a strong stimulus for increased production of milk. In cases where the child draws the milk



lazily and feebly, it is advisable to prolong the interval between the feeds so that the child becomes very hungry and completely empties the breast. If the child is fed at 3rd hourly intervals, it may be changed into 4th hourly intervals. Another method for increased production of milk is alternate fomentations to the breasts of hot and cold water followed by massage.

The following valuable instructions for massage are from the Nursing Journal of India, August 1935. These should be known to every medical man interested in infant feeding. These are :—

(1) " Sit at one side of the patient's knee in order to face her, place the palms of hands on her shoulders and stroke firmly downwards out to side of breasts, under breasts and upwards, never allow them to drop, support them with the hands and let them down gently.

(2) Still sitting in the same position, put arms round patient place palms on her back so that finger tips meet at her spine, stroke firmly outwards, under sides of breasts, under the breasts, and up to the nipple, letting down gently.

(3) Support first one breast and then the other with one hand and stroke firmly and briskly in lines radiating from above and outwards towards the nipple.

(4) Let the patient lie on a couch without a pillow or stand behind her shoulder and stroke firmly from the waist line up under her breast to the nipple. Particular care should be taken to use even movements and not to let the breast flop.

Finish with the first movement. Do each movement five times, sponge for five minutes and massage for 10 minutes. This treatment should be carried out between feeds but never within half an hour after or before a feed."

I have given these above details on account of their importance in re-establishing breast milk. I have seen mothers who did not have more than 2 oz. of breast milk in 24 hours, increase their milk to more than 20 oz. after a course of treatment

extending over a period of 2 to 4 weeks and who were thus able to feed their babies entirely on breast milk.

There are cases where though the mother has enough milk for her baby the nature of her work may preclude her from entirely breast feeding her child. Such will be the case with mill-workers, shop girls, teachers, etc. Here changing the feeds to 4th hourly intervals say at 5 A.M., 9 A.M., 1 P.M., 5 P.M. and 9 P.M. will overcome this difficulty.

Then there are instances where even though both mother and baby are healthy, her milk disagrees with the infant. The latter cries after each feed, its abdomen gets distended, there is frequent colic. Vomiting is not common. Greenish watery acid stools appear, and the napkin area becomes sore. The child is fretful and cries constantly and does not put on any weight.

In these cases the mother's milk is too rich for her baby. The constituents responsible for the indigestion are the fats and the proteins in the milk. Changes in the mother's diet do not effect the constituents of the milk to any appreciable extent because milk is an active secretion elaborated in the breasts and mother's food is not the only factor that influences its quantity or quality.

In these cases, the temptation to change to artificial foods is very great and has to be stoutly resisted. There is no certainty that artificial foods are going to agree where human milk has disagreed. A simple procedure here is to dilute the breast milk. Give the baby two to four teaspoonfuls of warm water just before putting it to the breast. This dilute the milk and makes it agree with the infant.

Sometimes I have given citrated water, $\frac{1}{2}$ gr. of sodium citrate in 2 to 4 teaspoonfuls of water, immediately before each feed with gratifying results. Once the milk agrees with the baby, simple dilution or administration of sodium citrate may be gradually discontinued.

A Case of Solitary Cyst of the Kidney.

(From Col. Cruickshank's Wards).

BY LAKSHMINARAYANAN, V YEAR.

Arogya Mary, aged 38 years, widow, admitted into the General Hospital, complaining of dull aching pain in the right loin and of a mass in the right upper abdomen for the last 2 months.

Family history.—Nothing relevant.

Previous illness.—Two months back patient had an attack of dysentery which lasted for 10 days, passing stools consisting of blood and slime 20 times a day. A few days before the onset of the dysentery, the patient fell out of bed on to her right side.

Present illness.—A few days after the attack of dysentery had subsided the patient developed dull aching pain in her right loin and she also observed a mass in the right upper abdomen. The mass has not increased in size to any extent but causes pain when she tries to lie down on her right side.

Patient gave no history of pyrexia, jaundice, attacks of biliary colic, attacks of renal colic, haematuria or other urinary symptoms, or any symptoms of obstruction relating to the alimentary tract.

General condition.—All the systems were normal.

Local condition inspection.—Abdomen moved freely with respiration, the right upper flank bulged more than the left. An ovoid swelling was seen occupying the right hypochondriac and right lumbar regions, which did not cross the middle line. The tumour moved with respiration and became less prominent by putting the recti on the stretch.

Palpation.—The upper border of the swelling was just below the liver, the lower border reached to the level of the umbilicus. Though the upper border could not be clearly defined yet the fingers could be insinuated between it and the costal margin. The swelling was definitely not fixed but mobile to a slight extent in all directions. It was palpable and movable bimanually. The swelling felt hard and solid. No fluctuation or pulsation could be made out. The surface of the tumour was fairly regular. In the knee elbow position the tumour did not come down on to the examining hand.

Percussion.—A band of resonance was present between the liver and the tumour and also anteriorly over the medial part of the tumour. Percussion note over the tumour was dull, the dullness extending into the right flank.

Auscultation revealed nothing abnormal.

Examination from the back.—No swelling was seen, no local warmth or tenderness could be made out by palpation.

Liver.—Upper border was within normal limits. The lower border could not be palpated.

Spleen.—Not palpable. No other swelling seen or felt in the abdomen. No glands in the iliac fossae.

The following investigations were carried out :—

Urine.—Sp. Gravity. 1014. No sugar. No albumin. No red blood cells. No epithelial cells. No casts.

Faeces.—Nil abnormal seen. No occult blood.

Discussion and differential diagnosis.

The following might be considered :—

- (1) Swelling in the abdominal wall.
- (2) Swelling in omentum or mesentery.

- (3) Tumours of liver or gall bladder.
- (4) Tumours of colon.
- (5) Tumours of Pancreas.
- (6) Swellings of the right kidney.
- (7) Retro-peritoneal swellings.

1. Swelling of the abdominal wall can be ruled out since the tense rectus obscures the swelling.

2. Mesenteric and omental swellings can be ruled out since the swelling is bimanually palpable and movable.

3. The clear demarcation between the swelling and the liver, the free mobility of swelling, and the ease with which its movements during respiration can be arrested, the absence of dyspepsia, the absence of jaundice or history of attacks of biliary colic all rule out the possibility of its being a hepatic or gall bladder swelling.

4. Neoplasms of the ascending colon can be ruled out by the absence of signs and symptoms of obstruction or ulceration.

5. The free mobility, the presence of resonance only over the upper and medial part of the swelling, the absence of jaundice, the absence of other signs and symptoms of pancreatic insufficiency such as diarrhoea, wasting, etc., rule out a pancreatic swelling.

The above conditions have been more or less easily ruled out. We are now left with the following conditions to consider namely swellings in connection with the right kidney :—

Hydronephrosis.

Neoplasm.

Polycystic disease.

Solitary cyst

and retro-peritoneal tumours and cysts of congenital origin.

Before dealing with these possibilities, it will be necessary to detail the results of further investigations carried out.

Cystoscopy.—Revealed a normal bladder and normal ureteric orifices. Intravenous pyelography showed that both kidneys were functioning normally but that the right kidney appeared to be large and low placed and showed definite dilatation of the upper two major calyces. The right ureter was not well defined but was displaced medially. The pyelogram suggested a mass causing obstruction and displacement of the ureter.

A retrograde pyelogram of the right kidney showed flattening and dilatation of the available calyces with widening of the pelvi-renal junction.

The pyelograms in conjunction with the nature of the swelling, the short history, the absence of the haematuria and of severe pain save to rule out hydronephrosis, polycystic disease and renal neoplasms.

Retro-peritoneal extra-renal cysts and solid swellings resemble renal neoplasms, but though retro-peritoneal swelling may cause displacement of the ureter and kidney as seen in the pyelograms, yet they do not give rise to the pyelographic deformities characteristic of the renal neoplasm.

Solitary cysts.—These are of congenital origin and simulate neoplasms. They are usually found at the lower pole of the kidney and the pyelogram may simulate that of a neoplasm. They do not communicate with the renal pelvis. They present no characteristic symptoms and are usually discovered accidentally. If the cyst does not displace the renal pelvis the pyelogram will be normal. If, however, there is pressure on the renal pelvis or on the ureter a pyelographic deformity will be present and should haematuria occur, diagnosis from a renal neoplasm becomes very difficult.

Retro-peritoneal cysts can be excluded because the pyelogram is not normal and shows deformities.

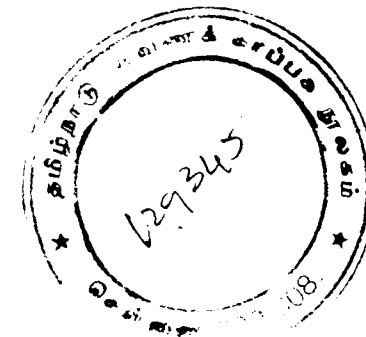
Hence the diagnosis lies between a neoplasm of the kidney and a solitary cyst and a diagnosis of a solitary cyst was made because of the entire lack of any history of renal trouble or of any signs or symptoms of renal neoplasm except the swelling.

The case came to operation and the diagnosis of solitary cyst of the kidney was found to be the correct one.

The cyst was found at the lower pole of the enlarged kidney; but it also extended up behind the colon to which it was very adherent rendering removal out of the question. The cyst was therefore emptied by trocar and canula through a separate stab wound in the loin.

The cyst contained 8 ozs. of colourless, clear, odourless fluid, the biochemical analysis giving positive tests for urea, and uric acid, and negative reactions for sugar and creatinine.

In conclusion I wish to express my thanks to Col. Cruickshank, I.M.S., for his permission to report this case from his wards and for the great help which he has given me in getting up the report.



The Story of the Resurrectionist.

BY S. BALAKRISHNAN, V YEAR.

In a murder-trial at Warwick, John Hunter the anatomist, who described the Adductor Canal which is still known by his name, was a medical witness. He was asked "you have long been in the habit of dissecting human subjects. I presume, you have dissected more than any man in Europe?" and he answered, "I have dissected some thousands during these thirty-three years." The Court purposely refrained from asking him where he obtained these thousands.

The answer to this question is to be found in some of the darkest pages in the history of medicine. History unfolds a tale,

"Whose slightest word,

Would harrow up the soul; freeze the young blood;

Make the two eyes, like stars, start from their spheres."

That these words of the ghost to Hamlet do indeed describe with no more than exact truth the horrors of the tale will be evident from the following account which has been culled from books on the subject.

Dissection was not then legalized and anatomists had to follow the example of Vesalius who stole bodies. Strength was indeed a great asset to the surgeons of those days, for only strong men, like Robert Liston, could venture on frequent midnight excursions into the churchyard.

But this occupation was incompatible with a life of strenuous study, of long hours of patient dissection, and of demonstrations to pupils; and thus there arose a new class of men in London, Edinburgh, Glasgow and other places, to meet this growing demand for dead bodies; and these men were the notorious resurrectionists or body-snatchers or sack-'em-up men. It is altogether a queer fact to reflect upon, that circumstances could make comrades of such illustrious men

as Sir Astley Cooper and body-snatchers like Crouch. The bond between them was such that if a resurrectionist was imprisoned, the anatomist had to help him and support his family. 'It is a strange world, my dears, it is a strange world', as the Maratha poetess Miss Sanjivini Marathe sings. The law considered the theft of a dead body as a misdemeanour; and condemned it felony to steal the grave-clothes. For example, Vaughan and his wife were sentenced to one month's imprisonment for having exhumed bodies; and when they were later tried again for a stocking which had clung to one of the dead legs, they were transported for seven years. "It is a strange world, my dears, it is a strange world."

These resurrection-men soon grew into a formidable tribe, more or less. They monopolised the cemeteries, by employing sextons, watchmen, grave-diggers, and undertakers, by intimidation and by bribery. They entered work houses and hospitals, claiming to be relatives of the recently deceased; usually they won their prey, for the authorities were only too ready to save the expenses of a pauper's funeral. Sentimental mourners had to watch the burial grounds; thoughtful relatives bought Bridgman's patent wrought-iron coffins; the authorities concerned set spring-guns in the churchyards. And still the bodies disappeared. The graves gave up their dead, though not in the Biblical sense. No obstacle was too great for the dexterity of these resurrection-men. Their crowbars and chains worked miracles. Their quickness at their job, and all in the darkness of the night, and without the least sound, might well be envied by an abdominal surgeon; and they restored the grave again 'so skillfully that many flowers were planted, and tears shed, over empty coffins.'

Nor had the anatomists all the benefits of these midnight exploits. Bodies sold to an anatomist were often stolen again from him and resold to another. Sometimes live drunkards in a state of torpor were delivered in sacks, instead of corpses; and the rogues pocketed their money before the deception was discovered.

Now we come to a still more gruesome tale, one which rings with the more intimate note of persons.

In Edinburgh the anatomists dissected and lectured in Surgeon's Square; in Tanner's Close lived their baser brethren the body snatchers.

And among of the latter, now famous in history, were William Hare and William Burke, and their 'women' Margaret Laird, and Helen M'Dougal; and all four drank constantly.

Among Hare's lodgers was an old army pensioner named Donald who died before his quarterly pension arrived, owing the landlord £4. Hare wondered how to recover his debt, and consulted his friend Burke. But neither had been resurrection-men till now. To their corrupt minds this was what might be called a 'psychological moment.' The parish officer had placed the dead man in a coffin; but when he returned to take it away it contained only tanner's bark, for the corpse of Donald lay in Hare's bed. The friends went to the college to see the professor of Anatomy, were directed to Number 10, Surgeon's Square. That night Donald's body lay in Robert Knox's dissecting room. The body-snatchers received £8 for the body—that is, twice the amount due to them by the deceased lodger. No questions were put by Dr. Knox but more bodies sought of them. This was on November 29, 1827.

Later, Joseph the miller lay sick with fever in Hare's lodgings. He was sure to die anyway, and so Burke and Hare smothered him and sold his body to Knox for £10. 'A nameless Englishman, suffering from jaundice' was next on their list.

The devil in them had been let loose. Like ominous birds of prey, they began to prowl the streets looking for 'subjects'; and the poor friendless men and women who haunted the neighbourhood little knew what sort of an eye was upon them.

One morning Burke saw two policemen dragging a drunken creature to the watch-house. "Let her go," he said, "I know where she lives and will take her home." After sunset she lay on the dissection-table of Dr. Knox. Another item in the firm of Burke and Hare—"Sold to Dr. Knox for £10."

Every week Abigail Simpson walked from Gilmerton to Edinburgh to get her pension of eighteen pence. Hare and his wife invited her for a drink, and the next day she was sold in a teahouse. Burke enticed old Effie to Hare's table, made her drunk, and smothered her—or as the term now used is, burked her.

Mrs. Hare suggested that Mrs. Burke might be turned into merchandise, but Burke was too fond of his Nelly for that. Of course these men and women were not the type of people that one would like to live with. In fact, Merrilees, a resurrectionist, sold his own sister to the surgeons.

Innumerable were the men and women who were thus victimised. Mary Haldane was one who never refused a drink. She had plenty of it at Hare's table, and as she fell asleep on the straw, was carried to Dr. Knox. Within a day or two her daughter Peggy called at Hare's house, saying the grocer had seen her mother there. Mrs. Hare was wild at this outrage, but Mr. Hare came with a smiling face, and soon Burke joined them, and the quarrel was forgotten, Peggy got drunk, Burke placed her face downwards and pressed her until she stopped breathing. That night the dead daughter lay beside the dead mother on the dissecting table.

Burke had just pitched upon a forlorn old man when he was greeted by a hearty Irish woman with her grandson, a boy dumb since birth. A greater bargain dims the less truly, and since two were better than one, Burke dismissed the old man. The Irish woman had come in search of some friends whose address she didn't know. Of course Burke professed to know the 'whereabouts' and he took her home, she was made drunk and then burked. The next morning the dumb boy showed by his actions that he was frightened at having been left alone. Burke himself says how the boy looked at him with terrified imploring eyes. But Burke knew that the boy could not cry out, and taking the dumb victim on his knee, he broke his back. And Knox paid him £16 for the two bodies.

I have perhaps quoted already too many cases, but I cannot leave without mentioning this last one.

Mary Paterson, a 'Venus of the pavement' belonged to Canongate. And of such dames their admirers sang:

The lasses o' the Canongate,
Oh they are wondrous nice;
They winna gi'e a single kiss
But for a double price.

This Mary was locked up over night in the watch house and the next morning she was refreshing herself at a shop with a gill of whisky. Here came Burke and invited her to his lodgings for breakfast. Bonny Mary, eighteen, alone, fearless, went with him. Burke offered Mary a bottle of whisky. She drank until she lay across the truckle-bed. Within a few hours the body of Mary Paterson was at Surgeon's Square.

One of Knox's assistants was sufficiently impressed by her beauty to inquire where they obtained her. This was young Fergusson, later famous as Sir William Fergusson, creator of conservative surgery, and professor at King's College of London. Another pupil, Henry Lonsdale, thus describes the sensation produced by Bonny Mary. "The body of the girl Paterson could not fail to attract attention by its voluptuous form and beauty; students crowded round the table on which she lay, and artists came to study a model worthy of Phidias and the best Greek art. A pupil of Knox's, who had been in her company only a few nights previously, stood aghast on seeing the beautiful *Lais* stretched in death, and ready for the scalpel of the anatomist. Knox, wishing for the best illustration of female form for his lectures, had Paterson's body put in spirit, so that when he came to treat of the myological division of his course, further publicity was given to her remains."

Cases of illustration being now over, there remains yet one case to quote, which closed finally the careers of Burke and Hare.

Burke was drinking in Rymer's shop, and at the same time on the look-out for a prey. An old woman came in begging for alms; she had come all the way from Ireland in search of her son, and her name was Docherty. Burke said that it was his mother's name too, and since they must be related he would help her to find her son, and of course, she must stay in his house. It happened that Burke's house was full at the time, a labourer named James Gray, his wife Ann, and their child occupying a pallet. Burke told them they must make way for his kins woman, and Mrs. Hare offered the old lodgers a bed in her own house. The Grays left Burke's house with the understanding that they would return next morning for breakfast.

At night there was merry-making in the house. The animated old woman sang and danced. If grew late and the other guests departed. The Burkes and Hares remained with the little old woman who thought

she would find her son the next day. There was a shout and then all was still. The Grays arrived for breakfast, and inquired about Mrs. Docherty.

Mrs. Burke answered that she had been too friendly with Burke and was so noisy that she turned her out. "Well", added Burke, "She's quiet enough now." Mrs. Gray had lost her child's stockings, and went to the straw to find them. "Keep out of there!" roared Burke. More than once he kept her away from the bed, and sat there watching it. Mrs. Gray smoked her pipe and wondered about the forbidden straw (naturally enough, Eve always wonders at forbidden things). No one moved from the room until it was dark; Burke then ordered Mrs. Burke and the lad Broggan not to let anyone come near the bed. Burke went out for a drink, and his faithless sentinels deserted their post. Gray and his wife were alone in the room. Without further delay, Mrs. Gray lifted up the straw which covered Mrs. Docherty. They gathered their few belongings and left the house. Mrs. Burke met them in the passage, and offered £10 a week for their silence; the Grays walked to the nearest police station and told their story. At eight o'clock a sergeant entered Burke's house; he lifted up the straw and nothing was there; he saw the blood and Mrs. Burke said she was menstruating. The sergeant did not believe the Grays and thought they brought the charge because they could not pay the rent and Burke had put them out. Nevertheless he took the accused to the station-house. The next morning the police visited Dr. Knox's empty rooms. The porter brought up from the cellar a tea-chest which had been delivered the night before. The police opened the tea-chest, and saw the face of a little old woman. James Gray came over, and identified her as Mrs. Docherty. The unshakable honesty of Gray had broken up the co-partnership of Burke and Hare.

The prisoners were tried only for suffocating Mrs. Docherty, and nothing was said about their numerous other victims—there was some technicality about that. Hare was promised immunity if he gave King's evidence, and he smilingly admitted sixteen murders. Hare, Mrs. Hare and Mrs. Burke went scot-free, and Burke was condemned: "To be hanged by the neck, by the hands of the common executioner, upon a gibbet, until he be dead, and his body thereafter to be delivered to Dr. Alexander Munro, Professor of Anatomy in the University of

Edinburgh, to be by him publicly dissected and anatomised. And may Almighty God have mercy on your soul."

The short skeleton of William Burke still hangs behind glass in the Anatomical Museum in the University of Edinburgh. By his side is the skeleton of one of his victims, Daft Jamie.

It remains to add that on July 19, 1832, after a stubborn debate, the Anatomy Bill, advised by Macartney, introduced by Warburton, supported by Macaulay, finally passed the House of Lords as the Anatomy Act. On that day Anatomy became a legitimate study, and the resurrection-man ceased to exist.

Madras Medical College Students' Hostel.

ANNUAL DAY.

24-2-1936

MAJOR McROBERT'S ADDRESS.

Col. Newcomb, Mr. Principal, Fellow students of medicine,

Having refused the honour of addressing the assembled students on several previous occasions, I consented to do so to-night with a good deal of misgiving as I cannot claim the longstanding intimate knowledge of student life in South India possessed by Col. Newcomb, nor am I a silver-tongued orator like Dr. Lakshmanaswami Mudaliar who addressed you last year.

In approaching me, your representative asked for words of advice to the student body.

Now I have an innate horror of the usual type of platitudinous utterance of the senior official who begins with a reference to the nobility of your chosen profession and then proceeds to urge you to devote your lives to almost gratuitous work in remote mofussil villages far removed from all the amenities of life to which you are accustomed.

But what else can an official say? Ours is a Government college, staffed by civil servants and we are bound almost to silence by government rules and by ordinary decency which prevents the employee from criticizing his employers in public places.

I should have liked to have been able to say "work hard, be conscientious in your studies, for the rewards are for the ablest and the best among you"—but I am afraid that I could

not say that with complete honesty, though I hope that some day in the future, a time will come when capability will count more than caste and brains come before birth place as recommendations for appointments.

I feel however that there are a few points which I may usefully touch upon without encroaching on forbidden ground.

In the first place I would urge you to cultivate friendship with fellow students over as wide a field as possible, not restricting your intimacy to devotees of medicine but mingling and exchanging views with members of all the faculties and also with men and women outside university circles.

One of the great dangers of life in a hostel, is its tendency to seclusion of its occupants from other members of society and the danger is especially great in a hostel of this type restricted to one class of professional student.

Coming as I have recently from a sister university on the other side of the Bay, where all undergraduates live in Hall but where segregation by faculties is not allowed, I am not too keen on the growth of any isolationist movement for medical students, though any hostel even a purely medical one, is better than the ill-lit and badly ventilated lodgings in which some of you have perforce to exist.

With these reservations I join heartily in congratulating the founders and committee of Jaya Mansion hostel on the success of their efforts and on their praiseworthy enterprise, and I earnestly hope that the students of Madras college will continue to press strongly through the proper channels for the provision of wholesome sanitary residential accommodation for every student—man and woman alike.

My next word of advice is with regard to your attitude towards criticism. I would urge you to try to cultivate a sense of humour and of tolerance of criticism.

It is exceedingly painful for a teacher who has made what appears to him at any rate to be an amusing remark or a mild and harmless joke at the expense of an erring member of his class or clinic to have the same taken as a slight or even as an insult.

On more than one occasion I have been met by a student who asked forgiveness for having incurred the evident displeasure of his teacher, who had completely forgotten the incident beyond recall.

Do not be ready therefore to take offence lightly nor to look for slights where nothing but harmless and entirely friendly comment or criticism is intended.

Another and even more important admonition is—Cultivate your sense of humanity.

Reasons given by students for entering the profession of medicine are numerous and varied. Its much vaunted nobility may call to some, to many it appeals as the most interesting of all the professions, always improving and steadily advancing; but to most it attracts as a safe means of proving a reasonable remunerative mode of living. Whatever may be the motive which brings us into the profession, we early find ourselves in a position greatly to assist and to benefit our fellow human beings and one of the great joys of practice in the tropics, is the large proportion of patients to whom one can give real relief, whom one can literally snatch out of very jaws of death.

There is however the very real danger which we must fight against from our earliest clinical days—the danger of regarding patients as cases and not as fellow human beings in distress.

Those of you who work in my clinic know that the favourite method of approach to treatment is "what would you recommend if this were your own father, would you advise operation if this were your brother", and so on.

I would therefore appeal to you from the earliest stages of your medical studies to regard with special care those poor illiterate people who have sufficient trust in our medical science to offer their bodies for our ministrations and manipulations against their ancient traditions and against the wishes and advice of their relatives and friends, and to help them as much as possible in hospitals where daily so many wander bewildered about the corridors with admission tickets looking almost in vain for some mysterious person designated H A to S-1, R. M. O-2, etc.

I would emphasize also the necessity for the development of a public health outlook. The role of the private practitioner in this country is still mainly confined to treatment of individual patients to the neglect of prevention of spread of disease and I have been greatly shocked both in hospital and outside to find evidence of enteric spreading gradually through household after household without any adequate measures having been taken to apply the simplest rules of hygiene and preventive inoculation to obviate spread of the disease.

With regard to examinations, I should like to say that so far as I have been able to ascertain after careful and painstaking study, the element of luck is almost entirely absent from the final M. B. B. S. examination.

I have been assured by students that they have failed by bad luck but the system which we have adopted of multiple examiners working in pairs, asking simple but important questions only, practically rules out the possibility of failure of a student who knows his subject reasonably well.

The object of the examiner is neither to pass nor to fail. He is an agent of the great Indian public to whom he guarantees that those who leave the portals of the College may reasonably and safely be consulted as having a good grasp of the elementary principles of their profession.

No amount of theoretical knowledge will make up for obvious lack of familiarity with clinical examination of patients; the regular burning of the midnight oil will not make up for lack of experience in the use of the stethoscope or the fingers, and I can assure you that there would be a higher percentage of passes in Medicine at any rate if less time were spent listening to teachers and more devoted to examination of patients.

In conclusion may I quote the lines of my late colleague, Lieut.-Col. J. W. Jones, I. M. S. of Rangoon:

If you want to tell the bison from the elephant or cow
The adder from the python or the sambhur from the sow
You don't swot up long descriptions in a scientific book
You pay your entrance at the Zoo and go and have a look.
If you want to learn your life work and to know about disease
You may listen to your lecturers or not, just as you please,
By all means read and learn it up, but take a tip from me,
Go and walk the hospital—it beats the zoo—its free!!

Medical College Students' Hostel Annual Day Celebration

The Annual Day of the Medical College Students' Hostel was celebrated on the 24th February 1936. Lt. Col. Clive Nevcomb, Surgeon General with the Government of Madras, presided over the function. And Major G. R. McRobert addressed the gathering. There was a large and distinguished gathering of officials, non-officials and students.

Tea over, in the lawn opposite the building, the gathering adjourned to a meeting on the beautiful terrace.

After prayer, Mr. K. Nagappa Alva, Student warden, read the following Hostel Report :

President Sir, Learned speaker, guests of the evenings and colleagues.

It is with the greatest pleasure that I extend to you all a hearty welcome. I feel great pride in performing this onerous duty for a second time in the life of this hostel. I am glad to report that the seed sown by Dr. Guruswamy Mudaliar and nurtured carefully by Dr. A. Lakshmanaswamy Mudaliar and Dr. K. S. Viswanathan under the kind patronage of our beloved principal Lt.-Col. Clive Newcomb has grown into complete fruition. Let me also remember on this occasion the untiring efforts of Mr. T. Janardhanan in starting this hostel.

As reported by me last year at the inauguration of the hostel, the hostel began its life on 1st September 1934 with 11 members. We grew from strength to strength and the hostel was full in no time. The rush throughout the year had been so much that we had to persuade last summer our land-lord and benefactor Mr. S. P. Jayarama Nadar to build another flat of rooms which as you see has devoured a part of this beautiful terrace.



Photo taken on the occasion of the Annual Day Celebration of the Medical College Students Hostel.
(Few of the many distinguished Guests).

The rush at the beginning of this academic year had been very great and we were forced to refuse admission to some inspite of taking in a few as associates. This makes it clear in what dire necessity the medicos stand for a big hostel. And we are greatly pained that even this year when the budget showed a surplus our existence has been completely ignored and no thought was given to the subject of our hostel by our benevolent Government. But it is some consolation that the sympathies of the college authorities are with us through thick and thin. And this year we have at our disposal the kind services of Dr. Lakshmanaswamy Mudaliar as our Adviser.

The strength of the hostel is at present 80 including 7 associates as compared to 49 and 2 of last year. The strength has been maintained constant.

The first General Body Meeting was presided over by Dr. Lakshmanaswamy Mudaliar on 30th July 1935 and a regular programme had been chalked out for the year.

The clerical work connected with the hostel has increased to such an extent this year that it was found impossible for the warden to work single-handed. So much so a part-time clerk had to be appointed and Mr. T. V. Sitaramiah a clerk of our College office, has been kindly permitted by our principal Lt -Col. Plumptre to accept this, and he is in our service from 1st November 1935. Also with the increase in the number of members it was felt that the previous place which was being used for the reading room was inadequate and another hall on the ground floor was rented.

Our vegetarian mess has 30 members and it is under the control of Mr. S. Venkateswaralu and Mr. S. Vasava Menon who form the mess committee. The non-vegetarian mess has 50 members and a committee consisting of 3 members Mr. G. S. Ramachandran, Mr. M. Natarajan and Mr. D. J. D'Costa is in charge of it. Both the messes give a fair report. The messes still continue to be run by contract. It has been our cherished hope to dispense with the contractor and run a mess of our own. To achieve our ambition we require a lot of money and support which we very badly lack. We look forward to our well wishers to come to our aid.

As regards accommodation there are 58 rooms out of which 45 are single seated, 11 double seated and 2 triple seated. Each flat has a representative of its own and he looks after the general comforts of the members and the sanitation of the flat. Mr. G. Sundarama Reddi is in charge of the topmost flat, Mr. P. V. Ramachandra Reddy of the middle flat and Mr. R. R. Breganza of the lower flat.

Coming to our social activities I am glad to report that we have got a separate common room with improved amenities. We have at present 3 dailies, 2 weeklies, and 1 monthly. Carroms and Chess continue to be as attractive as ever, and Ping Pong which has been added this year has proved very popular and relieves greatly the rush at the first two. Mr. K. P. Anandan is in charge of the common room. We had our usual intra-hostel tournaments. Another attraction for the members this year was the sports for which also the prizes are being awarded. For a decent common room we have got to equip ourselves with more periodicals, indoor games and a small library. I suppose I am not exceeding my bounds when I suggest that any old student can easily help us in this trilling matter.

Our examination results were satisfactory as ever. I am very happy to report this evening the success of one of our inmates Mr. E. R. Rebello who passing the recent Preliminary Examination of the Royal College of Surgeons has kept up the tradition set up by his predecessor Mr. P. S. Janardhanan.

It is a pleasure to report at great length the general activities of our members. Most of them continue to be members of the University Union, Y. M. C. A., Suguna Vilasa Sabha, and other important public associations. Our members shouldered much of the burden of the College Centenary Celebrations. We contributed no less than 50 per cent of the total number of volunteers both for the exhibition and general work. For the Flag Day collections almost all had gone out. We were greatly responsible in running the show and the authorities in office know with what zeal we did it. This strain had its telling, and many of our enthusiasts had to be dosed for a week as advised by our Medical officer with 10 grains of Hexamine a day.

Our contribution to the College U. T. C. contingent is more than a quarter. And it is a thing for our Commanding Officer Dr. K. S.

Viswanathan who as the treasurer of our hostel takes keen interest in us to be justly proud of. Also this will be a pleasing information for our popular Commandant Mr. C. B. Ponnappa who is one of our distinguished guests to-day.

As regards the general health of the members a few cases of illness had been reported at the beginning of the year but later it improved and has been quite satisfactory ever since. Our grateful thanks are due to Dr. Guruswamy Mudaliar who still continues to be our Medical Officer.

Coming to our finances, we collect a rupee per month from each member and out of this we pay for the papers, games, servants and sanitary requirements. Now we have a balance about 20 rupees. This reveals the sad state of our finances.

We are being given stray and vain hopes that for our hostel a foundation has been raised somewhere this side in Vepery and a site granted somewhere that side on the banks of the sacred Cooum opposite the Moore Market. The situation is both anomalous and ambiguous and leads us to doubt whether a hostel will ever come out. We don't know clearly where exactly we stand. I suppose that only a strongly organised effort by the students with the complete backing up by the College authorities will bring home to the Government the immediate necessity for a hostel. I appeal in the name of the noble profession to the authorities to do the needful.

Ladies and Gentlemen, you have now come to know something of our abode. We have got to find our own shelter and to stand on our own legs till the Government affords us a roof to live under. It is up to us to maintain this institution of ours which is soon to complete its second year of life. It stands as a noble monument of student enterprise. Our hostel is of immense value to a pretty large section of our College students, especially more so in summer when it happens to be the only hostel running in the city. Herein lies the importance of the hostel. And it falls to our lot to maintain it at all costs. This cannot be achieved unless we have sufficient funds. My request last year in a similar circumstance fell flat and at least now something has got to be done and should be done. I once again appeal to all benefactors both medical and public for generous contributions. Donations may kindly

be sent to Dr. Lakshmanaswamy Mudaliar or Dr. K. S. Viswanathan or Dr. S. Thambiah or to me, and these will be gratefully acknowledged in our College Magazine. The ray of hope which we expressed last year that the Centenary Day would see the laying of the foundation stone of a hostel has disappeared. But the Centenary Year has not come to a close. Nevertheless there is a chance for the benevolent members of the centenary committee to do us an act of charity. As I pointed out already it had been our aim to have a mess of our own and live better. The centenary committee will at least kindly help us to provide a mess of our own by meeting the capital expenditure necessary for utensils, etc., and this will be the greatest help that they would be rendering to the present and future students of the College. I think our cause is quite deserving for a small fraction of the fund to be spent on. We require a grant of Rs. 1,000 for our initial expenses and it is my sincere request that all the members of the committee will give their full support to our cause and help us.

Lastly it is my duty to tender my thanks to all those concerned. I am grateful to Lt.-Col. Clive Newcomb for all the encouragement he has given me. Time and again we are deeply indebted to the various acts of kindness which our landlord Mr. S. P. Jayarama Nadar has been pleased to perform towards us. My thanks are also due to Mr. T. Janardhanan, Ex-Secretary of our College Association, for his kind advice now and then. I thank all the members of the hostel for the hearty and willing co-operation they have given me throughout the year. Ladies and Gentlemen, I request you all to kindly sympathise with us and take keen interest in our cause."

Dr. K. S. Viswanathan, Treasurer, read an account of the caution money of the members.

Major G. R. McRobert next delivered an address to the students, the text of which appears elsewhere in the magazine.

Mr. T. K. Narayanan then introduced some of the hosts to the audience in a humorous speech.

Dr. Habibullah announced that in that day's Inter-collegiate, the Medical College had distinguished itself by winning all the trophies,

except that for the tennis singles. He said it was a record, which no other college had equalled.

Then the prizes won at the hostel sports were distributed to the winners by Lt.-Col. Clive Newcomb, the Chairman. He thanked Major McRobert for his very interesting address. He congratulated the Student Warden and the members of the hostel on their efficient management of the institution. The great merit of the hostel, he said, was that it was run entirely by students themselves. A hostel by the students, of the students, and for the students is to be justly proud of, and it deserves all help and encouragement. He promised to do all he could to get a Government-built hostel as soon as possible. He hoped they knew how difficult it was in those days to carry through any scheme, and any delay in the building of the hostel, he assured them, was not due to any lack of pressure by either the college authorities or the Surgeon-General. He was only acting Surgeon-General and he knew how keen Sir Frank Connor (Surgeon-General) was on getting them a hostel. In conclusion he thanked all those who had been rendering assistance to them in conducting the hostel.

Lt.-Col. C. M. Plumtre, I.M.S., Principal, expressed his pleasure at being present at the function, and in response to the clamour of the students announced a holiday for the college next day.

After a few songs by Mr. Eromanunni and Mr. John E. Koshi, and a vote of thanks by Mr. R. Rajagopala Reddy, the function terminated with cheers for the Chairman, the speaker and the guests.

Cullen the Olympic Player.

I have great pleasure in reporting in successive issues of the Magazine the rare distinctions achieved by The Madras Medical College in the field of sports. Following the inclusion of S. V. T. Chari in the All-India Cricket Test Team against Australia, Earnest Cullen of our college has been selected as the best possible pivot of the All-India Hockey Team for the Olympic Hockey Tournament to be held at Berlin this year. His place in the team was long expected and it is no surprise to us who know his marvellous game.

Earnest John Goodsire Cullen was educated at St. George's College, Mussoorie and from his early school days he has been keenly interested in sports, representing his school in hockey, football, cricket, boxing, etc., and has also been well up in his studies.

In 1931 he joined the Madras Medical College and distinguished himself as a good athlete and sportsman. He represented our College in Hockey, Football and Tennis in the Inter-collegiate Tournaments. On several occasions he played for the Madras University in the Inter-Varsity Tournaments and also for the Madras Hockey Association in the Inter-Provincial Tournaments. In 1934 he had, as a College Student, the unique privilege of captaining the Madras Hockey Association Elevens and led them to success against Bangalore, and in the following year he captained the Madras Hockey Association against the All-India Team to Newzealand.

True to the traditions of its glorious past, the Madras Medical College Hockey Team has won an unprecedented distinction for her 'alma mater' by winning the M. U. C.



EARNEST JOHN GOODSIRE CULLEN.

Photo by V. S. Ramaiah.

gold cup for two years in succession. This great success of ours is mainly due to Ernest Cullen, the talented captain and pivot of our team and he well deserves special praise for his fine captaining and unstinted endeavours in the interests of the team.

Recently he represented the Madras Hockey Association in the Inter-Provincial Tournament held at Calcutta where his fine display won for him the enviable place in the All-India Team.

Apart from his high standard in hockey he is an exceptionally good all-rounder. He is easily the best in our College Football team and played centre forward for Madras against Masulipatam in the Inter-'Varsity Tournament. He is also good at Tennis and represented our college both in Singles and Doubles in the Inter-collegiate Tournaments. The characteristic feature of his game being his spectacular Top-spin drives; the leading exponents of the game in Madras prophecy a bright future for him in Tennis as well.

In addition to his keen interest in sports he is a good student and has successfully come to the end of his College course. We wish him and the team Bon-voyage and brilliant success throughout the tour

J. J. DHARMARAJ.

In Lighter Vein.

All Square.

Perkins was feeling queer; he couldn't go on with his work; he couldn't do anything. So he decided to see his doctor.

"I don't feel up to the mark," he said to the man of medicine. "Can you give me a tonic?"

The doctor surveyed him for a moment or two, and raising from his chair remarked, "Has it ever occurred to you that there is a great deal in imagination, Mr. Perkins?"

"Certainly, doctor."

"Then imagine there is nothing the matter with you. Come back in a week and let me know how you feel."

The patient went, doctored himself, and returned at the appointed time.

"Ah," said the doctor, "you are feeling better. Didn't I tell you there's a great deal in imagination?"

"That's true," said Perkins, "What is your charge?" "One guinea," said the doctor.

"Well, imagine you've got it," said Perkins.

Tit for Tat.

Impertinent Doctor.—"I say, your ears are extraordinarily long."

Patient.—"Yes, put them on your head and we should have a fine donkey."

In Lighter Vein

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Too Clever.

McPherson (hoping for free advice): "Doctor, what should I do for a sprained ankle?"

Doctor.—"Limp!"

Asked for.

The seedy-looking man called on his doctor.

The latter cast a critical eye over his patient.

"So you don't feel any better after taking the medicine I prescribed", he said, "By the way, have you followed any one else's advice since you were taken ill?"

The patient nodded guiltily.

"Yes," he replied, "a young medical student—a friend of mine."

The doctor thrust out his jaws aggressively.

"And what foolish advice did he give you?" he asked.

"Well, he told me to come and see you," the patient replied.

A Warning.

Teacher.—"If you do not behave better, I shall ask your father to come and see me."

Doctor's son.—"You had better not—he charges five shillings a visit."

The Precaution.

Patient.—"Doctor, I'm afraid I'm losing my memory."

Doctor.—"In that case you'll have to pay me cash for this visit."

Put out your tongue.

A well-known physician was very much annoyed by an old lady, who was always sure to stop him in the street for the purpose of telling him her real or supposed ailments. Of course this wasted a great deal of the doctor's valuable time.

Once she met him in a crowded street, when he was in a great hurry. She began as usual to go over her complaints "Ah, I see you are quite feeble," said the doctor, "Shut your eyes and show me your tongue," She obeyed; and the doctor quietly moving off left her standing there for some time in this ridiculous position, to the great amusement of all who witnessed the funny scene.

Smoking.

Two doctors met together one evening. One of them was smoking and to this practice the other objected very much.

"Is it possible", said the non-smoker, "that you smoke tobacco? Even a pig would not smoke so vile a deed."

"Then, I suppose, judging from what you say, you do not smoke"

"No, indeed!" exclaimed the non-smoker petulently.

"Then, my dear fellow, who is more like the pig, you or I?" This remark closed all argument.

A poison

The professor was taking a class in Pharmacology. "HcN" he said, "is a terrible poison—one drop of it kills. Now then, Smith," said he, "name me another such poison."

"Aviation," Smith replied, after a while. The class tittered with amusement.

"Explain yourself, Smith," the professor snapped.

"One drop will kill, Sir, replied Smith.

The Assurance.

"Billy was badly hurt in that train smash, wasn't he, doctor?"

"Very. We had to amputate both legs"

"How sad! will he pull through?"

"Oh yes; we will have him on his feet again in less than three months."

Another Name.

"I don't like your heart's action," said the doctor, applying his instrument again, "you have had some trouble with angina pectoris."

"You're partly right, doctor," said the young man sheepishly, "only that isn't her name."

A Fatal Mistake

Doctor's Wife—My dear, what are you so dreadfully excited about?"

Doctor:—Just think of it, woman! By mistake I signed my name in the column for 'Cause of Death' in a death certificate!"

Last Property.

Jones had been through a serious operation, and when getting better, became quite pally with two other patients in the same ward.

"How are you feeling, boys?" said Jones one morning to them.

"Oh we are all right," said they, "considering that we both had to have a couple of operations."

"Why, how was that?" asked Jones.

"Because the doctor is just a careless ass. In collecting his instruments after the operation he missed a needle and a pair of scissors. The former he found in me, and the latter in my friend here on the right. You see now the reason for two operations."

Just then the surgeon put his head in the door and asked.

"Has any one seen my silk-hat?" Jones fainted.

Consoling!

"Oh, doctor, I feel so discouraged—whooping-cough, measles mumps and croup, one after the other, and now my child, is ill again!"

"Why, the boy is a genius!"

"A genius?"

"Yes—infinite capacity for taking pains, you know."

A doubt.

"I say, doctor, did you ever doctor another doctor?"

"Oh, yes."

"Well, tell me this: Does a doctor doctor a doctor the way the doctored doctor wants to be doctored, or does the doctor doing the doctoring doctor the other doctor in his own way?"

Practice.

"You cough with much more ease this morning," said the doctor.

"That is not remarkable," retorted the patient, "I've been practising it all night."

The Dermatologist.

To a doctor who has specialised in skin diseases—"why have you selected this branch of medicine?"

"For three reasons. None of my patients get me up at night, they never die, and they never get well."

The Secret.

The doctor smiled as he entered the room.

"You look much better to-day."

"Yes, I followed exactly the directions on your medicine bottle."

"What were they?"

"Keep the bottle tightly corked."

The Cure.

"And you say that Brown was cured of a bad attack of insomnia by suggestion?"

"Yes—Purely by suggestion! His wife suggested that since he could not sleep he might as well sit up and amuse the baby. It worked like a charm!"

The Doctor's Love-letter.

MY DARLING,

You have caused a sudden change in my metabolism. My respiratory organs are upset. My liver does not function as it should. My lachrymal glands work overtime so that there is always a film of tears in front of my orbs.

I am unhappy, and there is a general feeling of malaise, which weighs heavy upon me.

And why?

Well, the only diagnosis I can arrive at is that I am in love with you. Ever since the day I saw you, I have carried the image of your beautiful face in my left ventricle. And, darling, every time I form your name on my oris muscles, I feel a sudden spasmodic pain in my vena cava.

So tell me, will you be mine? Only a favourable answer will result in a favourable prognosis in the otherwise hopeless case of my mania for you.

YOURS STETHESCOPEFULLY.

University of Madras

Pre-Registration Examination, 1936

INORGANIC CHEMISTRY

SATURDAY, 4TH APRIL. 10 A.M. to 1 P.M.

Maximum: 100 marks

NOTE: Candidates must use separate books for PARTS I and II.

PART I

1. What is the connexion between the lowering of the vapour tension of a solution by the solute and the osmotic pressure of the solution? [16]

2. How can the molecular weight of colloids be determined? A colloidal substance is found to contain 0.455 per cent. of iodine. Calculate its minimum molecular weight. [16]

3. Given a mixture of barium chloride, barium nitrate, and barium sulphate, all in powder, how could you determine the amount of each present? [18]

PART II.

4. What are buffer solutions, and what are their properties? Calculate the PH of a buffer solution containing a mixture of acetic acid and sodium acetate in equivalent amounts, assuming that the sodium acetate is completely ionized in the solution. (K for acetic acid = 1.85×10^{-5} .) [20]

5. What are isotopes? Describe some of the recent methods used for effecting the separation of the isotopes of an element. [15]

6. Give explanatory definitions of the following terms:—(a) vapour pressure, (b) hydrolysis, (c) eutectic mixture, (d) lyophilic colloid and (e) gel. [15]

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Pre-Registration Examination, 1936

PHYSICS

MONDAY, 6TH APRIL. 10 A.M. to 1 P.M.

Maximum: 100 marks

NOTE: Candidates must use separate books for PARTS I and II.

PART I

1. Assuming the existence of *surface tension*, explain the ascent of water and the depression of mercury in a glass capillary tube.

Water rises to a height of 6.0 cm. in a glass capillary tube whose internal diameter is 0.5 mm. Calculate the surface tension of water. [17]

2. Define the *coefficient of thermal conductivity* of a body. Describe how you would compare the thermal conductivities of two given metal rods. [15]

3. Indicate briefly how the following measurements can be made:—

(a) The refractive index of a drop of oil.

(b) The thermo-e.m.f. of a copper-iron junction at 100°C. [18]

PART II

4. Explain the nature of *spherical* and *chromatic aberration* in a lens, and indicate briefly how these defects may be minimized.

What is an achromatic lens, and how is it made? [18]

5. Describe how *cathode rays* are produced in the laboratory. Enumerate their properties, and describe an experiment to demonstrate one of these properties. [16]

6. Write short notes on:—

(a) The absolute zero of temperature.

(b) The critical angle of a transparent medium.

(c) The quality of a musical note.

(d) Neutral points in magnetic fields. [16]

Pre-Registration Examination, 1936

BIOLOGY

TUESDAY, 7TH APRIL. 10 A.M. TO 1 P.M.

Maximum : 100 marks

NOTE : Candidates must use separate books for PARTS I and II.

PART I.

1. Give an account of the chief distinguishing characters of the important poisonous snakes of the South India. [18]
2. What is a tissue? Describe the principal tissues in the stem of a dicotyledonous plant. Illustrate your answer by means of diagrams [16]
3. Explain the biological meaning of—zygote, homozygote, dominant, and recessive. [16]

PART II.

4. Give an account of the various devices by which fruits and seeds are dispersed. Cite examples from Indian plants. Of what importance is the distribution to the plants? [16]
5. Describe briefly, with the aid of diagrams, the appendicular skeleton of the Frog. [14]
6. Write short notes on:—capitulum, transpiration, cork, prothallus guttation. [20]

First M.B. and B.S. Examination, 1936

ORGANIC CHEMISTRY.

SATURDAY, 4TH APRIL. 10 A.M. TO 1 P.M.

Maximum : 50 marks

NOTE : Candidates must use separate books for PARTS I and II.

PART I

1. A monobasic acid was found to contain carbon, hydrogen, and oxygen only. The calcium salt upon being heated yielded a distillate which reacted with hydroxylamine to give a derivative containing 19.17 per cent. of nitrogen. Calculate the approximate molecular weight of the acid, and suggest a possible structural formula for it. [9]
2. Compare and contrast the properties of nitro-paraffins with those of the aromatic nitro-compounds. [8]
3. Explain the isomerism of maleic and fumaric acids. How can they be converted into tartaric acids? Write the graphic formulae of the tartaric acids obtained. [8]

PART II.

4. Show clearly how you would proceed in order to convert (a) ethyl alcohol into methyl alcohol, (b) acetic acid into propionic acid, and (c) benzene into benzyl chloride. [9]
5. What are the general methods of preparation and properties of phenols? In what respects do phenols differ from aromatic alcohols? [8]
6. Describe the use of the following reagents in organic chemistry:—(a) hydriodic acid, (b) sulphuric acid, (c) nitrous acid, and (d) metallic sodium. [8]

First M.B. and B.S. Examination, 1936**ANATOMY, INCLUDING ELEMENTS OF
HUMAN EMBRYOLOGY**

MONDAY, 6TH APRIL 10 A.M. to 1 P.M.

Maximum : 100 marks

NOTE : *Candidates must use separate books for PARTS I and II.***PART I**

1. Describe, with the help of a diagram, a transverse section through the midbrain at the level of the superior colliculus (quadrigeminal body). Mention the chief connexions of the named masses of grey matter at that level. [17]

2. The shoulder joint.

(a) Mention, in order, the immediate relations of its articular capsule.

(b) State how its security is provided for.

(c) Name the arteries and nerves which supply it. [17]

3. Give an account of the prostate, including its development. [16]

PART II

4. Describe in detail the *septum nasi*. State what you know of its development. [17]

5. Give the position and relations of the various groups of lymph nodes in the inferior extremity. Mention the areas severally drained by them. [17]

6. Describe the internal mammary artery. How may its position be indicated on the surface of the body? [16]

First M.B. and B.S. Examination, 1936**PHYSIOLOGY, INCLUDING BIOCHEMISTRY**

TUESDAY, 7TH APRIL. 10 A.M. to 1 P.M.

NOTE : *Candidates should use separate books for PARTS I and II.*

Maximum : 100 Marks.

*Illustrate your answers with diagrams where possible.***PART I**

1. Give an account of the causation and regulation of *tonus* in voluntary muscle. [16]

2. Describe the influence of afferent nerves on the cardio-vascular system. [16]

3. Give an account of the physiological actions of (a) secretin, (b) histamine, (c) acetyl choline. [18]

PART II

4. Describe, with the aid of diagrams, the arrangement of blood-vessels in the liver, and explain their physiological significance. What will be the effect of complete excision of this organ? [17]

5. Discuss briefly the sources and the physiological effects of carbon dioxide in the body. [16]

6. Give an account of the structure and functions of the anterior lobe of the pituitary body. [17]

Second M.B. and B.S. Examination, 1936

PHARMACOLOGY

SATURDAY, 4TH APRIL. 10 A.M. to 1 P.M.

Maximum: 100 marks

PART I

1. Mention the important drugs which are opaque to X-rays. In what doses and in what manner are these used? [15]
2. What is ergot? What do you know of its source, composition, and physiological action? [18]
3. What are the requisites of an ideal local anaesthetic? Mention those in common use, and discuss their relative merits. [17]

PART II

4. Briefly discuss—
 - (a) the effect of excess of protein on the germicidal action of chlorine-yielding compounds and mercurials;
 - (b) the influence of the solvent on the disinfectant action of phenol; and
 - (c) the properties essential in a preparation used for disinfection of the genito-urinary tract. [18]
5. A drug is said to dilate the pupil. Describe how you would proceed to ascertain its mode of action. [16]
6. Describe the action of the following official preparations, giving the doses and mode of administration in each case:—(a) *Extractum Hepatis Liquidum*, (b) *Liquor Ergosterolis Irradiati*, (c) *Pulvis Ipaecacuanha et Opii*, (d) *Mistura Sennae composita*. [16]

Second M.B. and B.S. Examination, 1936

HYGIENE

MONDAY, 6TH APRIL. 10 A.M. to 1 P.M.

Maximum: 100 marks

PART I

1. Compare the composition of cow's milk with that of human milk, discussing the fitness of the former as food for the human infant. What would you do to render cow's milk suitable for use as food for the human infant? [17]
2. Give a short account of the life-history of the *Musca domestica*. What steps would you take to prevent the breeding of the house-fly? Give three examples of fly-borne diseases. [17]
3. Write short notes on:—(a) antitoxic serum, (b) antisiphonage action, (c) antiseptics, (d) infantile mortality. [16]

PART II

4. Give a brief description of a slow sand filter, and state how it brings about purification of water [16]
5. Discuss briefly the relative influence of the important constituents of the atmosphere on health and comfort. How would you determine the state of ventilation in a room? [18]
6. Indicate the nature of preventive measures in (a) plague, (b) pulmonary tuberculosis, and (c) tapeworm infections. [16]

Second M. B. and B. S. Examination, 1936

GENERAL PATHOLOGY INCLUDING BACTERIOLOGY

TUESDAY, 7TH APRIL. 10 A.M. to 1 P.M.

Maximum : 100 marks

PART I

1. Under what conditions may sugar be found in the urine? How would you determine its cause? [16]
2. Discuss the causation of cerebral haemorrhage, and describe the pathological changes which occur in the brain. [16]
3. Describe the life-history of *E. histolytica*. Give an account of the naked-eye and microscopic changes found in the intestine infected with this parasite, and contrast with those seen in cases of *B. dysenteriae*. [18]

PART II

4. What are the principles and the methods of artificial immunization? Explain the difference between active and passive immunity. [18]
5. What are the post-mortem appearances of a case of advanced pulmonary tuberculosis? [14]
6. Describe the morphology and the distribution in the body of the organism of kala-azar. How would you make a laboratory diagnosis of a case? [18]

Second M. B. and B. S. Examination, 1936

OPHTHALMOLOGY

WEDNESDAY, 8TH APRIL. 10 A. M. to 1 P. M.

Maximum : 50 marks

PART I

1. Describe the operation for enucleation of the eye-ball. [9]
2. What do you mean by papilloedema? What does it signify? [8]
3. Mention three well-known pathological conditions which show characteristic changes in the visual fields, and give diagrams of the fields. [8]

PART II

4. What treatment would you adopt for juvenile cataract? [8]
5. Describe the ophthalmoscopic appearances of a case of primary optic atrophy. Mention some of the principal causes of this condition. [9]
6. How would you treat a case of acute catarrhal conjunctivitis? [8]

Final M.B. and B.S. Degree Examination, 1936.

FORENSIC MEDICINE

WEDNESDAY, 15TH APRIL. 10 A.M. to 1 P.M.

Maximum: 100 marks

PART I

1. What are the means available for the identification of the living and the dead? What factors may operate to reduce the value of the data obtainable for identification? [17]
2. Describe the medical and legal responsibilities of a medical man towards the sick and the State. [17]
3. Mention in seriatim the changes in the body after death. Explain the factors that will accelerate or retard each item of the change. [16]

PART II

4. Describe the modes of estimating age in the young. [16]
 5. Describe the manner and cause of death in drowning. What are the post-mortem signs which indicate death by drowning? [17]
 6. Name **three** typical metallic irritants. Describe the symptoms and the treatment you would adopt in a case of acute poisoning by any **one** of them. [17]
-

Final M.B. and B.S. Degree Examination, 1936.

SURGERY.

FIRDAY, 17TH APRIL, 10 A.M. TO 1 P.M.

Maximum: 100 Marks.

PART I.

1. Describe the varieties, clinical features and treatment of fractures of the clavicle. [16]
2. Describe the causation, complications and treatment of supuration in the frontal air sinus. [17]
3. Discuss the pathology and treatment of herniae at the umbilical region.

PART II.

4. What are the symptoms and physical signs of volvulus of the pelvic colon? How would you treat the condition. [17]
 5. A patient suffering from malignant disease of the testis comes to consult you. You find that the growth has involved the body of the testis, the epididymis and ductus deferens, the covering of the spermatic cord and scrotum. Where would you look for secondary deposits, and why? [16]
 6. Describe briefly the life-history of *Dracunculus medenensis*. What are the clinical manifestations of infestation with this parasite, and how would you treat them? [17]
-

Final M B. and B.S. Degree Examination, 1936.**OBSTETRICS AND GYNAECOLOGY.**

SATURDAY 18TH APRIL, 10 A.M. TO 1 P.M.

Maximum: 100 Marks.

PART.

1. Discuss the causation and treatment of persistent occipito-posterior positions. [17]
2. Describe the mechanism of labour in flat pelvis, discuss the treatment. [17]
3. A patient aged twenty-four is admitted into hospital with acute pain in the left side of her lower abdomen, temperature 104, pulse 129. Discuss the causes of the condition and how you would investigate and treat the case. [16]

PART II.

4. Describe the aetiology, pathology and treatment of asphyxia neonatorum. [17]
 5. Describe the investigation and treatment of a case of sterility in a woman. [16]
 6. A woman aged thirty years who has had five children is admitted on 10th January 1936 with a history of getting up from bed that morning to find her clothes wet with blood. Her last menstrual period was on 15th April 1935. Describe your investigation of the case, and discuss the treatment. [17]
-

Final M B. and B.S. Degree Examination 1936.**MEDICINE.**

THURSDAY 16TH APRIL 10 A.M. TO 1 P.M.

Maximum: 100 Marks.

All questions to be answered.

PART. I.

1. Give a brief account of the pathology, symptomatology, and differential diagnosis of climatic bubo (lymphogranuloma). [17]
2. Give an account of the clinical conditions associated with tetany and of the appropriate treatment in each case.
3. Give the signs, symptoms, and differential diagnosis of aneurysm of the transverse portion of the aortic arch. [17]

PART II.

4. State what you know of Monomania. Give prognosis and treatment. [15]
 5. Give the aetiology, symptoms, and treatment of chronic gastritis. [18]
 6. Give the differential diagnosis of nephrosis, and discuss the principles of treatment. [17]
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University of Madras.

MEDICAL EXAMINATIONS, APRIL 1936.

The following is the list of successful candidates at the recent Medical Examinations held in April 1936 :—

(Note :—Names in italics denote women candidates.)

Medical College, Madras.

PRE-REGISTRATION EXAMINATION.

Rank.	Regr. No.	Name of candidate.	Regr. No.	Name of candidate.
1	26	Jayaraj Aiyar Nadar, C.	34	Lakshmarayudu, Ch.
	55	Rangaraj, A. G.	35	<i>Lazarus, Muriel E.</i>
3	70	Urumese, M. A.	37	Lushington, L. T.
4	52	Ramachandran, P. V.	40	Muttukumaraswami, M.
5	63	Sitapati, T. M.	41	Mutturam, T. R.
6	14	D'Silva, B. G.	42	Narayanan Nambissan, C. N.
	1	Audikesava Rao, K.	44	Noble Adiseshayya.
	4	Arabinda Babu Naidu, S. R.	45	Padmanabha Reddi, B.
	5	Balakrishnan, P.	46	<i>Pankajam, V.</i>
	6	Balakrishnan, P. P.	49	Raghavan, A.
	8	<i>Burhanunissa.</i>	51	Rajasekharan, N.
	9	Chandrasekharan, N.	53	Ramachandra Rao, Y. R.
16		Ganapati, S. N.	54	Ramaratnam, T. S.
17		Gridhar Prabhu, G.	56	Sanjiva Rao, K.
18		<i>Girija Bai, M.</i>	57	<i>Sarada, A.</i>
19		Gnanadickam, V. J. D.	60	Sengottayyan, K. N.
20		Gopalaratnam, M. R.	62	Seturamalingam Pillai, C.
23		Govindarajulu, M.	68	Tyagarajan, A.
25		Janakiraman, O.	72	Varughese, J. K.
27		John, E. K.	73	Vittal Kudva, K.
31		Krishnamurthi, P. V.	74	<i>Vurghese Ruby</i>
33		Kumaravelu, P. S.		

FIRST M.B. & B.S. EXAMINATION.

PART I.

Register number and name of candidate.

75	Aga Muhammad Raza Shirazi.	91	Jagannadha Reddi, D.
76	Ahmed Hussain, H.	93	<i>Janaki, K. G.</i>
77	Anantagiri, V.	94	Jansen, R. A.
79	Balakrishna Ayyar, N.	95	Jayaram, D.
80	Channabasappa, M. N.	96	Kannivelu, P. D.
81	Chellappa, Y. C.	97	<i>Komalavalli, B.</i>
82	Dasanna, M. N.	98	Krishna Rao, K.
85	Gopalakrishna Ayyar, S.	99	Lionel Bannerji, M. J.
86	Govindarajulu, N.	102	Maragadavel, S.
87	Harirajan, D.	103	Mohanarangam, V.
88	Hart, W. S.	106	<i>Nayudu, Varalakshmi</i>
89	Hogg, L. M.	107	Pereira, B. J.

University of Madras

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FIRST M.B. & B.S. EXAMINATION—(Contd.).

PART I—(Contd.).

Register number and name of candidate.

109	Radhakrishna Chetti, M.	130	<i>Thomas, Alice P.</i>
111	Rajakannappan, A. C.	131	Thomas Zacharias, P.
112	Rarukutti Nayar, K. T.	132	Umamahesvara Rao, P.
114	Sanjiva Rao, P.	133	Velayudhan Pillai, K.
117	<i>Sarah Samuels.</i>	134	Venkataramanan, G. N.
118	Sekhara Menon, K.	135	Venkatarama Rao, B.
119	Seshan, A. M.	136	Chathukutti Nayanar, V.
122	<i>Simcock, Ruby.</i>	137	Haridass, A. K.
123	Somayya, C. I.	138	Kochunni Nayar, K.
124	Srinivasan, J.	141	Madhavan, S. P.
125	Srinivasan, N. A.	143	Padmanabhan Ayyar, S.
126	Subrahmanyam, C. T.	144	Kamanujachari, C.
127	Sukhumaran, K.	145	Vedanayakam, D. T.
129	Thanaratnam, P.		

The following candidate completed the First M.B. & B.S. Examination by passing in Part I :—

Register number and name of candidate.

110 Rajagopal, S. G.

The following candidates completed the First M.B. & B.S. Examination by passing in Part II :—

SECOND CLASS.

Rank.	Regr. No.	Name of candidate.	Regr. No.	Name of candidate.
1	148	Anandan, K. P.	150	<i>Asirvatham, Josephine.</i>
2	223	Sukumaran, R.	153	Balakrishnan, T. K.
3	205	Ranganatha Pillai, T. V.	156	Bhavadasanuni Nayar, K. P.
4	192	Narayanan, G.	157	<i>Buultjens, Gusta.</i>
5	179	Krishna Rao, S.	158	Chakravarthi, S.
6	202	Ramapandiya Raj, V. P.	160	<i>Chandy, Saramma.</i>
7	151	Atmaram Rao, G.	162	<i>Dominic, Josephine.</i>
8	233	Yusuff Siddiq.	163	<i>Enoch, Josmine.</i>
9	144	Ramanujachari, C.	164	Francis Chandradoss.
10	149	Arthur, D.	167	Hamid, M. A.
11	172	Korula, John.	169	Jayaram Rao, D.
	228	<i>Vedakkan Daisy</i>	171	Kesava Pillai, E. K.
13	168	Jaganivas, B.	173	Koshy, P.
14	212	Samuel Victor, J.	178	Krishna Rao, J.
15	175	Krishnamurthi, T. R.	181	<i>Mahalakshmi, S.</i>
16	147	<i>Afzalunissa Begum</i>	186	Muhammad Abdul Subhan.
17	195	Orton, F. G.	190	Ninan Varghese.
18	161	Davidson, H. A.	194	Natarajan, K. J.
19	198	Raghavan, T.	203	Rama Raju, P.
20	230	Venugopalan, M. S.	209	Sampath, S. K.
21	208	<i>Saguna Bai, M.</i>	210	Samuel, G.
22	201	Raja Rao, S. V.	214	Shamboo Hegde, M.
23	196	Penhearow Ray, M.	215	Somasundaram, M.
24	184	Martin, Basil H.	216	Srinivasa Rao, K.
	187	Muhammad Rahimulla	222	Sudarsanam, V. C.
26	165	Ganpati, K. C.	224	<i>Sunanda Bai, K.</i>
27	170	Joseph, K. P.	225	Sundararaj, I.
	143	Padmanabhan Ayyar, S.	232	Verma, S. N.

The following candidate passed in Part II only :—

Register number and name of candidate.

* 142 Muhammad Tajjuddin.

* Yet pass in Part I.

SECOND M.B. & B.S. EXAMINATION.

PART I.

Register number and name of candidate.

236	Balakrishna Menon, K.	264	Ramachander, P.
237	Chacko, C. W.	265	Ramanathan, A. N.
238	Chandrasekhara Panikkar, T. C.	266	Rama Rao, K. R.
240	Coshan, A. R.	267	Rithuparnan, T. K.
242	Gangadhara Kartha, N.	268	Sumbasivan, V.
243	George, T. M.	271	Satya Joseph, H. A.
245	John Sosamma.	272	Srinivasan, A.
247	Karney, P. L.	273	Sriramachandra Rao, C.
248	Krishnamurti, B. N.	274	Subbaratnam, G. L.
249	Krishnaswami Vasantha, S.	275	Sundararami Reddi, G.
250	Kumaran, V. C.	277	Waller, S. O.
251	Kuriya, A. L.	281	Desai, M. D.
252	Madhav Rao, D. N.	282	Gundu Rao, M.
253	Manikkamuttu, C.	283	Manuel, Miriam
254	Martandam, L. R.	284	Muhammad Abdul Subhan.
255	Mathew, K. M.	285	Ramachandra Sarma, S.
256	Money, N.	287	Raman Tampi, A.
257	Muhammad Shamsuddin.	290	Shrivastwa, G. P.
260	Oommen, P. O.	291	Subrahmanyam, N. V.
261	Pushong, E. C.	292	Vaidya, D. R.
263	Raghava Rao, T. V.	294	Visvanatha Tarvadi, V.

The following candidates completed the Second M.B. & B.S. Examination by Passing in Part II :—

SECOND CLASS.

Rank.	Regr. No.	Name of candidate.	Regr. No.	Name of candidate.
1	292	Vaidya, D. R.	285	Ramachandra Sarma, S.
2	307	Gangadharan Thampi, P.	287	Raman Tampi, A.
3	290	Shrivastwa, G. P.	303	Dhirar, A.
4	281	Desai, M. D.	310	Gowrisankar, T. D.
5	306	Elizabeth, P. K.	313	James, F. M.
6	362	Venkatachalam, P. V.	315	Kasim Pillai, A.
7	341	Sankaran Kutti Menon, M.	316	Kesavalu, S.
8	359	Vasava Menon, S.	317	Kesavan, C. K.
9	355	Syed Muhammad Ghouse.	318	Krishnan Nayar, K.
10	297	Anantakrishnan, T. A.	322	Mallesu, G. M.
	308	Gibson, Heywood B.	324	McNamara, L.
12	340	Rangavadivelu, N.	327	Narasimbachari, N.
13	291	Subrahmanyam, N. V.	331	Paidilingam, K.
14	298	Bhaskara Menon, A.	344	Sheshappa Sheno, L.
15	361	Velayudhan, A.	347	Sivarama Mannadiyar, E.
16	302	Damodar Sheno, G.	350	Subbalakshmi, K. S.
	339	Ramalingam, T. T.	351	Subbarayalu, P.
18	343	Sivabushanani, K.	352	Subrahmanya Chetti, M.
19	321	Madhavanunni Nayar, M.	353	Subrahmanyam, N. R.
20	294	Visvanatha Tarvadi, V.	356	Thomas George.
	363	Venkatakrishnayya, S.	357	Thomman, K. C.
22	320	Madhavan Nayar, R.	358	Varghese, K. L.
23	304	Dominic Sebastian, K.	360	Vasunni Nayar, M.
24	296	Aga Muhammad Jawad Shirazi.		

FINAL M.B. & B.S. DEGREE EXAMINATION.

PART I.

Register number and name of candidate.

366	Abraham, M.	390	Sivasankara Kurup, P.
367	Abraham Paul.	391	Sriramamurti, K.
368	Anantan Nambiyar, M.	392	Subrahmanyam, V. S.
369	Balakrishnan, S.	393	Thiruvengkatachari, S. V.
370	Chacko, A. G.	394	Venkataswami, Pushpam
372	Dharmaraj, J. J.	395	Abdul Sathar Ismail
373	Doraiswami, P. K.	397	Balakrishnan Nedungadi, T. M.
374	Duraiswami, N. S.	398	Chandy, Jacob.
375	Eromanunni, T.	399	Damodara Mallayva, B.
376	Fonseca, P. J.	400	Gangamma, K. M.
377	Janardhanan, P. S.	401	Jagadisan, A. N.
378	Kamath, M. V.	402	Kasim, P. A.
379	Keralavarma Thirupad, K.	403	Keshava Nayak, K.
380	Krishna Bhat, K.	404	Krishna Nayak, P.
382	Marikar, Abusha Bibi.	405	Luke, V.
383	Narayanan Nayar, M. K.	406	Pandidurai, C. S.
384	Rajagopalan, G. N.	407	Porinchu, A. A.
385	Ramachandran, G. S.	409	Rama Ayyar, V.
386	Ramachandran, V. S.	410	Ramankutti, M.
387	Ramakrishnamma, Z.	411	Rangachari, N. A.
388	Ramanathan, N.	413	Titus, T.
389	Sivaraman Nayar, M.		

The following candidates qualified for the M.B. & B.S. Degree by passing Part II of the Final M.B. & B.S. Degree Examination :—

SECOND CLASS.

Rank.	Regr. No.	Name of candidate.	Regr. No.	Name of candidate.
1	492	Shankar, E. A.	437	George, P. I.
2	502	Sundaresvaran, D.	442	Janardhanan, T.
3	470	Nandlal Bordia.	452	Koshi, K. C.
4	489	Samuel, Annamma.	453	Krishna Ayyangar, V.
5	504	Thangamma, K. G.	455	Krishnanunni, T.
6	474	Padmanabhan Nambiyar, E. K.	456	Krishna Prasad, R.
7	459	Lakshminarayana Ayyar, A.	457	Krishnaswami, A. S.
8	515	Venkateswar, C. H.	458	Kumara Menon, K.
9	447	Kameswaramma, G.	468	Muttuswami, L. K.
10	454	Krishna Bhatta, B.	472	Narasimha Prabhu, G.
11	423	Brahma Bhat, K. A.	478	Radhakrishna Reddi, G.
12	404	Krishna Nayak, P.	483	Ramakutti Wariyar, T. V.
	415	Achyuta Panikkar, M.	488	Rudrani Amma, G.
	418	Angustine Altarikathan.	490	Sankara Ayyar, G.
	420	Bail, M. R.	500	Sundara Babu, B. V.
	422	Bhaskaran, K.	501	Sundaram Pillai, V. O.
	424	Chacko, P. T.	505	Thomas, K. E.
	427	Chandrasekhara Menon, C.	508	Vaidyanathan, S. R.
	429	Colledge, Merlyn.	509	Varghese, P. K.
	434	Eapen, K. E.	512	Varkkey, C. E.

M.D. DEGREE EXAMINATION, APRIL 1936.

The following candidate was declared to have qualified for the M.D. Degree :—

Register number and name of candidate.

Branch II—Midwifery.

521 Venkataswami, P. V.

M.S. DEGREE EXAMINATION, APRIL 1936.

The following candidate was declared to have qualified for the M.S. Degree :—

Register number and name of candidate.

523 Mahadevan, R.

**EXAMINATION FOR THE DIPLOMA IN GYNAECOLOGY AND OBSTETRICS,
APRIL 1936.**

(D. G. O. EXAMINATION.)

The following candidates were declared to have passed the examination :—

Register number and name of candidate.

526 Krishnan Nayar, P.

527 Madhavi Amma, P. T.

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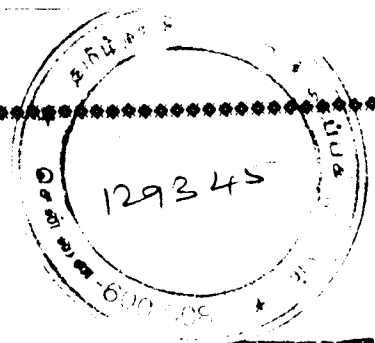
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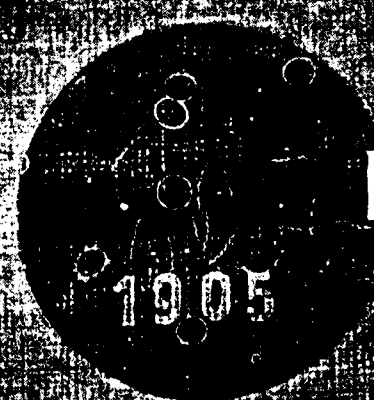
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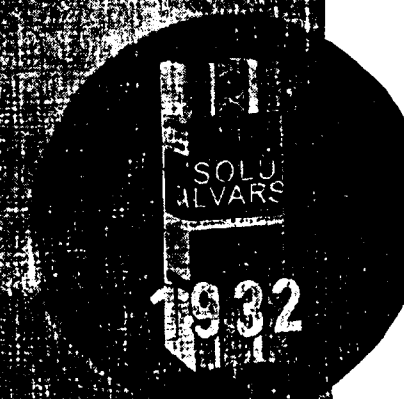
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