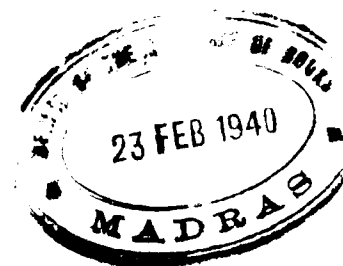


THE MISCELLANY

OF



THE TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION
(Branch of the Indian Medical Association)
(REGISTERED)

FOR CIRCULATION AMONGST MEMBERS ONLY.

JANUARY

1940

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THE MISCELLANY

OF THE

TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION

(REGISTERED)

FOR CIRCULATION AMONGST MEMBERS ONLY

Vol. VII]

JANUARY 1940

[No. 1

Ourselves

We have been publishing in these pages a short summary of our monthly meetings and monthly statement of accounts. This year we purpose to publish as many lectures as possible that are delivered at our Association. In the current month's issue we are publishing a record of our Annual Gathering with Dr. T. S. S. Rajan's opening address. In the subsequent months we shall be publishing summaries of the three lectures delivered during the session.

It is gratifying to note that in response to our appeal a member has sent a contribution for publication and we are gladly publishing the same and invite other members not only to contribute original articles but also case notes and useful extracts.

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The Trichinopoly District Medical Association

(Branch of the Indian Medical Association)

(REGISTERED)

The Tenth Annual Gathering of the above Association was held at 11 A.M. on Sunday the 21st January 1940, in the premises of the National College, Trichinopoly.

About 60 members and 50 visitors from neighbouring districts attended the function. Lt. Col. N. K. Bal the President of the Association welcomed the members and visitors and appealed to all medical men in the district to become members of this Association.

The Secretary then read the Annual Report reviewing the activities of the association during the year and giving the financial status of the association. (The President's welcome address and the Annual Report have been published separately.)

Before proceeding with the election of office bearers, the secretary suggested that a little deviation from the new rules might be adopted in the election of the President and the Vice-President, i.e., that they may be elected on the floor of the house by open method, and on the house agreeing to the same, he proposed Dr. T. S. S. Rajan to be the President for the year and Dr. C. E. R. Norman to be the Vice-President and both were unanimously elected. He also suggested that as it was the convention to have a lady member on the committee the only lady member, that had signified her consent to serve on committee Dr. M. Balammal be elected unanimously. He then suggested that Lt. Col. N. K. Bal who had been the President for the past year and whose services for the coming year should be availed off, could be elected as a member of the Committee. This was also unanimously accepted by the House. Then elections for the post of Secretary, Treasurer and three remaining committee members was proceeded with. Voting papers containing the names of all the candidates under the seal of the Association were distributed to all the members and

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MISCELLANY

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they were requested to mark therein S for Secretary, T for Treasurer and C. M. for committee members against the names of those, whom, the member considered as deserving for the post. On collecting ballot papers, it was found Dr. P. A. S. Raghavan secured a majority of votes for Secretaryship and Dr. T. N. Subramanian had secured a majority of votes for Treasurership and hence these two were declared as Secretary and Treasurer. In choosing the three remaining members of the managing committee, a sort of single transferable vote was adopted with the approval of the House, i.e., votes secured by a candidate for either office bearership or membership of the managing committee were all counted, and it was found that Dr. V. Enok, Dr. N. C. Subramanian and Dr. T. V. Srinivasan had secured the highest number of votes and were declared elected as members of the Managing Committee.

Dr. Rajan then delivered an impressive address, a summary of which, is published herewith in another page. Members and guests were then treated to lunch and the afternoon session commenced at 3 P.M. with Dr. T. S. S. Rajan in the chair and an interesting lecture by Dr. K. Vasudeva Rao, M.D., M.R.C.P., T.D.D., on "Intestinal Tuberculosis". This was followed by a lecture on "Radiological findings of stomach and intestine" by Dr. K. M. Rai, M.B.B.S., F.R.C.S., D.M.R., accompanied by demonstration of X-ray films and magic lantern slides.

Tea was served at 5 P.M. and was followed by another interesting lecture by Dr. R. V. Rajam, M.B.B.S., M.R.C.P., on "Recent advances in Gonorrhoea". All lectures were followed by interesting discussions and a summary of the lectures will be published in the Miscellany during the coming months.

In bringing the proceedings to a conclusion Dr. Rajan congratulated the Secretary on the pick of the days' lecturers each one of whom, was an authority on his own subject and thanked them all for the trouble they had taken in coming over here at such great inconvenience and giving their experience and knowledge to the members of the association. He also conveyed the thanks of the association to Messrs. Raptakos Brett & Co., Ltd., Bombay, M S Hebbar Brothers Ltd., Madras, M S United French Laboratories, Madras, Mr. D. Srinivasa

Iyengar of M S Thio Calcin Co., Madras, Mr. Sarangapani Iyengar of M S Indogeston Manufacturing Co., Cuddalore, M S Best & Co., Ltd., agents for the Govt. Industrial and Testing Laboratory, Bangalore, and M S T. M. Thakore & Co., Madras for their liberal contribution for acting as hosts during the day and for their participation in the day's function by exhibiting their products. He also paid a high complement to Lt. Col. N. K. Bal, the retiring president, who personified in him all the qualities of a perfect gentleman.

Then the Secretary read the greetings and messages wishing the 10th Annual Gathering a success from the following:

Ramnad District Medical Association.

The Madura Medical Association.

The President, All India Medical Licentiates Association, Madras.

Rao Bahadur Dr. A. Lakshmanaswamy Mudaliar, Principal, Medical College, Madras.

Rao Bahadur Dr. T. S. Tirumoorthy, Principal, Stanley Medical College, Madras.

Lt. Col. T. S. Sastry, President, Krishna District Medical Association.

Dr. S. Padmanabha Sarma, M.B.C.M., Rtd. Dist. Medical Officer.

Dr. R. G. Cochrane, Lady Wellington Leper Settlement, Tirumani, Chingulput.

With a vote of thanks to all concerned by the Secretary the meeting terminated at about 7-30 P.M.

Dr. V. Iravatham, Diplomat in Laboratory Science, treated the guests present to a delightful dinner at 8 P.M. in his newly started Laboratory at Chinnakadai Street, Trichy.

P. A. S. RAGHAVAN,
Hon. Secretary.

OPENING ADDRESS

BY

DR. T. S. S. RAJAN

During the Tenth Annual Gathering of the
Trichinopoly District Medical Association on 21st Jan. '40

Dr. Rajan began by congratulating the association on the extremely good work done during the past year and on their affiliation to the All India Medical Association, which was the only body whose doors were open for all medical people. It was like the Indian National Congress and really the one body which could speak on behalf of the medical profession in the country and which he hoped would take its rightful place as important as the British Medical Association was for the British people. The great event of that association during the past year was the election Dr. B. C. Roy as the first non-official President of the All India Medical Council. The change over from official to non-official was very significant and if he would not be letting out a secret, the Congress Governments had no mean part in it. If in the course of political events, medical associations and medical men had found their rightful place in society in the country, they should congratulate themselves and the Indian Medical Association on that achievement in the march of events.

Special Protection for I. M. S. Condemned

Referring to the European element in the I. M. S. he said it was a class unaffected by public opinion, medical and lay, in the country for the past so many years. Although Provincial Governments had taken over the responsibility of medical administration in its entirety, the fact remained that the European members of I. M. S. cadre had come under the special protection of the Secretary of State through the Director General of Medical Services and the Surgeon General in

various provinces. It was an anomaly against which he had protested not out of office, but while in office and those who have watched the proceedings of the Legislature would have noticed what he stated as Minister when a resolution was moved to that effect and voted upon unanimously by the Legislature. He had stated that the entire control of the medical profession must be in the hands of the ministers controlled by popular electorate. The I. M. S. cadre was kept out for the reason that it belonged to the Defence of India Department. The Indian medical world protested strongly against their particular privilege and the same state of affairs existed even to-day. What would happen in the future was more than he could say, but if political events as they appeared in the horizon did take shape and they as a people got their rightful heritage of administering the affairs of the country for the benefit of the people rightly or wrongly, with the transference of power both in the centre and in the Provinces, the I. M. S. could not claim exclusive protection for any length of times under the direction and control of the Secretary of State, for he expected the Indian Defence would become a subject matter under the control and guidance of the Indian people through India Ministers. No question of independence could even be thought of with an Army beyond the control of the State. The fight for independence centred on the full and complete control of the Defence and Foreign relations with all the countries of the world. There was, he said a clear note of optimism in the speech of H. E. the Viceroy and Gandhiji, the keen intellectual that he was, saw germs of promise in the declaration of H. E. Gandhiji was prepared to trust Englishmen and also in the justice of the war that was being waged against Germany that India shall get her rightful place and India's demand answered. Seeing the trend of events, he believed that England was anxious for compromise, for the surrender of power and the only concern was the difficulties and limitations of such transfer and he was certain the anomalous position would for ever be solved. It was to him a more political, rather than a professional question, but as long as the politics of the country had to be dictated to by people outside the country, such a state of affairs would continue, but it could not continue for long. The Indian

Medical Association as representing the medical profession in the country would soon attain its rightful place and would be in a position to direct the medical profession and medical education in the country.

Removal of Inequalities

Dr. Rajan then referred to the disagreement in the Indian medical world between the Medical Licentiates Association and the Indian Medical Association. How far the Indian Medical Association was responsible for the existing state of things, it was hard to assess but he was certain that they would do anything to placate the Licentiates association and in asking the Hon. Dr. Rama Rao to preside at the Nagpur session, they gave a rightful place to the Licentiates whose grievance seemed to be more of service than of the profession. When once the service conditions and political constitutions became transmitted, there could be only one body of practitioners of the system. They found to-day that already it was recognised that medical education shall be uniform throughout the country. The Government of India had called for a Council of experts interested in the question and had formulated that it was the endeavour of the Government that as soon as it could possibly be done, a uniform standard of medical education should prevail. In Madras they arrived at the conclusion long before the Government of India thought about it. Following in the wake of Madras, Mysore was going to cancel the Licentiates course. The only difficulty seemed to be in Bengal and some places up North where a large number were being trained in medical schools for an inferior qualification. They had nine schools in Bengal and it was a problem to close them at one stroke, but even they had accepted the principle that medical education should be uniform. The reform had been accepted by the Government of India and in a way it solved the future of the medical profession to a large extent in removing inequalities.

The District Medical Associations, Dr. Rajan went on to say, were in most cases either Trade Guilds or Public Utility concerns and never looked beyond the professional needs and disabilities. They had not merely to create an *esprit de corps* and to observe certain codes of public and professional conduct, but

should widen their outlook and acquire greater strength by taking to a more practical form of service to the public. He commended to the practitioners the example of a survey made at Saidapet which had opened their eyes to the existing state of things. Some members could go out in batches at specific hours of the day and do certain things towards successfully eradicating the causes of infectious and epidemic diseases. They should live not only for themselves, but be bent on giving their best towards the general welfare of the people. Secondly, the profession ought to be active and keen and give expression to their considered opinions on investigations conducted by them with uncontrovertible facts and figures. If they surrendered the duty of the profession to the state, they would be really surrendering their rights. He advised the rural practitioners also to make common cause with the association as their safety as a class depended upon their membership of a larger body, and the demands made by the District Association would carry certainly greater weight with the Government than their own association.

Dr. Rajan did not wish to speak about the Public Health Act as the penal provisions were sufficiently well known. He appealed to all practitioners to understand the implications of the Act and its various sections and carry them into operation as far as it lay in their power.

There was nothing which a medical man could not do in the interest of Public Health apart from his professional work.

Guard against false sense of Patriotism

Dr. Rajan warned the members of the positive danger with regard to the trade which was going on in the name of patriotism and nationalism much to the deterioration of scientific thought. Patriotism has its own value, but if patriotism was converted into a piece of trade, it was high time to call halt. Something was being canvassed in the name of Ayurveda which might be good in certain respects, but he would warn the profession of going back to the catamaran while they had modern methods of crossing the ocean such as steamship and aeroplane. Ayurvedic medicines were being dumped on the

market, but he had no objection to Ayurveda if brought up to date. He referred to the introduction of surgery etc. in the Indian School of Medicine which was intended to improve Ayurveda. Up-to-date knowledge was neither eastern nor western, it was scientific thought and if they appropriated it, they could not call it western. The first contribution was to stand up as a man and speak honest truth and not trade upon patriotism. Nationalism had nothing to do with disease, it knew no colour or caste but was universal, it was part of humanity. In the fight of human race against disease they could not afford to fight about particular systems. He appealed in the name of the country to rise above small individual considerations, to realise the supreme importance of the medical profession in the body politic of the country and to be more active and conscious sharers of the struggle for freedom.



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Prepared by a special process **ALEMBIC MILKOTONE** embodies in it in a palatable and easily digestible form the body-building nutritive ingredients Milk, Malt, Cocoa, and Glycerophosphates of Calcium, Potassium and Sodium. It is rich in Vitamins A, B & D and supplies the necessary minerals, Calcium and Phosphorus.

It forms a delicious drink with warm water or milk. In health it serves as a nutritive supplement; in illness, convalescence and general debility it provides an easily digestible tonic food to maintain strength and Vitality and in tired condition and sleeplessness it acts as a refreshing and soothing draught.

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The Rationale of giving Glucose-D with Vitamin D

BY

J. A. NARADAN.

(A Member)

It is to our common knowledge that the market is flooded in recent years with numerous brands of D-Glucose powder (Dextrose) with Vitamin-D and Calcium Glycero-phosphates and a few brands without them. Every educated lay-man thinks rightly or wrongly that any tonic or food is incomplete without some vitamins. The medical man's critical sense has been blunted or rather has succumbed before the drug propagandist through his attractive pamphlets and advertisements. He has become by such circumstances more empirical than rational. The object of this small contribution is to evaluate the rationale of administering Vitamin-D with Glucose.

Before going to the main theme we shall just recapitulate very briefly the pharmacology of these components.

Vitamin-D:—This is a crystalline substance of a definite chemical formula ($C_{27}H_{44}O$). It is fat soluble and for its proper absorption and assimilation, administration of fat in some animal or vegetable form is absolutely necessary. The function of Vitamin-D is the control of the calcium and phosphorus metabolism. Want of Vitamin-D leads to rickets, osteoporosis, osteomalacia, tetany and other calcium deficiency diseases. For an adult whose bone development is complete not more than 1500-2000 units of vitamin-D is necessary per diem. Hypervitaminosis-D gives rise to anorexia, diarrhoea, loss of weight and calcification of arteries, heart and internal organs.

Calcium Glycerophosphates: "These are broken down into phosphates and glycerine. The phosphates are mostly excreted in the urine and faeces and the glycerine is oxidized. There is no definite evidence that these are either of any use or substantial value."

D-Glucose or Dextrose: This is a highly assimilable carbohydrate food that is absorbed directly from the alimentary canal without requiring previous digestion and is less fermentable than cane sugar. In this carbo-hydrate (Glucose) metabolism Vitamin-D has no place at all and if at all it is very remote and round about.

The Theme: In recent years D-Glucose is prescribed by mouth in many condition and mostly in all febrile manifestations. For purposes of illustration to our point of discussion, we shall consider in some detail Glucose Therapy in fevers. In fevers the diet mostly consists of carbohydrates in the form of barley water, par-boiled rice congee, sago, oranges etc. Excluding milk which forms a part of the diet, all the rest are predominantly carbohydrates. We have been told quite rightly to use in fevers Glucose profusely as sweetening agents along with other foods and independently as glucose water. Advanced school of thought tells us that for an adult during fever when the metabolic rate is raised about 2500 to 3000 calories should be provided for to prevent undue wasting and to support the heart. The Glucose-D in good amount i.e. 8 to 10 ounces (900 to 1130 calories) plain or with other foods as barley water orange etc. answers quite well for these contingencies. Now each ounce of Glucose in the market is said to contain 500 units of Vitamin-D. So on the whole we are giving about 4000 to 5000 units of Vitamin-D in fevers wherein to the best of our knowledge there is no defect in calcium-phosphorous metabolism and hence no need for Vitamin-D at all. The rational thing in these infectious conditions would be Vitamin-A rather than Vitamin-D. Besides fat being contra-indicated in fevers no fatty food is given and hence Vitamin-D being fat soluble is not assimilated and so wasted. So what is the use of administering Vitamin-D? If at all assimilated, 5000 units are too much and may cause symptoms of Hyper-vitaminosis as anorexia and diarrhoea etc. which symptoms we are apt to attribute to the primary condition fever and we go on treating for them without knowing exactly what they are due to. So to say we will be in a vicious circle. Moreover, the crystalline Vitamin-D being insoluble in water gets sedimented or precipitated and get stuck up to the sides of the vessel in which the food is given and thus wasted.

Conclusion: There is no rationale in giving Vitamin-D with Glucose-D powder and when given, either they are wasted and become inert or if utilised by the system may show signs of Hypervitaminosis.

The Chemotherapy of Infected Wounds

(From the British Med. Journ., 1939, II, 831)

The War Office has issued a memorandum on the treatment of infected wounds by the sulphonamide drugs. These are effective in streptococcal infections and also have an action on anaerobic gas-forming bacilli. It is therefore recommended that they be given a trial in the field. The earlier the treatment the better the result, but some benefit may be anticipated even in established infections. All wounds which from the clinical aspect appear likely to become the site of secondary coecal or gas gangrene infection should receive a prophylactic sulphonamide course as early as possible. This should occupy about 48 hours. For established or developing infections the course should extend over 10 days, but if by then it is ineffective an interval of 48 hours should be allowed before continuing treatment. When an infection appears to be controlled, as judged by the temperature, small doses should be continued for a further 3-5 days in order to prevent relapses. The principle of effective treatment is to obtain a high blood concentration of the drug as rapidly as possible and to maintain this at an effective level over a period of time. Because the drugs are rapidly excreted it is necessary, in order to maintain an effective level, to administer it 4 hourly *night and day*.

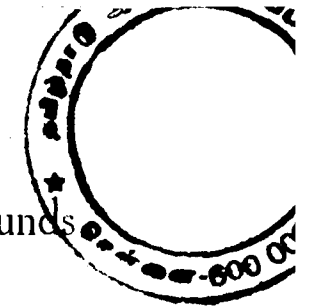
Certain individuals are unduly sensitive to the drugs and there is no evidence yet available for assessment as to whether persons suffering from shock may not be even more sensitive. The reactions that may occur can be classified as mild and serious. The following is a list as to how to avoid and treat them.

REACTION

1. Mild

Cyanosis:

Incidence reduced by prohibiting sulphur-containing foods and especially by the avoidance of saline and drastic purges. Liquid paraffin the best laxative. Cyanosis may be temporarily



dispersed by giving 0.5 to 1.0 gm. per day of methylene blue by mouth. Cyanosis *per se* should not prohibit continuance of treatment.

Acidosis:

Treat by oral administration of sodium bicarbonate.

Drug Fever:

Requires to be distinguished from fever due to recrudescence of infection. If true drug fever, omit drug.

Dermatitis:

Omit drug and induce diuresis with water or simple diuretic. May be the prelude to more serious complications. Check leucocyte count if possible.

Dizziness, headache:

If intolerable, administer fluids freely. Check leucocyte count if severe.

Leucopenia:

Negligible unless rapidly progressive to below 3000 leucocytes per c. mm.

Haematuria (M. & B. 693 only):

Administer fluids freely.

Jaundice, neuritis:

Omit drug. induce diuresis. (See also haemolytic anaemia).

2. Serious

Agranulocytosis:

Occurs after 10 days or more of treatment, Incidence rare. Leucocyte count only method of diagnosis. Other symptoms: headache, deterioration of condition, fever, sore throat. Treat by transfusion and pentnucleotide.

Haemolytic anaemia:

Occurs early (2-4 days). Incidence rare. Mortality low. Early signs jaundice and haemoglobinuria. Omit drug, induce diuresis, transfuse if necessary.

DOSAGE

1. Sulphanilamide.

Tablets should be powdered and administered suspended in milk or water.

Prophylaxis.—4 gm. (8 tablets) statim followed by 2 gm. (4 tablets) in 4 hours' time followed by 1 gm. (2 tablets) 4-hourly night and day for a period of 48 hours. If infection develops continue as for "treatment."

Treatment. 4 gm. (8 tablets) statim followed by 2 gm. (4 tablets) in 4 hours, followed by 1 gm. 4 hourly night and day for a maximum period of 10 days. If infection is still uncontrolled allow an interval of 48 hours and then repeat the same course from the beginning or, if available, change on to M. & B. 693. If infection appears to be controlled during the first or later courses reduce those to 0.5 gm. (1 tablet) 4-hourly and continue for 3-5 days after the temperature has become normal.

2. M. & B. 693.

Tablets should be powdered and administered in milk or water. If vomiting is troublesome, split the doses and give at shorter intervals, e.g., instead of administering 1 gm. 4-hourly give 0.5 gm. 2-hourly.

Prophylaxis.—3 gm. (6 tablets) statim followed by 2 gm. (4 tablets) in 4 hours' time, followed by 1 gm. (2 tablets) 4 hourly night and day for a period of 48 hours. If infection develops continue as for treatment.

Treatment. The same procedure as for sulphanilamide except that the initial dose is 3 gm. (6 tablets) instead of 4 gm.

3. M. & B. 693 Soluble.

This is of great value when swallowing is impossible or when gastric upset prevents absorption. It consists of a 33 per cent.

solution (1 gm. in 3 c.c.) Injections are best made intramuscularly, but as the solution is alkaline some reaction at the site of the puncture is common unless care is taken to inject deeply and avoid escape into the subcutaneous tissues. The solution may also be injected intravenously if the dose is diluted with 20 c.c. of sterile distilled water or normal saline. The drug may also be added in suitable quantity to intravenous drop transfusions of saline or blood (at the rate of 1 gm. per 4 hours)

Dosage, prophylactic and treatment. 1 gm. (1 ampoule) 4-hourly night and day, the prophylactic course being completed in 48 hours. The treatment course may be continued for 10 days, but a change to the oral compound should be made at the earliest opportunity. The soluble compound finds its best use in the initial phases of a course of treatment and should not be regarded as a substitute for the oral compound; it should be used for a continuous course only when oral therapy is impracticable.

Fatal Agranulocytosis from M. and B. 693

(From the Clinical Journal, December '39.)

H. Nicol and B. Freedman* record the case of a man, aged 60, admitted to hospital with gonorrhœa of a week's duration and right epididymo-orchitis. Two days later administration of M. and B. 693 was begun 4 gm. daily for 5 days and then 3 gm. for a further 16 days, making 68 gm. in all. After 7 days of the treatment there was no urethral discharge, the epididymitis was subsiding, and he appeared in good health. All treatment was stopped on the twenty-first day. But 6 days later he complained of malaise and frontal headache. His temperature rose to 103° in the morning and 105° in the evening. The throat showed only slight redness and "fleshiness" of the fauces, but hæmolytic streptococci were cultivated from a swab.

Next morning the patient was very ill and drowsy. The face was flushed, the tongue was dry with a central brown coat, and there was white exudate on the right tonsil. The total white-cell count was 300 cells per c. mm., all cells seen being lymphocytes. Hæmoglobin, 72 per cent.; red cells, 4,360,000; colour index, 0.83; punctate basophilia present. He was given pentnucleotide 10 c.c. four times and hepastab 4 c.c. twice on the day agranulocytosis was diagnosed. In the evening his condition was worse, and the right tonsil was brown and becoming gangrenous. He died the next morning, 48 hours after the onset of symptoms, and 8 days after the M. and B. 693 had been stopped. The necropsy showed sloughing of the fauces and pharynx, toxic changes in heart muscle, liver and kidneys.

There was a clear interval of 6 days' good health between cessation of the treatment and the onset of symptoms of agranulocytosis. Agranulocytosis is a well-known complication of sulphanilamide treatment, but only 5 cases have been reported

* Lancet, 1939, ii, 647.

as due to M. and B. 693. In a case of appendix abscess from which pneumococci were cultured the leucocyte count did not fall until 3 days after cessation of administration of M. and B. 693. Death was due to neck abscesses and not directly to agranulocytosis. In the other 4 cases agranulocytosis appeared during the administration. The dosage in the 5 fatal cases was: 52 gm. in 18 days, 54 gm. in 17 days, 80.9 gm. in 26 days, 54 gm. in 11 days, and 18 gm. in 15 days.

Alcoholic Intoxication and Coramine

The intramuscular injection of coramine is recommended in the treatment of alcoholic intoxication. Intravenous administration of doses up to 20 c.cm. was previously recommended for producing soberness by shock, but frequently the condition of the drunk is such that the intravenous route is rendered impossible, or at any rate very difficult. Thirty cases of drunkenness ranging from mild to medium intoxication were treated by the administration of 1-2 small ampoules of coramine (1.7 c.cm.), in severe cases a dose as large as 5.5 c.cm. was used. The action is not so rapid as that produced by intravenous injection, but in all cases soberness was obtained in from 10-15 minutes, and vomiting often ceased promptly. (*Schweizerische medizinische Wochenschrift*, September 9, 1939.)

The Practitioner, Dec. '39. pp. 663.

Avitaminosis in Diabetic Patients Under Insulin Therapy

(From *J. A. M. A.* Vol. 113 No. 4.)

The frequent occurrence of glossitis and stomatitis in persons with diabetes is a matter of common knowledge. The usual explanations of such lesions particularly when complicated by monilial or spirochetal infection has been 'lowered resistance' or 'a toxic state' due to hyperglycemia. Since the type of glossitis and stomatitis usually seen in diabetes is in all respects similar to that seen in mild endemic pellagra or in acute pellagra secondary to parenteral nourishment with dextrose solutions, it seems probable that the cause may be avitaminosis caused by abnormal carbohydrate metabolism. Patients with complications of diabetes develop clinical signs of pellagra when the carbohydrate content of the diet is increased and more insulin is administered to assure utilization of the augmented diet. But nicotinic acid controls the glossitis and mental symptoms but when carbohydrate or insulin is again increased the symptoms recur and is again relieved by nicotinic acid. It would seem likely that rapid metabolism of carbohydrate such as is secured in diabetic patients by the use of Insulin causes correspondingly rapid depletion of co-enzymes and in this way produce signs and symptoms of avitaminosis. Also the question of inadequate absorption or storage must be considered. But it seems more probable that increased dextrose metabolism caused by relatively large amounts of insulin might exhaust the body of the store of coenzymes I and II both of which contain nicotinic acid.

Mapharsen in Treatment of Syphilis

(From J. A. M. A. Vol. 113, No. 22.)

The majority of syphilitic patients undergoing treatment in private practice are in the late asymptomatic stage and the diagnosis of syphilis is frequently made on serologic evidence. One of the great difficulties encountered in private practice is to convince patients with latent syphilis that sustained treatment must be carried out. Aside from economic considerations one of the reasons for irregular and haphazard attendance and eventually for complete relinquishment of treatment is the production of various untoward symptoms by the standard arsenical preparations in common use.

On account of the low toxicity of mapharsen (meta-amino-parahydro-phenylarsine) used in the treatment, alone and with an alternating course of bismuth compounds. The prompt healing of cutaneous lesions, the complete or partial reversal of serologic reactions and the improvement of subjective symptoms following mapharsen therapy compare favourably with the response to arsphenamine and neo-arsphenamine therapy.

The clinical and serologic response to mapharsen therapy was much more favourable in patients who were treated by a concurrent course of one injection each of a bismuth compound and of mapharsen, per week. The toxic effects of arsenical therapy may be the following:

A. Immediate Reactions.

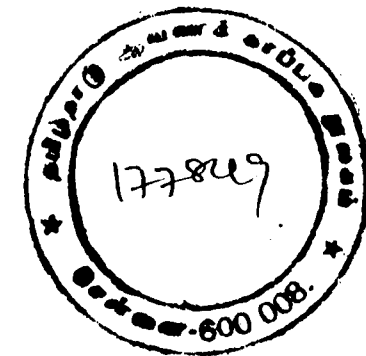
(1) Venous spasm, (2) mild gastro-intestinal disturbances associated with nausea, vomiting and abdominal pain, (3) Headache, (4) Weakness or collapse and nitroid reactions.

B. Delayed Reactions.

(1) Nausea and vomiting, (2) fever and chills, (3) dizziness and fainting, (4) precordial pain, (5) blood dyscrasias, (6) hemorrhagic encephalitis, (7) skin reactions from urticaria to such a

serious condition as exfoliative dermatitis, (8) jaundice, (9) delayed nitroid reactions, (10) ocular disturbances, (11) renal damage, (12) neuritis.

Venous Spasm. This may occur during or immediately after the injection of mapharsen especially if it was administered slowly. Some times these pains would extend as high as the shoulder; they would persist from a few minutes to twenty four hours. If the drug is administered more rapidly this reaction may be eliminated almost entirely. In case of spasm application of cold wet compresses over the vein will be rapidly effective. Perivascular infiltration and extravascular seepage of small amounts of mapharsen produces a burning pain followed by a slight local reaction. The other toxic effects occur rarely and even if they occur they are not as severe as when arsphenamine or neo-arsphenamine is used.



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Orange flavoured

... Crystalline Vitamin C in palatable form

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CEVITAL (CEVITAMIC ACID) is indicated for prophylaxis, and treatment of scurvy and prescurbic conditions. It is useful as a means of ensuring an adequate vitamin C intake for patients who are allergic to or dislike fruit juices and is a desirable supplement to Sippy, ketogenic, and other diets which are deficient in Vitamin C.

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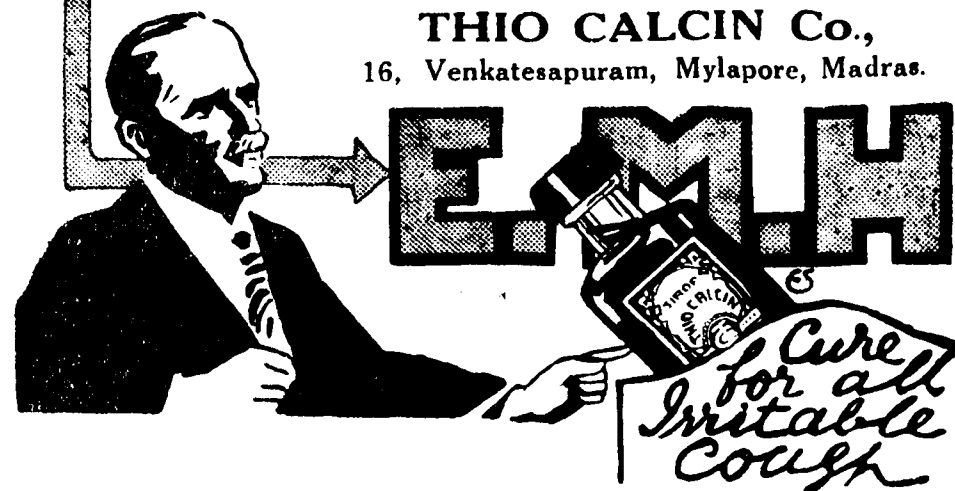
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OF



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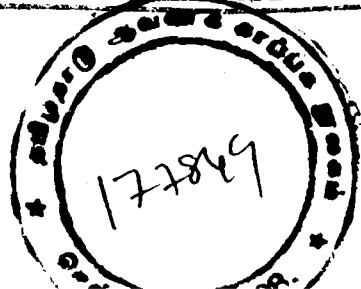
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FOR CIRCULATION AMONGST MEMBERS ONLY

Vol. VII]

FEBRUARY 1940

[No. 2]

Health Exhibition of the 2nd All India Khadi, Swadhesi and Industrial Exhibition

(1940 Trichinopoly)

The Chairman of the Trichinopoly Municipality while organizing the 2nd All India, Khadi, Swadhesi and Industrial Exhibition requested our President Dr. T. S. S. Rajan to organise the Health Exhibition, and placed at the disposal of the Health Officer a sum of Rs. 500 for the same. The President consulted the members of the Managing Committee who agreed to do so and it was decided to concentrate our activities on four sections i.e., Tuberculosis, Nutrition, Vaccination and Antenatal work. It was also resolved to make a survey of age, height, and weight of as many people as could be got at, and inspect as many cattle sheds in the town as possible. The following members were requested to prepare preliminary plans for the sections noted against them.

Tuberculosis:

Drs. P. A. S. Raghavan, N. C. Subramanian, V. Iravatham and R. Kalamegam.

Nutrition:

Drs. T. N. Subramania Iyer, P. E. Jembunathan, R. Sambasivan and T. V. Srinivasan.

Antenatal work:

All the lady doctors in the town.

Vaccination section was left entirely in charge of the Municipal Health authorities.

The various sub-committees met a number of times and chalked out their plan of work. They also prepared small folders in simple Tamil, explaining the essentials in each subject. 5000 folders each on Tuberculosis, Nutrition, and Antenatal care were printed and distributed free at the exhibition.

The Exhibition was opened on 9th Feb. 1940 by Sri C. Rajagopalachariar, Ex-Premier, who visited the various sections of the Health Exhibition and appreciated the activities of the members in charge of them. He also broad-cast from the model studio of the All India Radio in the Exhibition grounds, a talk in Tamil for 10 minutes on Health.

The Health section in the Exhibition was active especially between 4 and 8 P. M. every day, and it is estimated that roughly about 28,000 attended the Exhibition.

At the entrance of the Health section, the preliminary survey of age, height and weight was carried out on 3925 males and 2075 females. The female section was in charge of Dr. V. Enok for few days assisted by School mistresses. The male section was invariably in charge of Dr. D. Srinivasan assisted by a couple of Sanitary staff.

Next to that was the Tuberculosis section which consisted of pathological specimens secured from the Medical College, Madras, and some Cod liver oil; fish oil; eggs, butter and spittoons. Dr. T. V. Srinivasan, who was invariably in charge of the section, was explaining to crowds of visitors, various aspects of the disease and its prevention. Next to that, was arranged a viewing lobby with skiagrams of normal and tubercular organs, which was being explained to gatherings of visitors. The tuberculosis section ended with the arrangements for making Mountoux test, by Dr. V. Iravatham and Dr. N. C. Subramanian and 69 Mountoux tests were done, out of which, 16 proved positive, 29 negative and the rest did not turn up for further examination.

For two of these positive cases free X Rays were taken by the courtesy of the Trichy X Rays Ltd. Dr. Iravatham also

examined a few slides of sputum and blood for Kahn and count.

Next was the Nutrition stall, which started with the free supply of about 50 measures of butter-milk every day, and on the whole it is estimated, that 7,600 people were supplied with butter-milk throughout the Exhibition.

Next to this was displayed poor and adulterated milk and different kinds of rice, i.e., Hand pounded rice, parboiled rice, and polished mill rice and the visitors were informed about the advantage of eating hand pounded rice.

Next to this, a long table arranged with common but useful food-stuffs; the ill balanced diet and the well balanced diet were arranged with labels attached to each. This section which was in charge of Dr. R. Sambasivan, was the most crowded section, and his talks were much appreciated. In his absence, his place was taken by Drs. T. S. Balasubramania Iyer, N. S. Krishnamoorthy and K. A. Chidambara Iyer, who were also giving instructions to the gatherings.

Next to this, was the vaccination section, which was in charge of the Municipal Health staff and 14 primary vaccinations and 361 re-vaccinations were done during the Exhibition.

Lastly came the Antenatal section, which was partially enclosed. Motor conveyance through the courtesy of Trichy Srirangam Electric Supply Corporation Ltd., was arranged to bring pregnant women from various parts of the town with the help of the Health Centre staff. 397 cases were examined of which 25 were gosha ladies. This section was entirely in charge of Dr. (Mrs.) Monsing, who with the help of Drs. C. K. K. Ammal, M. Balammal, and Padmavathi Ammal examined the cases.

All the male Municipal Medical Officers *i.e.*, Drs. M. K. Sahadevan, J. H. Roberts, J. E. Gnanaraj and K. Ramaswamy Iyer attended everyday and were helping in one section or the other every day. Drs. T. V. S. Shastry and P. V. Ramachandran also attended and helped on a few days.

In addition to the activity at the Exhibition, the above Practitioners and Drs. K. R. N. Chary, O. R. Balu, and

L. K. Neelakantan visited a number of milch cattle yards in the town accompanied by the ward Sanitary Inspector and sometimes by the ward Councillor and filled the forms showing the condition of the various cattle yards inspected by them.

Prominent among those, that visited the Health Exhibition, were Sri C. Rajagopalachari, Sir T. Desikachariar, the President of the District Health Association; Lt. Col. C. M. Ganapathy D. P. H.; Sri A. V. Raman, Superintending Engineer, Health; and Rao Bahadur Dr. T. S. Tirumurthy, who, all appreciated the activities of the members.

After the conclusion of the Exhibition on the 26th February, a gathering was arranged on Friday the 1st March 1940, at 8 p. m. in the premises of the District Health Association when Rao Sahib Dr. R. Subramania Iyer, Municipal Health Officer, gave a Dinner party, which was attended by all the Medicalmen, and Sanitary and Health staff, who took part in the Health Exhibition. Reviewing the work done, Dr. Rajan invited suggestions for carrying out further activities in the town in continuation of the work done during the Exhibition. After an interesting discussion, a small committee consisting of Dr. T. S. S. Rajan, Dr. P. A. S. Raghavan and Dr. R. Subramanian, the Municipal Health Officer, was formed to draft a report on the work done with schemes for future work which would be circulated to all the members and submitted to the Municipal Council for their help and support.

The Municipal Commissioner, Mr. E. H. S. Abraham, who was present on the occasion promised on behalf of the Municipal Council all help in furtherance of the scheme to be suggested. The gathering disbursed at a late hour after a vote of thanks to the guest.

P. A. S. RAGHAVAN,
Hon'y. Secretary.

The Trichinopoly District Medical Association

(REGISTERED)

(Branch of the Indian Medical Association)

The Eleventh Inaugural meeting of the above association was held at 5 P.M. on Saturday the 17th January '40 in the premises of the District Health Association, Puthur, Trichinopoly. About 60 members attended. Dr. T. S. S. Rajan the President of the Association was 'at home' to the members. Rao Bahadur Dr. T. S. Tirumurthy, B.A., M.B.C.M., D.T.M. & H., Principal, Stanley Medical College, Madras, delivered a lecture on **PHYSIOLOGY AND PATHOLOGY OF THE SPLEEN.**

The Secretary announced before the commencement of the meeting that he had received invitation for the 12th Annual Gathering of the Madura Medical Association to be held on the 24th instant and requested as many members as possible to attend the same, as a good contingent (fifteen) of their members had attended our Annual. He also announced that arrangements were being made to have benefit performances in aid of the Building fund of the Association and requested the co-operation of the members to make them successful.

Dr. T. S. S. Rajan in his opening remarks thanked Dr. T. S. Tirumurthy for again inaugurating the year and hoped that his visits to these districts might be more frequent. He also complimented Dr. Tirumurthy on his successful building up of Stanley Medical College and hoped, that ere long, the College would be a full blown and renowned institution.

Before calling upon Dr. Tirumurthy to deliver his lecture, he informed the members present, that the Health section of the 2nd All India Khadi, Swadhesi, and Industrial Exhibition run by the Trichinopoly Municipality, was being conducted by the members of the Association and that they were this year concentrating on Tuberculosis by doing Montoux test and examining suspected cases, on Nutrition, by exhibiting common, but usual and cheap food stuffs and on Ante-natal work by

examining pregnant women and giving them necessary advice. He also said a survey of average height and weight was being taken and vaccinations against small pox was being carried out.

During the investigation in the Exhibition, an interesting case of suspected tubercular cervical adenitis in an emaciated anaemic girl of 12 who was tested for Montoux and X Rayed by the Trichy X-Rays Ltd. Both were negative. Blood examinations were carried out by Dr. V. Iravatham, who read out clinical notes and demonstrated the case at the meeting. This was followed by a discussion. Dr. T. S. Tirumurthy giving his opinion on the case said, that in addition to Tubercular glands, the girl may be suffering from Sub-acute endocarditis also.

Dr. Tirumurthy then delivered an interesting lecture on the Physiology and Pathology of Spleen, a summary of which, will be published.

In his concluding remarks Dr. Rajan thanked the lecturer and all the members present and he appealed to them to help him in carrying on Health propaganda in the town. The meeting terminated with a vote of thanks by the Secretary, to the President, District Health Association for allowing the meeting to be held in their premises, the President Host and lecturer of the evening.

P. A. S. RAGHAVAN,
Hon'y. Secretary.

'Abdominal Tuberculosis'

BY

DR. K. VASUDEVA RAO.

(Adapted from the lecture at the 10th annual gathering of the
Trichinopoly District Medical Association)

Tuberculosis may affect the various organs in the abdomen, besides the intestines. The Bovine type may be responsible for roughly 4% of cases and the rest belong to the Human type. The prognosis in the Bovine type is worse. The lesions may be primary or glandular especially in children, or secondary or ulcerative, usually in adults, due to re-infection. The usual site of lesions is along a foot on either side of the Ileocaecal valve.

Symptoms are vague pains in the abdomen and hypermotility of the intestines, diarrhoea, persistent vomiting and emaciation. In several cases all or none of these symptoms may be present.

Diagnosis. X Ray is very important. The picture shows 'filling defects' and the absence of haustrations. The filling defects are due to the hypermotility and may therefore be at different sites in different pictures; while on the contrary, in malignant disease, these filling defects are invariably found at the same place in the different pictures. Barium Enema may also be useful. Through a Sigmoidoscopic examination, the ulcers may be visualised and also a section may be taken for biopsy. Rectal examination may not usually reveal anything, as these ulcers are generally found at least 6 to 8 inches from the rectum.

Tubercle Bacilli in the stools. This is not very helpful in diagnosis as there are several fallacies due to various extraneous acid fast organisms in the food.

Diagnosis is easier if these signs and symptoms are present in association with a pulmonary lesion.

Differential diagnosis has to be made from Appendicitis, Dysentery, Cancer etc.

Recent Advances in Treatment of Gonorrhoea

BY

DR. R. V. RAJAM

(Adapted from the lecture at the Annual Gathering of the Association)

Dr. R. V. Rajam, M. R. C. P. (Lond.), V. D. Specialist, General Hospital, Madras spoke on "Recent Advances in the Treatment of Gonorrhoea" during the Annual Conference of the Trichinopoly District Medical Association held on 21st Jan., 1940 in the National College premises.

He first dealt on the early history of Gonorrhoea and mentioned how in those days this disease was thought to be one and the same as Syphilis. He further stated that how a famous Venereologist in Paris through long research found the difference in the causative organisms of these two diseases. Only after this knowledge that the medical world started to institute separate treatment for these two ailments.

For the past two centuries the treatment of Gonorrhoea had undergone various stages of metamorphosis with indifferent results. Eminent medical people throughout the world were in despair as regards complete cure of this disease. So much so, a famous physician in Paris answered his patient that "God alone knows" when he would be completely cured.

Only recently Sulphonamide treatment in Gonorrhoea came into vogue and now medical people have a powerful weapon in their therapeutic armamentarium to fight this long despaired disease. This drug was first discovered by a German Scientist in 1908 and through laboratory and animal experiments it was found to have very good effect first on Haemolytic Streptococci. In 1937 with further research by two eminent American workers, it was found to produce very good effect on Gonococcus and its application on the human affections of the diseases was then ventured upon.

The first Sulphonamide preparation introduced in the market was Prontosil (Bayer). Subsequently several English and French firms manufactured different varieties of the same drug.

Dr. Rajam stated that he had been handling this drug for the past two years and that he had tried it on over three thousand patients in the Hospital but he had made scientific observations of its dosage and effects on only 700 patients. Several schemes of dosages have been tried and eventually he has come to the following scheme which has a salutary effect on the patients without any untoward actions befalling them. For an Indian adult male patient he administers Sulphonamide Tablets daily for three weeks.

During the	first	week	4 Gms.	of the drug per day.
"	2nd	"	3 Gms.	"
"	3rd	"	2 Gms.	"

For an adult Indian woman :—

During the	first	week	3 Gms.	"
"	2nd	"	2 Gms.	"
"	3rd	"	1 Gm.	"

For Children :—

"	first	week	2.5 Gms.	"
"	2nd	"	2 Gms.	"
"	3rd	"	1 Gm.	"

In his experience he has noticed that children seem to tolerate the drug much better than the adults. With this method of administration of the drug he has found that the discharge stopped completely within three or four days and microscopical examination of the discharge revealed complete absence of gonococci. Some patients have a miraculous and dramatic drying up of the urethra within a day or two. That is why sometimes patients get into a wrong notion of a complete cure and disappear into thin air before full course could be gone through. Usually such patients do come back to the hospital after a while.

Dr. Rajam maintained that sulphonamide gives disappointing results if administered in the early stages of gonorrhoeal infections. He has in his experience obtained good results, if the drug were to be administered in the second or third week

of the infection, and exceedingly good results if the treatment were to be started one or two months after infection. Besides, he states that the treatment must be continuous for three weeks and that there should be no break in this period. If the treatment were to be interrupted further administration of this drug has been found quite useless. Patients and infecting organisms seem to develop some sort of immunity to the action of the drug. Similar state of affairs do occur in cases where early administration of sulphonamide has been instituted. In these cases besides producing an immunity to the drug the organisms themselves seem to undergo certain changes in morphological character and staining properties; so much so, sometimes even Gram-positive intracellular diplococci have been found in the smear of the urinary deposits of the patients. All the above observations were noticed only in those cases that were treated by Sulphonamide pure and simple. But the tablets M. B. 693 (May and Baker) have very good effects in the early stages of the disease but being costly they are not used in hospital practice. Another feature of this preparation is that it does not work well if it is administered in later stages of the disease.

Having mentioned about the wonderful effects of this drug Dr. Rajam went on to tell about the evil effects which he had observed in his hospital cases. Fortunately for us the reactions so far observed were not so severe, except in two cases which ended fatally. Common signs of intolerance of the drug met with were nausea, vomiting, dizziness, head-ache, malaise, epigastric discomfort, cyanosis, breathlessness, pyrexia, and dermatitis. These are easily overcome by either lowering dosage or completely withdrawing the drug for a day or two. According to him the drug seems to be excreted rather rapidly through the kidneys and does not possess cumulative properties.

Those fatal cases he had mentioned were due to severe blood changes known as Agranulocytosis which is clear evidence of damage to the Haemopoietic system. So it is always a good procedure to examine the blood of the patient often during the administration of sulphonamide and other allied preparations. But one thing is certain that even with this precaution Agranulocytosis cannot be predicted as this condition happens

in some individuals even with minimum dosage. These people seem to show some sort of allergy to this drug.

In the General Hospital as a routine each patient is tested after 3 weeks treatment whether he or she is completely cured. 3 different methods are tried. The first is gonococcus vaccine, as much as 600 million organisms, is injected; if there is any discharge the following day or later, it is examined for the presence of organism. The second method is prostatic massage, and the third, a bougie is passed into urethra and the bladder and the former is massaged over it. If any discharge is obtained by these methods it is examined microscopically for the organisms. There are other serological and cultural methods for test for cure but owing to lack of facilities they are not undertaken in the above hospital.

In conclusion he mentioned that for those cases that do not respond favourably to sulphonamide and its allied preparations we should resort to older methods of treatment and leave the rest to God.

Toxic Reactions of Sulfapyridine

BY

NORMAN PLUMMER, M.D.

AND

HERBERT K. ENSWORTH, M.D.

(New York)

Toxic Reactions : Based on 323 Patients Treated with Sulfapyridine

1. Gastrointestinal	Cases.
Nausea	165 (52%)
Vomiting	129 (40%)
Severe vomiting	35 (11%)
2. Skin	
Generalized morbilliform rash ...	5
Questionable, typical, rash ...	2
3. Blood	
Anaemia	2
Granulocytopenia	0
4. Liver	
Jaundice (preceded therapy) ...	1
5. Kidney	
Ureteral Stone	2
Hematuria without proved stone:	
Gross	2
Microscopic	2
Nitrogen retention	3

The problem concerned with toxic reactions is of great importance, and careful attention has been given to it. Our

data in this regard are based on the 270 cases of pneumococcic pneumonia and in addition fifteen cases of pneumonia in which we could isolate no pneumococci, five cases of subacute bacterial endocarditis and thirty-one miscellaneous cases. The incidence of the various reactions is given in the above table.

Nausea and vomiting is almost certainly central in origin. It rarely occurs until from 4 to 6 gm. of sulfapyridine has been given, and it has been shown that giving sodium sulfapyridine by vein causes vomiting. We have found no satisfactory way to control it short of allowing the blood level to fall. Here again, however, individuals vary greatly; some vomit when the blood level is only 2 or 3 mg. per hundred cubic centimeters and others do not vomit when the blood level reaches 8 or 9 mg. Usually the drug could be continued in spite of vomiting, which frequently lessens as recovery takes place.

Four of the five patients with morbilliform rash had received between 30 and 40 gm. of drug; the other, 16 gm. The rash cleared promptly when the sulfapyridine was stopped.

A number of patients had minor falls in red blood cell counts and hemoglobin values, such as might be encountered in severe infections. Only two, however, were severe enough to cause concern; in both the hemoglobin content fell below 50 per cent. Recovery followed withdrawal of the drug.

Liver damage attributable to sulfapyridine has not been encountered clinically or at autopsy.

In our experience, toxic effects involving the kidney and ureter have been the most disturbing. In two cases, definite ureteral stones composed of sulfapyridine have been found. The first of these two patients was a woman of 40 with subacute bacterial endocarditis, who received 540 gm. of sulfapyridine over the course of three months. The blood levels ranged from 4 to 8 mg. per hundred cubic centimeters, and subjective improvement occurred, but eventually microscopic hematuria was noted a few days later.

autopsy two small white stones were found in the pelvis of one kidney which on analysis showed almost pure acetylated sulfapyridine. X-ray films were taken but they were found not to be radiopaque. There were healed kidney infarcts, but Dr. Jacob Furth, the pathologist, believes that the stones caused the hematuria in this case.

In the second case, one of type III pneumonia, gross hematuria and pain in the flanks radiating down the ureters occurred after only 13 gm. of sulfapyridine had been given. Urographic study revealed negative shadows in the kidney pelvises interpreted as stones, and cystoscopy was done. Gravel was found in the bladder and ureters; on analysis this proved to be composed of acetylated sulfapyridine.

Two other patients in our series had gross hematuria. One was a seven months pregnant woman with type III pneumonia who had severe bilateral ureteral colic and hematuria after 15 gm. of sulfapyridine had been given. Urographic study was done. One kidney pelvis was dilated, but the head of the foetus overlay this abnormality, obscuring the plates and interfering with their interpretation. No stone was passed but recovery was prompt. The other patient was a man aged 55 with the grip. After the administration of only 5 gm. of sulfapyridine, temporary anuria occurred, followed by gross hematuria and a rise in urea nitrogen to 37 mg. per hundred cubic centimeters. He recovered when the drug was stopped, and again no stones were passed.

Microscopic hematuria was noted after administration of 16 gm. of the drug in a man aged 68 with type III pneumonia who had no other renal symptoms or manifestations and who recovered and also in a man aged 54 with pneumococcic endocarditis after 200 gm. of the drug had been given. With others, we believe that the explanation of hematuria as a toxic reaction is precipitation of the quite insoluble acetylsulfapyridine in the kidney tubules and pelvis and consequent mechanical damage. In the last case cited, however, it is uncertain whether the blood came from kidney infarcts or as the result of endocarditis or was due to sulfapyridine itself. At autopsy, no stones were found but infarction was present.

In three additional cases, temporary elevation of the blood urea nitrogen was observed without other signs of kidney damage. Sulfapyridine was discontinued and prompt recovery ensued.

Besides these cases in the present series, we have first-hand knowledge of the occurrence of gross hematuria—in two instances in children—in five patients not under our care. Kidney stones have been produced with sulfapyridine experimentally by Antopol and Robinson and by Gross, Cooper and Lewis. Lawrence has reported a human case of hematuria and renal colic due to stone, and Southworth and Cooke reported three cases of hematuria one with visible blood, in persons under treatment with sulfapyridine.

(*J. A. M. A.*, Nov. 18, 1939.)

Male Sex Hormone

Clinical Application

(From J. A. M. A.)

Two types of hormone therapy are now possible in hypofunction of the testis:

- (1) Stimulation therapy with gonadotropic material.
- (2) Substitution therapy with male sex hormone.

1. Gonadotropic material is the anterior pituitary-like principle and it has not yet been possible to prepare them in crystalline form. They are completely inactive by mouth and must always be administered by intramuscular injection. There are two gonadotrophic hormones. One is obtained from the serum of pregnant mares which is predominantly follicle-stimulating in females and influences the function of the seminiferous tubules in males and the other is from the pregnancy urine, which mainly causes luteinization of follicles in the ovary and influences the activity of the interstitial cells in the testis.

2. For substitution therapy with male sex hormone, Testosterone Propionate, which is made synthetically is used. This also is inactive by the oral route, while its counterpart in females oestrogen, which is also made synthetically, is active both orally and by injection. With Gonadotropic material the testis is stimulated to increased activity, so that the testis itself produces more male sex hormone and it is to be preferred in most instances, in which, the testis is capable of responding to stimulation. Examples of conditions in which stimulation is indicated are the Frohlich syndrome, hypopituitarism with secondary hypogenitalism and undescended testis. In substitution therapy the male sex hormone, which the testis itself is not capable of producing in sufficient quantity when stimulated, is supplied artificially. Examples of conditions in which it is indicated are eunuchism, eunuchoidism and all cases in which the testis is incapable of response because of atrophy or destruction, e.g., the orchitis of mumps.

Eunuchism and Eunuchoidism

The value of male sex hormone is shown best by its effect on individuals with complete absence of testicular function namely castrates and eunuchoid individuals. The persistence of bilateral intra-abdominal cryptorchidism beyond the age of puberty commonly results in a condition similar to that produced by castration early in life. However, eunuchoidism is by no means an inevitable result of bilateral failure of testicular descent. In adults with intra-abdominal cryptorchidism, the interstitial cells may show a surprising degree of function, as judged by the development of a normal size penis and prostate and considerable amount of pubic hair.

Undescended testis

The anterior pituitary-like principle of pregnancy urine stimulates the interstitial cells of the testis to produce male sex hormone and produces descent in a number of cases in young boys. The same results can be produced with testosterone also, but since it may injure the testis, treatment with gonadotropic hormone by stimulation is preferable. It should be pointed out that both anterior pituitary-like substance and testosterone may cause excessive genital growth in young boys and that both may stimulate the rate of skeletal growth. In view of the fact that such a growth due to stimulation or substitution may be followed by retardation as in the case of some interstitial cell tumours of the testis, the therapy must be used with caution in young boys.

Frohlich syndrome

In cases of Frohlich type the effect of stimulation therapy should be tried before male sex hormone is used. Large doses of gonadotropic factor of pregnancy urine are very effective in this condition. If the testis do not respond to stimulation large doses of testosterone propionate may be used.

Benign Prostatic Hypertrophy

Since the male sex hormone causes development of prostate in the first place, it is not easy to understand how its use in

benign prostatic hypertrophy would be beneficial. It does not appear to be effective in the treatment of benign prostatic hypertrophy.

Sterility

Since treatment with male sex hormone represents primarily substitution therapy it does not appear to be indicated in the treatment of male sterility. In an individual with normal testicular function it would appear that testosterone propionate produces at least a temporary injury to the seminiferous tubules. These results appear to contraindicate the use of male sex hormone in most cases in which the testis are capable of producing spermatozoa. Some cases of sterility in male appear to be due to deficiencies in quantity and quality of spermatozoa which may be due to deficiencies in the function of the anterior lobe of the pituitary.

The male climacteric

There is no definite period of loss of sexual function in the male like the menopause in the female. Nevertheless there does occur some waning of sexual activity with advancing years, the age varying tremendously from person to person. It is probable that injections of testosterone propionate may revive the sexual, mental and physical vigour of old men.

Impotence

As many cases of impotence are psychogenic in origin the promiscuous use of hormone therapy in this condition is to be deprecated. If it is related to a deficiency of testicular function then improvement may be expected from hormone therapy, which may be of the stimulation or substitution type depending on the capacity of the testis to respond.



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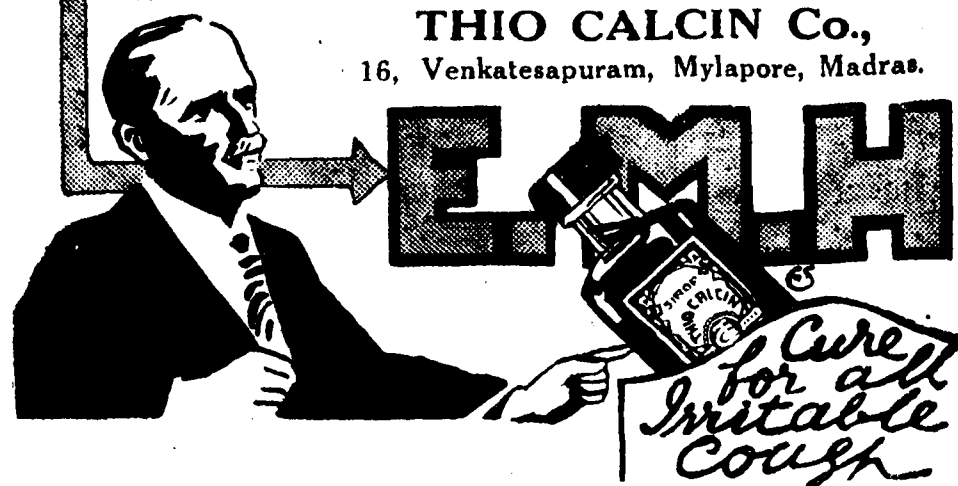
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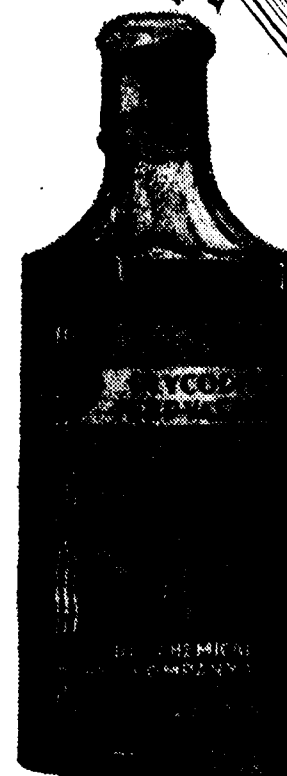
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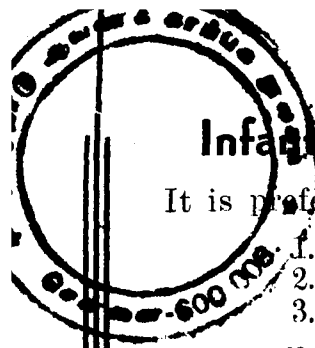


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THE MISCELLANY

OF THE

TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION

(REGISTERED)

FOR CIRCULATION AMONGST MEMBERS ONLY

Vol. VII]

MARCH 1940

[No. 3

Skin Grafting

BY

J. A. NARDAN



The purpose of this small contribution on Skin-grafting, which obviously pretends to no originality is just to encourage the general medical practitioner to whom treatment of ulcers, burns and injuries is almost of every day occurrence, to do skin-grafting and thereby hasten the healing process and avoid unsightly scars and consequences of contractual cicatrice. Moreover, this operation of skin-grafting is within the competence of every general medical practitioner who with a few instruments—to enumerate exactly, a sharp razor, a pair of scissors, two sharp pointed dressing forceps with good grip, an ordinary straight needle and a basin containing warm normal saline—can undertake this operation.

PHYSIOLOGY: The skin is nothing but a few layers of epithelium which get their nourishment through lymph. There is plenty of lymph flow from a raw granulating surface. And it is this lymph that maintains the vitality and nourishment of the skin-graft and prevents its decay and death.

PRÉPARATION: The ulcer which is fit for skin-grafting should satisfy the following few conditions. (1) It should be almost in level with the surrounding skin. (2) It should be healthy and free from discharge. This latter condition is not absolute but only relative. (3) The surface of the ulcer should be bright red, covered with granulations which bleed readily when gently rubbed with gauze. If exuberant granulation tissue is found rising above the level of the surrounding skin the ulcer may

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just be touched with copper sulphate crystal. Prior to skin-grafting the ulcer should be dressed with gauze, soaked in normal saline for two days.

THE OPERATION: The 'donor' area is generally selected from the external surface of the thigh over the vastic muscles. The area should be well painted with rectified spirit and then cleaned with sterile normal saline. A rectangular area about 2" x 3" is spotted out and its three sides, two lateral and the top, are infiltrated with 1% novacaine solution without adrenalin. The skin is held taut and with a razor rinsed in saline as large and as thin a slice of skin as possible is cut. An important point which is not generally stressed in text books is that the razor should cut the skin while it is being drawn towards the operator and not while it goes away from him. The observance of this technique will reward him with one large slice of skin. The cut skin is immediately transferred to the basin containing warm normal saline. The raw 'donor' area is now dabbed with gauze soaked in 5% tannic acid solution for a minute and touched with 10% silver nitrate solution. The area is then dressed with gauze dipped in a solution of 5% tannic acid and 1 in 3000 mercuric perchloride. The advantage of this dressing is that a firm coagulum is formed over the ulcer making further dressing unnecessary and that within ten days it gets healed with the dressing automatically falling off.

THE GRAFTING: The 'recipient' area should be absolutely free from any bleeding. Before grafting all the bleeding points are to be controlled. To attain this end the gauze dressing over the ulcer should be well soaked in normal saline and kept for at least five minutes and then very gently separated from the ulcer to avoid injuring the fresh granulations and consequent bleeding. Another point to be noted in this connection is that no chemical antiseptic of any sort should be used during the operation. Before applying the graft the ulcer should be well bathed in normal saline and gently dried. The skin is cut into small rectangular pieces according to the size and level of the ulcer and then firmly but gently spread over the ulcer with the aid of a needle or sharp pointed dressing forceps. Sometimes you can advantageously spread the graft upside down over the top of your forefinger and directly transfer it over the ulcer. Just see that there is perfect approximation. Grafts may just overlap one another and the margins of the ulcer.

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Corners, narrow areas and irregular surfaces may be implanted, rather thrust in, with tiny bits of the graft with the aid of the fine pointed forceps. The grafted area is then covered with sterile vaseline gauze and bandaged. Areas such as over the bend of the elbow, groin etc. are to be immobilized. This vaseline dressing is left un-disturbed for four or five days, when, on removal, one will find all the grafts 'have taken'. The same sterile vaseline dressing is continued for two or three more days until the area completely heals.



An area 4" by 3/4" has been grafted. The dark area running across the bend of the elbow represents the grafted area.

CONCLUSION: The whole technique of skin-grafting has been described and a few details though trifling have been stressed as important at least for a novice.

Corrigendum

In the January 1940 issue of our Miscellany we published an article on "The Rationale of giving Glucose D with Vitamin D" as by J. A. Naradan. It must be J. A. Nardan. We regret for the error.

Editor.

Toxic Effects of Sulphanamide and its Treatment

DR. D. SRINIVASAN, TRICHY.

On the subject of complications and untoward reactions which arise in the course of the treatment by Sulphanamide group of drugs, we have a considerable volume of literature including the recent war office memoranda. A multiplicity of predisposing factors dependent on the patient, on the disease, on the drug, and on the proper technic of its administration have been investigated and described. In spite of all these we in daily practice do come across patients suffering from poisonous reactions due to the faulty technic in the Sulphanamide therapy which in many cases could be avoided with reasonable care. Leaving aside the symptoms arising due to patients own idiosyncrasy over which we have no control, we can at least avoid the majority of the complications by proper advice to the patients about the poisonous nature of the drug and the correct method of taking it. Nowadays the public are led away by the advertisements and take it without knowing its poisonous nature and induce their friends also to try it for similar complaints. Such being the case absence of the restriction of its sale is highly deplorable. Sometimes we ourselves are culpable for we do not often take pains to explain fully about the few don'ts which the patients ought to be aware while taking the drug.

Neither the mode of action nor the dosage of the drug for the different ailments is clearly understood. Sulphanamide is supposed to be feebly bacterocidal and exerts its action only by arresting the growth of bacteria. It acts in alkaline medium unlike mandelic acid which acts only in acid media. It is excreted very rapidly from the body after a few hours of its administration. It is being given in almost all conditions from a common cold to epilepsy. I happen to come across a case in which it had been given for a slight fever with cold and pharyngeal catarrh. The patient, a girl of 16, of moderate build, exhibited all the nervous symptoms, mental disturbances, dizziness, palpitation, headache, tinnitus paræsthesia, asthenia

nausea and vomiting after swallowing six tablets of Sulphanamide without alkaline mixture and glucose which are the essential adjuvants in the therapy. The toxic symptoms persisted for three months after the stoppage of the drug. I am only mentioning this case just to illustrate how chemotherapy is being extensively tried sometimes imperfectly even in very trivial complaints by those of us who have a craze for new drugs and new methods of treatment.

When we decide to give Sulphanamide tablets, we should not forget that it is a terrible bonemarrow poison and make the patient realise its poisonous nature and insist on his appearance before the doctor for examination at least once daily. He should be instructed to stop the medicine if he gets headache or dizziness. The tablets should be dissolved in a tumbler of water with two or three tablespoonful of glucose to be taken after meals followed by alkaline mixture, a precaution often neglected. He should take a low residue diet, should not expose himself to the sun and should not have violent exercise. Onion, garlic and eggs are forbidden. No saline purgative or phenacetin should be given. If there is constipation a simple enemata or liquid paraffin at night is quite sufficient.

Toxic Symptoms.

Cyanosis:—Mild cases may be treated by giving $7\frac{1}{2}$ to 15 grains of methylene blue by mouth—administration of oxygen is not of any use.

Nausea:—could be treated with alkaline mixture. It stops of its own accord after the third or the fourth dose with the usual precautions but if it persists the treatment should be stopped.

Colicky pains in the abdomen may be treated by giving glucose and excess of Soda Bicarb Solution.

Morbilliforms, maculo popular rash, and dermatitis and

Photo sensitisation of the skin can be successfully treated by rest in a dark but well ventilated room and acceleration of the excretory function of the body, oral or parenteral administration of Vitamin-C is advocated.

Neuritis—should be treated with injection of Vitamin-B.

Acidosis—Concentrated Sodium Bicarb solution by mouth and in grave conditions intravenous injection of Sodium Bicarb solution.

Pyrexia—This requires to be distinguished from fever due to recrudescence of the original infection. If the cause is due to the drug temporary omission will be sufficient.

Dizziness and headache—If intolerable administer fluids freely—Take differential count for fear of getting serious complications of the blood.

Haemolytic anaemia, Sulphæmoglobinæmia Polymorpho leucopœnea,—Injection of liver extracts and transfusion of blood. Administration of nicotonic acid is advocated by some. In this there are two schools of thought. One advocating Soda Bicarb and Nicotonic acid along with Sulphanamides and the other not to add nicotonic acid unless use is imperative.

Agraunlocytosis—Occurs after ten days or more of taking the drug. Leucocytic count is the only sure diagnosis. The other symptoms are, headache, deterioration of general condition, low fever with rapid pulse and sore throat. The treatment is only transfusion. Prognosis is bad but fortunately this complication is rare. Our motto should be to prevent the onset by raising hæmoglobin content of the blood.

Jaundice—Omission of the drug and induction of diuresis.

Mental depression.—begins at the late period of the treatment and continues even after the treatment is stopped.

As soon as the toxic effects of Sulphanamide are noticed it is desirable to stop the drug and effect excretion of the drug from the body in general. Vomitting and headache are supposed to be very common after the administration of M & B, 693. In the absence of the facility of a laboratory, it is always better to give two or three liver injections to avoid anæmia, due to the drug inhibiting the action of the bonemarrow.

The following table shows the groups of preparations of the Sulphanamides in the order of their toxicity.

Sulphanamides

GROUP 1	GROUP 4
(1) Prontosil Rubrum	(1) Proseptacine
(2) Prontosil soluble	(2) Soluseptacine
(3) Rubiazol	
GROUP 2	GROUP 5
(1) Uleron	M. & B. 693
(2) —	—
GROUP 3	
(1) Sulphanilamide	
(2) Prontosil Album	
(3) Sulphanamide. P.	
(4) Colsulanyde	
(5) Prontylin	
(6) Streptocide	

- Ref :—(1) Clinical Journal June 1939.
 (2) I. M. G. Vol. XXIV No. 4 April '39.
 (3) Medical Annual 1938.
 (4) Journal of American Medical Association 1938
 Vol. C. XI.

Intravenous Injections of Sodium Biborate in Billiary Colic.

(From *The Practitioner* September, 1939.)

Sodium biborate has been administered orally to relieve irritability of the urinary bladder and it has also been used in epilepsy and in exophthalmic goitre. The effects of its parenteral administration have hitherto been unknown, but recently G. Macchioro (*Minerva Medical*, April 28, 1939, 1, 410) appears to have obtained good results with intravenous injections of sodium biborate in relieving pains due to pathological conditions of billiary tract. 10 c. cm. of a 5 per cent. aqueous solution of sodium biborate was given daily intravenously and in the last four years forty-seven patients suffering from chronic cholecystitis were thus treated. In every case the diagnosis was confirmed by cholecystography, the majority showing evidence of billiary calculi. Of the forty-seven patients treated with sodium biborate pain disappeared completely in twenty-eight cases, and eleven patients showed marked improvement; eight patients did not respond to the treatment. On an average six to eight injections were sufficient to obtain relief. There was an improvement in the general appearance, increase of the appetite and gain in weight. A course of twenty daily injections was usually given and if necessary repeated after an interval. During the treatment the patients were kept on a strict diet and all other drugs were eliminated. The radiological findings after the treatment remained as a rule unaltered. Immediately after the injection a sensation of heat of short duration was felt all over the body similar to that experienced after an intravenous injection of calcium. No other untoward effects were noted, although in some cases the injections were given for a prolonged period. Great care was taken to avoid extravasation of the solution into the paravenous tissues, as this was followed by intense pain lasting several hours. The action of sodium biborate appears to be somewhat obscure, but it is likely that the alteration of the PH values of the blood may have a favourable influence on the inflammatory condition of the bile ducts. The results seem to be encouraging and the injections appear to be indicated in those cases in which for some reason no surgical treatment is undertaken or when pre-operative preparation is advisable.

The Diagnosis of Pregnancy by Intracutaneous Injection of Gonadotrophic Hormone.

An accuracy of 88 per cent in a test for pregnancy by means of intracutaneous injection of gonadotrophic hormone in a series of 102 cases is reported by E. Halaxz (*Revista Medica Lationo-Americana*, May 1939, 24, 827.) The preparation used was "Glanduantin" (anterior pituitary hormone) and the method employed was as follows:—The skin of the fore arm is cleaned with ether (not alcohol), the arm is raised and the needle of the syringe introduced parallel with a skin to a depth of 1-2 mm.—then 0.3 c.cm. of the gonadotrophic hormone is injected. After about thirty minutes, if the patient is not pregnant, a small area of erythema develops around the place where the needle was inserted, and remains visible for twenty four hours. If pregnancy is present there is a complete absence of erythema, but a small blister forms at the site of introduction of the needle.

(*The Practitioner* Sept. 1939.)

The Treatment of Smallpox with Sulphanilamide.

The markedly beneficial action of sulphanilamide on the eruptive stage of smallpox is reported by W. O. McCammon (journal of the American Medical Association, May 13, 1939, 112, 1936,) who has recently treated seven cases, four receiving sulphanilamide and three symptomatic treatment. The sulphanilamide was given in dosage of 10 grains, every three hours, and the patients also received acetyl-salicylic acid, 5 grains three-or-four-hourly. The results compared with those obtained in the three patients not receiving sulphanilamide showed that there was a marked effect on the eruption: in three of the sulphanilamide cases only an evanescent macular eruption occurred, and this quickly disappeared; in the other case only three pustules were noted. The temperature reached normal on the fourth day, and the patients were back at work seven to 10 days after the onset of illness. The necessity for the early administration of the drug is emphasized.

(The Practitioner September, 1939.)

Vitamin B₁ in the Treatment of Trigeminal Neuralgia.

Complete relief in four, and partial relief in two, out of a series of seven cases of trigeminal neuralgia treated by intramuscular injections of vitamin B₁ are reported by I. Bakhsh (Indian Medical Gazette, August 1939, 74, 456.) The dosage used varied according to the symptoms—one patient received 30 mgm. daily for two days, and then 10 mgm. for a further ten days. Improvement was noted after the first forty-eight hours, and after one week the pain had entirely disappeared. Another patient received 30 mgm. daily for one week with resultant cure, improvement setting in within forty-eight hours of the institution of treatment, and in a male of sixty years the administration of 6 mgm. daily for two weeks brought cure after the tenth injection. 10 mgm. daily was used in other cases, and the author comments on the general assumption that enormous doses of vitamin B₁ do not cause toxic symptoms, some authors having given as much as 100 mgm. of crystalline B₁ by intravenous route without any ill-effects. Steinberg, however, has reported the occurrence of herpes zoster after large doses, and he has been able to induce herpes by this means on two successive occasions. On the strength of the results obtained in the reported series the author recommends the trial of Vitamin B₁ injections in all cases of trigeminal neuralgia before surgical measures are resorted to.

(The Practitioner, December 1939.)

Sulphanamide in Erysipelas.

At the Ruchill Fever Hospital, Glasgow, Dr. T. Anderson finds that in adequate doses the sulphanamide drugs cure erysipelas in practically all cases within 3 or 4 days. The dosage in the 24 hours of sulphanilamide for adults is 6 to 9 gm.; for children of 5 to 10 years, 4·5 to 6 gm.; for those under 5 years, 3 gm. Children tolerate the drug well, and, since the disease is often most severe in infancy, relatively large doses may be administered, especially in the early stage of treatment. To maintain an effective concentration in the blood, the drug should be given by mouth at 4-hourly intervals. The lesion will cease to spread within 48 hours, and in most cases the temperature will return to normal within 3 or 4 days. Should this not happen, the diagnosis should be reviewed; the presence of some septic complication should be excluded, and the question of fever directly due to the drug should be considered. Full dosage should be used until the temperature returns to normal, after which the drugs should be continued in a dose of 0·5—1 gm. thrice daily for 10 to 14 days. When this is done, recurrence of the disease is unusual.

(From the *Clinical Journal*, Nov. 1939.)

A Simple Technique of Giving Intravenous Quinine with Saline.

BY

R. K. DE, L.M.P., D.T.M.

In tea-garden practice, we frequently encounter algid cases of malaria, both in adults and children. Every choleraic diarrhoea case that comes is looked upon with suspicion as to the possibility of the case being due to malaria. In such cases the microscope is the only thing that helps us in making a rapid diagnosis.

The Technique.—When the case has been diagnosed as one of the choleraic type of malaria, saline infusion is begun, either by direct vein puncture or by opening a vein. Then I take in a syringe the desired amount of quinine dissolved in one or two cubic centimetres of distilled water and while the saline flows on, inject the quinine into the tube. The rubber tube is taken as a vein, sterilized with spirit and punctured. The quinine solution is given very slowly so that it is well diluted with saline, and this eliminates shock.

This method of giving intravenous quinine by injection in the rubber tube has the following advantages:

(1) Most of the cases come so late that saline infusion has to be undertaken at once before anything can be done in the way of laboratory diagnosis. In such cases, I generally take a blood slide first and begin saline injection and by the time it is prepared and the administration begun, the blood slide has been examined; if it is 'positive', the quinine is given by the above technique. Hence further puncture or opening of a vein is avoided.

(2) Exact amount of quinine can be given as desired or necessary. If the quinine is mixed up with saline, there is chance of loss of a certain percentage of quinine, as the whole quantity of saline taken for infusion may not be required and also some cases react badly after a few ounces of saline.

(3) The most important advantage is that quinine can be stopped at the slightest possible sign of quinine shock and any intravenous circulatory and respiratory stimulant can at once be given by this method. My procedure in bad cases of choleraic malaria is that I first give 0.5 to 1 c.cm. of adrenaline chloride by this method and then I give quinine. This prevents any possible occurrence of shock from quinine.

By this technique I do not deprecate the other valuable techniques nor do I claim something new, as it may be known to many. I send this note for publication because there may be some who will find some interest in it. Also I think that any technique, however simple and negligible it may be, should be recorded.

Note.—We note what the writer says on this point, but we still consider that much the same result could be achieved by pouring the quinine into the tank with a small amount of saline and adding the rest of the saline when this is almost exhausted...Editor. I. M. G.

(From the Indian Medical Gazette, Dec. 1939.)

Intracutaneous Inoculation of Guinea-Pigs for the Diagnosis of Tuberculosis.

BY

C. L. PARICHAM MAJOR, I.M.S.,

G. PANJA, M.B. (Cal.), D.B., (Lond.)

K. BANERJEE, M.B. (Cal.) D.T.M.

Topley and Wilson (1936) in dealing with the diagnosis of tuberculosis infection write:—

‘The most delicate test for tubercle bacilli is animal injection, and the most suitable animal is the guinea-pig. The susceptibility of the guinea-pig is extremely high; even minute amounts of infective material will render this animal tuberculous. The material—sputum, pus, milk, etc.—should be injected subcutaneously or intramuscularly into the thigh; the advantage of intramuscular injection is that the local abscess which forms does not ulcerate through the skin. It is wise to inject at least two animals, in case one dies of secondary infection—an occurrence which is very common after the inoculation of urine or faeces. One animal should be killed 3 to 4 weeks later and if no signs of tuberculosis are apparent, the other should be kept for 6 to 8 weeks after inoculation before being killed.

The great drawback to the extended use of animal inoculation tests (particularly valuable for the demonstration of small numbers of tubercle bacilli in a pathological specimen) is the long delay before a definite diagnosis can be made. After a subcutaneous, intramuscular and intraperitoneal injection of suspected tuberculous material an interval of two months may be necessary before a diagnosis can be made. Although a tuberculin test may be used for the diagnosis of tuberculosis in a guinea-pig during life the result must be confirmed by post-mortem examination.

Intracutaneous inoculation:—This method of inoculation of the suspected material has definite advantages over the subcutaneous and other methods. There is an appreciable shortening of the time in which a positive diagnosis can be

made and the subsequent manipulation consists of the demonstration of acid-fast bacilli in smears taken from the ulcer which develops at the site of the intracutaneous injection.

After intracutaneous injection of the tuberculous material a small nodule develops at the site of the inoculation in 3 to 4 days. The nodule breaks down to form a punched out ulcer in 7 to 14 days. Tubercle bacilli can be found in smears made by scrapping the base of the ulcer. With the development of the ulcer there is an enlargement of the regional lymphatic glands. The ulcer may subside and heal completely leaving a small indurated nodule. The intracutaneous method was used by Herrold and Woolsey (1938) who reported better results with this method than by the subcutaneous method.

The intracutaneous method of inoculation was used in the examination of sputum from 11 patients suspected to be suffering from tuberculosis. Cultures were made from each specimen of sputum. The methods and the media used were those advocated by Corper (1938). The cultural examination yielded poor results, only two specimens gave positive cultures and with the rest the culture tubes were grossly contaminated. The intracutaneous inoculations of a guinea-pig gave consistently good results. An outline of the method and a brief description of the lesions produced are recorded.

A guinea-pig was injected intra-dermally with 0.2 to 0.4 c. cm. of the sputum under examination. Careful search of smear preparations from these samples showed no acid fast bacilli. One series of animals received the sputum (well shaken up in saline) without any preliminary treatment to destroy the contaminating organisms. Other animals received injections of centrifugalized deposit from a large amount of sputum treated by different methods (3 per cent hydrochloric acid, 5 per cent sulphuric acid, 3 per cent sodium hydroxide or 5 per cent oxalic acid solution). The results obtained with unaltered specimens were better than with specimens that had been treated to destroy the contaminating organisms. The ulcers were obtained two days earlier with the untreated than with the treated specimens. Occasionally, a local inflammatory nodule developed after 24 to 48 hours but this subsided in 2 to 3 days. In the

possible cases the characteristic punched-out ulcer with an angry red base and an irregular bluish margin developed in 7 to 14 days, after the injection of the material. Acid-fast bacilli were demonstrable in scrapings from the depth of the ulcers. In some cases examination of several smears made from the depth of the ulcer were necessary. Every animal that developed typical ulcer, when autopsied 3 to 4 months later showed extensive tuberculosis visceral lesions, most marked in the spleen, liver and lungs.

Suspected tuberculous sputum was injected intradermally into a guinea-pig which had been inoculated 4 to 8 days previously with a live culture of human type of tubercle bacilli. A red indurated area about 1 inch in diameter developed at the site of inoculation within 24 hours. Similar injections of sputum from non-tuberculous persons produced small nodules at the site of inoculation but without any skin reactions. Animals that have been used for the intradermal test with tuberculous material can be utilized for this type of allergic reaction.

Another advantage of the intracutaneous method of injection is that more than one specimen can be injected in one animal. It is advantageous to arrange the injections in such a way that the areas are drained by different groups of lymphatic glands. Four specimens can be conveniently given in one animal and the injections so spaced that the regional lymphatic glands lie near the four limbs. The strains of tubercle bacilli can be recovered and obtained in pure culture from the lymphatic glands. The following case illustrates the value of the intradermal method of injection in arriving at a correct diagnosis.

A male, 50 years old, who had suffered from long continued fever, cough and general weakness was diagnosed as suffering from broncho-moniliasis because of the presence in large number of yeast-like bodies in smears of the sputum. Repeated examinations of the sputum had been negative for tubercle bacilli. Intradermal injection of 0.3 c. cm. of the sputum of this patient into a guinea-pig produced a typical ulcer in 14 days. Smears taken from the base of the ulcer showed a number of acid-fast bacilli. Subsequent post-mortem examination of this animal showed extensive lesions of generalized tuberculosis with caseous lymphatic glands, and necrotic areas in the liver and spleen.

SUMMARY

The value of the intradermal mode of inoculation in the demonstration of scanty tubercle bacilli in tuberculous material is stressed.

The intradermal method has definite advantages over the other methods of animal inoculation. There is an appreciable shortening of the period required to obtain a positive result. The subsequent manipulations are minimal. This test does not require any complicated procedure or any expensive equipment. It can be carried out readily in any laboratory where guinea-pigs are available. The lesion can be seen without the necessity of sacrificing the animal and tubercle bacilli can be demonstrated in smears from the lesions produced. Four specimens can be conveniently injected intradermally into one animal. Additional advantage of the animal test is that, when positive, it demonstrates that the acid-fast bacilli present in the specimen are virulent to the guinea-pig.

Although cultural methods have economic advantages over the animal tests, it is not possible for every laboratory to undertake cultural examinations. Experience is necessary not only in obtaining satisfactory cultures but in concluding whether the resulting growth is of tubercle bacilli or of non pathogenic acid-fast bacilli.

Animals that have been used for intradermal tests can be subsequently utilized for allergic tests.

There is no advantage in the preliminary treatment of such specimens as sputum with any reagent to inhibit or destroy the contaminating organisms. Satisfactory results are obtained when fresh specimens of sputum collected in ordinary clean scalded jars are used for the intradermal test.

(From the Indian Medical Gazette, January 1940; pp. 20.)

The Trichinopoly District Medical Association

(REGISTERED)

(Branch of the Indian Medical Association)

A monthly meeting of the above Association was held on Tuesday the 12th March 1940, at 6 P.M. in the E. R. High School premises, Trichinopoly, when about 50 members were present. Dr. M. Subbiah was 'at home'. Dr. T. H. Somerville, M.D., F.R.C.S., of Mission Hospital, Neyyoor delivered an interesting lecture on '**Sepsis in Diabetes**'.

DR. K. NARAYANASAMY IYER,

Rtd. District Medical Officer

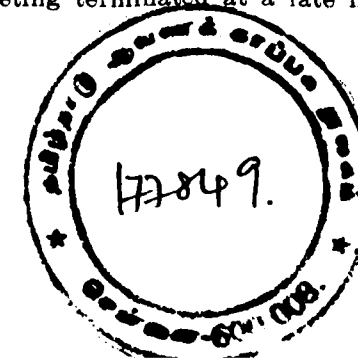
PRESIDED

In the course of his lecture, Dr. Somerville said, that modern advance in surgery was tending to become more conservative and surgeons were becoming more medical men than formerly. More carbuncles are now being treated with mag. sulph and glycerine paste and short wave therapy than with the knife. But when surgery is imperative we should not hesitate to use surgical methods of treatment. He then described in detail the anatomy of the fingers in relation to the various conditions and said that in the terminal phalanges incisions should be confined to the terminal half of the last while in the other phalanx incision should be made at the sides.

He also impressed upon the necessity of carrying on treatment of the diabetic condition by giving Insulin and plain sugar rather than glucose, which is unnecessary and costlier. He then answered a number of questions.

At the request of some members, at the conclusion of the lecture Dr. Somerville described in detail and in an interesting manner his expedition to Mount Everest in 1934.

With a vote of thanks to the lecturer, chairman and the host, the meeting terminated at a late hour.



P. A. S. RAGHAVAN,
Secretary.

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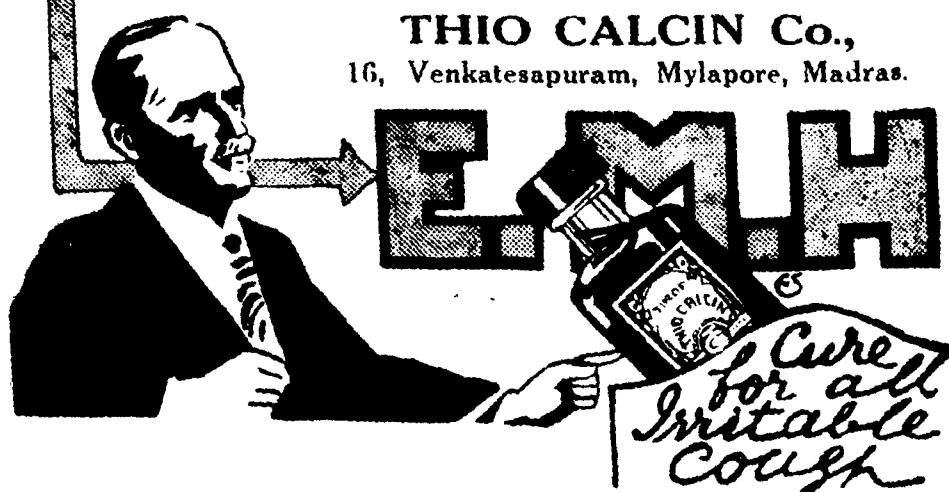
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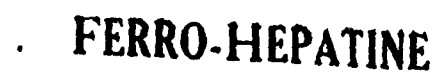
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