

The Bulletin

OF THE

South Indian Medical Union.

Vol. II.

JULY 1930.

No. 7.

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1. The Union does not accept any responsibility for the views and statements of the contributors as published in the Journal ; all manuscripts, books for review and letters intended for publication must bear the name and address of the author, not necessarily for publication. All communications should be addressed to the Business Editor.

2. Copy, cuts and blocks for advertisement should reach the Business Editor at least before the 15th of the month of issue. Advertising rates will be supplied on application to the Business Editor, who will try to accommodate advertisers' request for suitable space, position and proper display of advertisements.

3. Remittances should be made, by crossed cheques, registered letter or money order, payable to the Bulletin, South Indian Medical Union.

4. Medical men and Medical Students will be placed on the free mailing list of the Bulletin on application to the Business Editor.

South Indian Medical Union, Madras.

PROGRAMME.

AUGUST 1930

Meetings held at 32, Broadway.

Monday 11th, 6-30 p.m.

GOVERNING BODY MEETING

Monday 18th, 6-30 p.m.

**THE ROLE OF THE GENERAL
PRACTITIONER IN A MATERNITY
CLINIC**

BY

Dr. A. Lakshmanaswamy Mudaliar,

B.A., M.D.,

Second Obstetric Physician, Government
Maternity Hospital, Madras.

(Open to all.)

Monday 25th, 6-30 p.m.

SOME COMMON SKIN DISEASES

BY

Lieut.-Col. J. M. Skinner, I.M.S.,

Physician-in-charge, Skin Department,
General Hospital, Madras.

(Open to all.)



Have you sent in your membership form?

**The Publicity section of the South Indian Medical Union invites all
Medical Societies to utilise the columns of the Bulletin
for the publication of their proceedings.**

BULLETIN

OF THE

SOUTH INDIAN MEDICAL UNION.

JULY, 1930.

GENERAL NOTES.

Recently we came across a notification by the Health Officer of the Madras Municipal Corporation inviting the public to get inoculated by *his* staff. He did not think it worth his while to call in the co-operation of his real allies—the medical practitioners. In fact, in the last cholera epidemic we understand that no serum was supplied to the General Practitioner though requests were made for the same.

Now let us see how it is done elsewhere. The Health Authorities in New York started a campaign against Diphtheria. The Health Officer invited all the practitioners to a meeting, explained and discussed his plans with them, requested their help and co-operation and *he got it*. The public were invited to go to *their own* doctors for the protective inoculation, the necessary serum and literature being provided by the Corporation. The result was that the majority of the public got *protected*. It would be worth while to compare the results here and there. We trust that the Health Officer of our Corporation would at least keep in touch with modern methods of publicity and action.

One need not go to distant America to see the difference in the angle of vision. Take the Bengal Gazette. The following item will be of interest to us in Madras.

Dr. Susil Kumar Mukharji, F.R.C.S. (Edin.), D.O. (Oxon.), D.O.M.S. (Lond.), *Honorary Ophthalmic Surgeon*, Medical College Hospitals,

Calcutta, is appointed to *act as Professor of Ophthalmic Surgery*, Medical College, Calcutta, and Ophthalmic Surgeon, College Hospital, vice Lieut.-Col. E. W. O'G. Kirwan, I.M.S., granted leave.

If such an action was even contemplated here we feel afraid that at least one Service Incumbent might require the need of restoratives. But such a contingency need not be feared here. The attitude of the Services towards the honorary system is well known. For was it not that conclave of Civil Surgeons which shouted their fear that "these Honoraries would become our competitors." In spite of the times, this fear and a conduct resultant of it can be seen in most of the institutions where the honorary system has been introduced. Applications never reach the proper quarters. Not only is there indifference but also active obstruction in the work of the honoraries. We have received reports that in a hospital, not one hundred miles from Madras, every attempt is being made to discredit the work of the honoraries. Sometimes because they stand in the way of the employment of one's proteges. The cheap sneer has been replaced by hostility and no method is thought to be too low to attain this object.

We trust that the Surgeon-General will impress on his officers that the system has come to stay and that any failure might entail a further trial under different auspices.

* * *

Recently a conference was held in Simla to consider the location of the Central Research Institute for India. Representatives of all Universities and the Independent Medical Profession of India met the Government to consider the venue of the Institute.

We are glad that the conference has recommended that these research activities should be conducted at a *University Centre*. We have never

been believers in wasting money—money which could be more profitably utilised—on brick and mortar. We see enough and more of it in this presidency. Instead of sinking a large amount, and these estimates have an unfortunate tendency to soar up to extraordinary figures once a provisional modest estimate has been passed, in any imposing central structure. We would suggest that Foundations for research be established at various University Centres liberally subsidised by the Government. A healthy rivalry between the universities would thus be established. One thing is obvious, that such institutions should not be located at places away from public opinion.

* * *

We are informed that the University delegates have claimed a large voice in the management of the Indian Central Research Association. The funds of this Association are met purely from Central Government grants. As far as we know hardly any research work on medicine has so far been conducted by the Universities and it would be more becoming if the claims of the Universities for a voice in the control of the I. R. F. A., came after these Universities showed a record of Research Work under their auspices.

* * *

MEDICAL SCHOLARSHIPS.

At the present stage of the evolution of the Honorary system of medical relief in this presidency it is not necessary for anyone to advocate its advantages to the country or to the medical profession. The system has been well tried and been found to work very satisfactorily from all points of view. Government has therefore extended its scope and increased the number of honorary officers in the various hospitals of the Presidency. Two classes of officers have also been

created, a junior and senior class. This is as it should be; for it is from the ranks of the junior officers that the senior men will have to be recruited in the future.

The Government should now aim at keeping the efficiency of these officers at as high a level as possible both in their own as well as the interests of the people and of the medical relief of the country. These men should take their place in the front rank of the medical profession. In other countries we find that the persons holding such appointments are the best men available. They are well qualified in their specialities and have added to their knowledge by travelling abroad and gaining as much experience as they could from other people and countries.

It seems to us therefore that it would be greatly to the interests of medical relief in this country if the members of the honorary staff as well as those practitioners not on hospital strength get a chance of travelling abroad and gaining experience in other countries. The Government has an obligation not only to the poor who attend the hospitals but also to the general public who are largely dependent on private practitioners for their medical needs. Money spent on them will be well spent for it will return to the State in the shape of more efficient service to the general public, who have a right to claim as high an efficiency as possible from their medical men. The Government has recognised the value of experience and post-graduate training in other countries; for they are spending a good sum of money on their Service Officers in giving them study leave with pay and allowances and sending them on deputations to foreign countries.

The honorary officers cost nothing to the Government, and they do as efficient work for them in the hospitals as their paid officers. Government should therefore extend the same facilities to

the Independent Medical Profession, both for those connected with the hospitals and otherwise. They would thus help to evolve a class of efficient practitioners as well as specialists, who will serve the needs not only of the hospitals but the public at large.

Improvement in any department of work comes more quickly by competition and a keenness in competition is more easily created amongst practitioners who have to earn their living by their own practice. Everything that tends to make them efficient improves them in their profession, and this is bound to have effect on their work in the hospitals.

Practitioners who live by their practice find it very difficult to find the time and money, especially in the early days of their practice to travel abroad. Our country is poor and so are our practitioners. They can ill afford the time and expenses to travel to other countries. These facilities are all the more necessary now as opportunities for research and post-graduate training hardly exist at present in this country.

We request that this claim of the Independent Medical profession for scholarships as well as facilities to do advanced work in other countries will meet with the sympathetic approval of the Government and before soon the Government will evolve a scheme where this just claim of the Medical Profession will be met.

“TEACHERS?”

The ways of Governments are generally not understood by the man in the street. Governments evidently possess very special reasons for doing things which appear unreasonable to ordinary people. That Governments can do anything without special and worthy reasons is impossible. For,

before they make up their minds to do a thing, they make elaborate enquiries, they take counsel and they take time. But whether it is the very elaborateness of the enquiry, or the multiplicity of counsel or the inordinate delay in coming to a decision, or all of them together, which of these is responsible for the unfortunate impression created on the public it is difficult to know. We do not presume to expound the abstruse philosophy of governmental actions and their reasons. But certain recent doings of the Local Government in the *medical department* have come to our notice. All our efforts at finding the justification for such acts or appreciating the utility of these measures have been in vain. We shall therefore place these facts before our readers and leave it to them to say if they can appreciate the reasons which should have prompted the Government to these measures.

Readers of the Bulletin are aware of the recent activities in the medical department of our province about reorganisation of medical education. The report of the Medical Education Committee which was noticed in the last number, repeatedly expresses its desire to raise the standard of education and outlines certain proposals for the recruitment of better teachers. At the other end Col. Needham, who was till recently the inspecting and reporting officer to the General Medical Council, has reported to that body about certain flaws he noticed in the conduct of the various University examinations and suggested some improvements in the selection of examiners and in the method of examination.

Whether or not one is in full agreement with the views of the Committee or the findings and suggestions of Col. Needham, one fact has never been questioned, namely, that the staff of the various medical teaching institutions has not always been selected from the best men available. “Pro-

fessors" and "lecturers" have been appointed not because they have been proficient, nor because they were capable of lecturing; but because they have been seniors in the civil list, or they just happened to be on the spot, or some one in the higher ranks had taken a paternal interest in a particular person. When a Chair had to be filled various have been the criteria applied to chose the candidate. Sometimes it has been the possession of a higher academic qualification, at times the longer experience, occasionally the accident of being in a particular department, frequently a senior place in the civil medical list, and often no particular reason at all. In one case that we know of, it was military service. In the good old half-forgotten days, and that was only just a few years ago, a former Surgeon-General went pale at the suggestion that teaching hospitals should have on their staff honorary medical men. He gave out that teaching was a specialised work, and that teachers were not made in a day, not in five years. He reluctantly agreed to fourteen or fifteen years as the period of probation necessary to make a competent teacher, and he insisted on the higher academic qualification for teachers. But what should have been his mortification when district officers without any teaching experience were appointed as professors of physiology and materia medica in a University college? Such instances have been so common that our readers may feel that we are referring to some ancient history. We should have been very happy indeed if these are things of the past. But unfortunately we are nowhere near the end, not even at the beginning of it. We have seen it gazetted a few weeks ago that the *professor of Materia Medica* in a college was to act as *professor of Operative Surgery* in addition to his duties.

The professor of Therapeutics in the Madras Medical College was on deputa-

tion. The professorial work was carried on by the *additional* professor of Medicine in addition to his own duties. But just two months before the original incumbent returned room had to be provided for a civil surgeon and so this place was filled by one who till then has never been a teacher. Could not the first acting professor have carried on as well or rather as ill? No, room had to be made for another officer who unexpectedly returned from leave, and so to find a place for the latter he was pitchforked into this professorial chair. Within the last few years, a former professor of *Jurisprudence* in the college was sent to the Royapuram School to lecture on *Medicine*. And within the last few days we find the gazette announcing the present professor of *Jurisprudence* posted to be lecturer in *Surgery* in the same school. Our readers would be amused if they know the numerous roles that this officer has been called on to play from time to time much *against his own wishes*. These activities of the Madras Medical Department give an impression that in the selection of teachers profound knowledge of the subject and competency to teach are not regarded as indispensable qualifications. But we leave it to our readers to guess if that be the view of the Government.

While the staffing of the schools has been left to continue in this unsatisfactory condition, no time has been lost in giving effect to the suggestions to improve the examinations. The number of examiners have been increased for each subject, examiners have been requisitioned from outside, and the standard is presumed to have been set high and made more uniform.

But will it avail to improve Medical Education if one merely attempts to improve examinations while the defective system of teaching is left alone to thrive in rank luxuriance?

UNION NOTES.

(Secretaries.)

It has been suggested that the proceedings of all meetings be published in the Bulletin for information. In accordance with the above it has been decided to publish the proceedings in the Bulletin. Extracts from the proceedings of the Governing Body are also published.

* * *

The adjourned annual meeting of the Union was held on the 21st July. Extracts from the proceedings of the meeting are published elsewhere.

* * *

Two other meetings were held. The addresses on the 'Work ahead of Us' by Dr. M. Vijayaraghavalu, B.A., M.B. & C.M., and on "Recent advances in Therapeutics" by Dr. A. Visvanathan published elsewhere will be read with much interest by all. The latter especially so as it shows that a general practitioner if he keeps careful notes of his cases can produce work on a par with that of his hospital colleagues.

* * *

May we invite the attention of the members to the proceedings of the Governing Body regarding arrears. The increased activities of the Union can only be sustained with active and sustained support from members. In all such activities money is a potent force. We request all members who are in arrears to kindly remit their dues at their earliest convenience.

* * *

A varied and interesting programme is being arranged for September. All members of the profession and medical students are welcome and are cordially invited to the meetings.

* * *

Extracts from Minutes of the Governing Body of the Union, held on 7th July 1930.

PRESENT:

Major F. W. A. Coshan.
Dr. U. L. Shah.
" E. V. Srinivasan.
" V. D. Nimbkar.
" P. R. Venkappaya.
" U. D. Gopal Rao.
" P. Rama Rao.
" T. Krishna Menon.

Chairman: Major F. W. A. Coshan.

1. The minutes of the Governing Body meeting held on 16th May 1930 were read and passed.

2. The financial statement for May 1930 was passed.

3. Resolved that the minutes of the annual meeting held on 16th June 1930 be circulated among the members.

4. Read—

(a) Letter from Dewan Bahadur Dr. Krishnan of Palghat thanking the Union for the good wishes on the honour conferred on him. Recorded.

(b) Letter from Rao Bahadur Dr. C. B. Rama Rao as whether he will be considered as an honorary member as was done by the Calcutta Association.

Resolved that he be informed that at present there is no provision as per rules for honorary membership.

(c) Resolutions of the Grant Medical College Society held on 22nd May 1930. Recorded.

(d) Resolutions at a meeting of the Medical Profession of Bombay, held on 8th June 1930. Recorded.

5. The General Secretary placed before the Governing Body a list of members who are in arrears.

Resolved to issue reminders to all such members and request early clearing of the same. Dr. U. D. Gopal Rao has kindly promised to help in the above.

6. Applications for membership from the following were considered and approved :—

- Dr. K. Kalyanasundaram, Vadavur.*
 „ K. Pattabhiramayya, Boyarani.*
 „ K. Venkata Rao, Triplicane.
 „ M. S. Mariadoss, Royapuram.
 „ C. V. Narayana Iyer,
 Chalapuram.*
 „ K. T. Vengu, Palamcottah.*
 „ G. D. Rodrigues, O. B. E.,
 Calicut.*
 „ N. Gopalan Nair, Sandur.*
 „ A. K. Meghanathan, Coonoor.*
 „ R. Venkata Rao, Vizianagram.*
 „ C. Kantaravachariar, Cuddapah*
 „ K. Govinda Iyer, Aduthurai*
 „ K. K. Patnaik, Mudunoor*
 „ N. S. Kothandaraman,
 Naringiripet*

7. The meeting terminated with a vote of thanks to the Chair.

Extracts from the Proceedings of the South Indian Medical Union at the adjourned Annual meeting held on 21st July 1930.

PRESENT :

- Dr. E. V. Srinivasan
 „ U. K. L. Narayana Rao
 „ P. Govinda Rao
 „ V. D. Nimbkar
 „ K. Venkata Rao
 „ U. D. Gopal Rao
 „ K. P. Rama Hebbur
 „ Mrs. L. Jacob
 „ T. Satakopan
 „ M. Sanjiva Rao
 „ P. R. Venkappaya
 „ U. Venkata Rao
 „ K. Bhujanga Rao
 „ T. S. Duraiswami
 „ Miss G. M. Thomas
 „ P. Rama Rao (Secretary)

Chairman : Dr. T. Satakopan, M.D.

1. Resolution No. D. 2. Proposed by Dr. U. D. Gopal Rao and seconded

* Mofussil Members.

by Dr. M. Sanjiva Rao, and amended as below by Dr. Nimbkar :—

“ That the Government be requested to create special courses and classes with competent staff and appoint a Board of Examiners to grant diplomas in special subjects like Oto-rhino-laryngology, Medical Radiology, Ophthalmology, etc., at as early date as possible.”

Carried.

2. Resolution No. D. 3. Proposed by Dr. M. Sanjiva Rao and seconded by Dr. U. K. L. Narayana Rao and amended by Dr. V. D. Nimbkar as follows :—

“ That an Honorary Medical Service Committee be formed within the South Indian Medical Union to safeguard the interests of the Honorary Service, the Committee to consist of the President, one of the Secretaries, and four Honoraries, two of whom shall have first hand knowledge of the Honorary System in England.”

Carried.

3. Resolution No. D. 4, notice of which was given in the agenda was by permission withdrawn.

4. Proposed by Dr. P. Govinda Rao and seconded by Dr. K. P. Rama Hebbur.

“ That the authorities concerned be requested to enlarge the Medical College Library and make it more up-to-date and to convert it into a lending library available to all registered medical practitioners in Madras City.”

Carried.

5. Governing Body's recommendation :

“ The members of the South Indian Medical Union shall use only Indian made drugs and other professional requisites in preference to those of foreign manufacture.”

Carried.

The meeting terminated with a vote of thanks to the chair.

BULLETIN
OF THE
SOUTH INDIAN MEDICAL UNION.

JULY 1930.

WORK AHEAD OF US.*

By Dr. M. Vijayaraghavalu,
B.A., M.B., C.M.,
Madras.

In treating of the 'WORK AHEAD OF US,' I shall but briefly dwell upon the important lines along which our work should be carried on, as I do not want to inflict you with long harangues. But before proceeding with the discussion of the subject I would like to clarify our position. Two resolutions of the Union go a long way to define our position. I congratulate the Union for passing these two resolutions. The one is that the membership of the Union be restricted to Independent Medical Practitioners. It has been my earnest conviction that the *interests of the helpless Independent Practitioners are bound to clash with those of Service men.* That is why I along with others started the Independents' Association long years ago; but unfortunately it was killed by kind friends. And that is why I did not join this Union, till I came to know but recently that Service men are no longer allowed to be members of it. That is why I strenuously upheld the view at the preliminary meeting held in the Madras Congress Pandal, to keep clear of the service men. But yet I find a few names of service men among the list of members. I am not surprised at it, as membership in associations comes in handy during election times. The Union should lose no time to set its face sternly against such manouveres. Such

an attitude is derogatory to the interests of the Union. In holding the view I do, I am not to be taken to be unfriendly to service men. I have no mean number of valuable friends in the Services but I am not for compromising the interests of Independent practitioners on that score. The resolution to keep out service men has gone a long way in purging the Union from the medley it was from its very inception. I fervently hope that the anomaly would be ended in the very near future and that the Union would cease to be a hotch-potch.

But who are the *Independent* medical men? They are those who depend solely on private practice from the very beginning of their professional career, and also those in practice for a longer period than in service, for it takes time to wean one of one's acquired habits and ideals. A man ceasing after long to be a service man and entering practice only to trade on past official status, like the fly on the wheel, and so to handicap private men in the eyes of the indiscriminating public should not be received straight with extended arms by the Union. He should get absolved from service taint and habits. After all habit is second nature. Nor could a private man accepting service be seen out of the association till he has lost all traces of the traditions of private practice by having been in service for a longer period than in practice.

The other resolution of the Union in regard to the decision of the General Medical Council of Great Britain, can be well deemed to be at once prudent and manly, from the view point of Independent men. If you had the service men, you could not have taken the wise step, you did take, of letting severely alone the General Medical Council, with its suicidal decisions. I am proud of the members of the Union for their resolution, so utterly

*An address delivered before the South Indian Medical Union, Madras.

different from the ones passed by the various medical associations, throughout the land. We, Independent Medical men, have nothing to lose thereby, but on the other hand have everything to gain by it.

Medical men could be viewed to belong to one of two classes—(1) those to whom Mammon is God and (2) those to whom Mammon is no God. All teachers of religious thought as well as wise men of all ages and lands repeatedly enjoined people not to worship Mammon. The extent one deifies Mammon is the measure of his unhappiness. You can depend on this truism. Our profession affords us every opportunity to lead a good life, provided we co-operate to effect mutual help and cease to trample down one another's interests. It is vastly much better to be altruistic and sympathetic to our fellow-sufferers, and so to earn only a decent livelihood, and to train our children to be diligent and truthful, than to amass, by hook or crook, all the wealth we can, with the dream of founding a family which must perforce consist of children ready to squander the wealth for which they have not striven. There is hardly any instinct or faculty in us that has not its own corruption. For example, instinct to help our fellow-sufferers is a noble one; but tinge it with greed, it becomes a woeful moral disease only to land us in misery sooner or later. In both Service and Practice one can see types of both these groups. It should be the honest endeavour of every medical man to aim at the second ideal of altruism and at the correct bringing up of their children, resisting all temptations to allow themselves to be carried down by the demoralising tendencies innate in all private practice alike, be it of medicine, of law or of anything else. Should this goal be steadfastly kept in view, by private men, all avarice and all hankering for Service would vanish. As such it

would be magnanimous of those who have made a name in the profession, to practise only for a part of the day and to attempt to the training of their children during the rest of the day, instead of even resorting to clubs which are anti social institutions. I say magnanimous, because, it affords opportunities to juniors to build up their practice only to relinquish it in part in the fulness of time. The other materialistic aim of life is one of the undesirable changes unconsciously wrought upon the meek and charity-loving Oriental by the Mammon worshipping European. This pernicious view of life ushers in competition, the essence of European life, in the place of co-operation or mutual help, the germ of Oriental life. Should the right view of life be held by one and all of private men, all nefarious methods adopted by the unscrupulous to get on at the expense of their fellow practitioners and juniors would find no suitable soil to strike root and much less to thrive and to last. Then and then only would all practitioners be happy and feel fraternal to one another.

Our profession has some unique features which are highly commendable. It is universally held to be noble in that its aim is to assuage suffering and to prolong life. This feature of it pales into insignificance before another trait of it. This characteristic is that ours is the only profession that is suicidal. While the other professions do not endeavour to annihilate the opportunities for their need to exist, ours makes every determined effort to abolish the need for the existence of medical men by advocating preventive measures on all hands and at all times. The meanest of us never fails to achieve this end.

On this basis of what the Union or rather the Association should be, and of what the aims of private medical men ought legitimately to be I shall proceed to sketch the 'WORK AHEAD OF US.'

The foremost task to be undertaken is to end the unseemly rivalry between servicemen and private practitioners. This arises from manning hospitals with stipendiary medical men, who have to care for as many as one hundred or more patients. It entails too much work, on the attending physician or surgeon, deprives the poor sufferer all the exclusive attention his complaint demands, and throws a heavy burden on the poor tax-payer. It affords ample facilities for the unscrupulous among the service men to under-sell medical help, not out of altruistic motives but for personal gain. And when the private men who are in no way helped to build up their practice but are banned from discharging functions necessitated by the professions, such as the granting of certificates, and are otherwise looked down by those in authoritative service, notwithstanding that the people's Ministers drawn from non-officials are in charge of the medical portfolio, and when private men are not shown the common courtesy due to fellow professionals the gulf between the service men and independent practitioners widens to become unfordable. The only solution is to do away with one of the groups. The independent men are indispensable to the country at large, and there is rightly a growing demand for them though not from discrimination of the people but from sheer necessity. Whereas there is an almost cast iron limit to the number of service men, for financial reasons no such handicap is present in employing private practitioners. Hence in the interest of the Public the cadre of service men should be speedily abolished except for certain medicolegal duties, and private medical men of some standing in the profession should be freely engaged to care for a limited number, say 10 or 12, of hospital patients. All Municipal, District Board and Local Fund Medical institutions should be left to be worked

by Independent Medical Men practising in the locality, dividing the entire work among a sufficiently large number of them. This imperative reform, would lighten the burden of the taxpayer, afford opportunities for medical men to turn out better work, especially when the cases given to each particular attendant form a special class of disease, insure vastly better help to patients, and end all bitterness and ill-feeling among the different members of the Profession. The Union should vigorously agitate to bring about this change, and when this happy reformation is brought about two things ought to be immediately set on foot—(1) the considerable lowering of the scale of fees to be charged in private practice and (2) the restriction of owning chemist's business exclusively to qualified Chemists and Druggists.

There is yet the complaint of L.M.P.'s that they are branded for life as irrevocable inferiors to graduates. No two traits can be stated to be inseparably linked in this world. So capability and education are not necessary concomitants. The only legitimate solution of this problem is to select a certain number of capable L.M.P.'s for hospital practice recognising only two classes of hospital practitioners, without slavish heed to their relative qualifications.

The condition of Rural Medical Practitioners is deplorable. This is another ill-worked institution, deserving to be ended summarily. In lieu, there should be maintained a dispensary with a few beds to be within three miles reach of every villager, and worked by hospital practitioners freed from the direct control of local bodies providing the necessary funds. The requisite funds for the maintenance of Rural Dispensaries could be found from the part of the salary allotted for the cadre of service men, recommended to be abolished. These three reforms (1) the

abolition of service cadre, (2) the selection of hospital and dispensary practitioners from among the independent men and (3) the maintenance of dispensaries with a few beds in rural areas would ensure perfect harmony and good feeling among the allopathic practitioners.

To standardise medical education and to safe-guard against malpractices, there should be a General Medical Council for India, with absolutely no dependence on any similar foreign institution. There should be a number of medical colleges with clinical hospitals attached to them to train graduates, and a larger number of medical institutions at convenient centres to train students for diplomas. The chairs in the colleges and institutions should be filled only by such as have shown original capacity in the particular subjects. They should no longer be made to be *jobberies* to provide lucrative places for favoured ones in the services, as they are at present.

Lastly, there are the non-allopathic men to be reckoned with. It is time to constitute a respectable and responsible board to examine candidates of the different systems and to register such of those as may found to be safe to be entrusted with the care of human lives. Public funds need not be wasted over opening and maintaining schools for training students in the different systems of medicine. But vigorous and exhaustive research should be set on foot employing full-timed capable medical men to bring to light all effective drugs from the lore of the different systems, and to interpret in scientific language any valuable methods of examination and diagnosis that may belong to them. For there is no denying the fact that there are some unparalleled drugs in the Indian systems and that the *Pulse examination* of the Hindu system and the *Urine inspection* of

the Unani system are highly informing. It is deplorable that the two attempts made by the Government to unearth valuable drugs and methods have signally failed, once through short-sightedness and again through over-patriotism. Such effective drugs and valuable methods should be incorporated into allopathic system to let the world at large as well to adopt them.

So, to materially benefit the profession, the following innovations have to be introduced: (1) the General Medical Council for India, (2) the institution of capable chairs in the colleges and schools, (3) the interim registration of practitioners belonging to the other systems, and (4) the starting of a cadre for research into the lore of the other systems.

These reforms and innovations can be brought into operation only by the vigorous agitation to be raised by independent medical men. Till then certain interim measures have to be adopted to raise the efficiency of independent medical men. The foremost of our needs is a good library. Medical art is fast progressing along different lines. Chemistry and Physics have taken long strides. Physiology has almost completely changed from what it was a few decades ago. Pharmacology and Bacteriology have developed themselves into separate sciences. Bio-chemistry, Radiology and Organotherapy have come into existence. Many new methods of diagnosis are being added to our technique. In fact, there is hardly a subject included in the curriculum of medical studies that has not changed so vastly as to create a demand for up-to-date information. Independent medical men are unjustly denied access to the Government Institutional Libraries. The only library available to them is the Madras University Library, which contains very few medical books, mostly out of date. Hence we urgently require a library

containing standard and up-to-date books and bound volumes of some useful medical journals. We should subscribe for all leading medical journals. So we should all contribute liberally to fit up a decent library. The next desideratum is to maintain a supply of important and useful surgical appliances and instruments such as, oxygen drums and the gas and oxygen inhaler. A small laboratory with chemical appliances and reagents to carry on common tests and estimations is also highly desirable. We may profitably secure the services of an exclusively practical Bacteriologist, to examine our specimens instead of having to look to the Government Institute or to the practising Bacteriologists. We will do well to turn our attention to provide for these crying needs. Our Bulletin may well be made a Quarterly publication. Its Board of management should publish only what are really original or illuminating articles but not synopses and extracts from already published books and journals. I am very pleased to observe that our Bulletin discountenances advertisements of trash remedies, unlike the bulk of medical journals which are maintained only to pocket advertisement charges, but Homer too nods at times. The Bulletin may include a good summary of the important articles in the various leading journals. Much printing charges and the time of practitioners could be saved by a careful scrutiny of the articles to be published in the journal. When such conveniences as a Library, leading Journals, Instruments and Laboratory are provided and the Bulletin conducted along useful and economical lines, I am positively certain that the Union would attract a larger number of members both from the mofussil and the city. Lastly, there is nothing like having a permanent abode for the association, so that members may have opportunities of meeting each other. Periodical "At Home"

parties should be given by the seniors, to which all medical men whether they are service or private men may be invited. I have no faith in propaganda work. To join an association is an idea, and we cannot propagate an idea but only a faith or doctrine or practice that requires a change of life. So if we desire others to join the society, we should hold out promise of benefits and conveniences.

In the main, we should on no account lose sight of the essential and imperative reform to abolish all Services.

These, Gentlemen, are the few suggestions that I offer to you to make the Union a real boon to the medical men in particular and to the public at large.

SOME RECENT ADVANCES IN THERAPEUTICS.*

By A. Viswanathan, L.M.P.,
Madras.

It is not possible to compress the whole range of modern advances in therapeutics within the brief compass of an evening address. I shall therefore confine myself to remarks on some of the outstanding therapeutical drugs and methods which recent scientific researches have put into the hands of the general practitioners who are the real judges of their clinical utility and their limitations.

The number of proprietary and quasi-proprietary drugs are legion. Some of them can easily form a romantic chapter in the experimental investigation of drugs, as for example, Salvarsan and Neo-salvarsan; Plasmochin and Plasmochin compound; Insulin and Liver extract; Ureastibamine and its later day rivals Stibu-

* Read at the meeting of the South Indian Medical Union on 28th July 1930.

ria and Neostibosan; acridin dyes such as Acriflavin and Mercurochrome. Most of the other drugs are boomed into the market by insidious advertisements in medical journals and by agents who with half knowledge of medical science and drugs depict their preparations as something like a panacea. It is unfortunate and I believe I speak the truth that most of the practitioners' Vade-mecum of drugs is the advertising literature which every mail brings to them. It is still more unfortunate that some of them rush to print vaunting the virtues of this drug and that drug and claiming a cure of their few cases by the administration of those drugs. This generalisation from a few particulars is one of the fallacies which lead to confusion of thought and wrong application of drugs. The pages of Indian medical journals are replete with such unsound generalisations not based on extensive experience but on single cases and uncorroborated by other workers in the field. The mechanism of cure is so complex that we will be lulling ourselves to a sense of false security if we pin our faith on the supremacy of drugs alone.

Other causes of irrational therapy are chiefly the defective training in Pharmacology in our medical schools and colleges and the absence of a central organisation in therapeutic research which could conduct scientific investigation and condemn the spurious remedies which are flooding the market. The medical students are taught the old-fashioned *materia-medica* on its theoretical side during their second and third years when their mind is not properly ready with the basic facts of anatomy and physiology and when they do not know the names of diseases not to say of symptomatology, pathogenesis and aetiology, and that by *professors who can in no sense be*

called experts in the experimental and the laboratory side of pharmacology. Apart from the Calcutta School of Tropical Medicine there is no other organisation directing its activities on this side of the subject. Even that school has no legal powers to advise the authorities to control the dumping of spurious drugs and patents from the foreign market. These defects are easier said than remedied; and I cannot visualise in the near future any possibility of real improvement unless a national system of government comes into force which would care for the real advancement of medicine in India. If one turns the pages of the Japanese Medical Times, the only medical daily in the world, he will be astonished to read the wonderful researches that are going on in that country. In passing it may be mentioned that there is not a single advertisement of foreign drugs of European manufacture in that journal. But Japan is not India. We are at the mercy of a miniature bureaucracy in the British Medical Council aided and abetted by its bigger brother, the British bureaucracy in India. I am convinced—more than convinced—that the question of genuine attention towards medical problems and progress in India is involved in the general question of Indian political evolution. Till that time we have to be dependent on foreign researches supplemented by a little of our own whenever and wherever possible.

PLASMOCHIN IN MALARIA.

Since the introduction of cinchona 250 years ago—in the treatment of malaria,—modern chemistry and pharmacology have demonstrated that the beneficial effects of the cinchona bark are due to its alkaloids, quinine and quinidin. Parasitologists have proved that when a sufficient amount of these alkaloids is present in the blood it

makes an unhealthy environment to the malarial plasmodium. Though the immense therapeutic value of quinine and its salts in malaria is securely established it is as yet very little understood how it acts: whether by phagocytosis or by direct action on the plasmodium or by both. There are however certain disadvantages in quinine therapy in malaria which ought to be faced and solution sought. They are: (1) It is very bitter to the taste and a large majority of patients are reluctant to take it unless given in the form of pills or as Ethyl carbonate of quinine (Euquinine) which method is often ineffective. (2) There are some quinine resisting cases which most of us must have experienced in our practice. This was tried to be overcome by Col. Sinton, V.C., (Director of Malarial Survey in India) by a prior administration of alkalies in the belief that quinine acts better in an alkaline medium. Though this has improved the situation—and is at present the standard treatment—it has not yet solved the problem of resisting cases. (3) Quinine is not a safe remedy to be administered in the malaria of pregnancy and I have had a little more than dozen tragedies where the administration of quinine precipitated abortion or miscarriage. (4) Quinine is practically useless against gametes and gametocytes which is probably a factor in the causation of relapses.

Efforts were therefore made to discover some chemo-therapeutic agent which would equal quinine without its disadvantages. This culminated in the discovery of a substance known as plasmochin at the end of 1926 in the ELBERFIELD FACTORY in Germany, a big centre for synthetic chemistry and dyes. It was at first tried in induced malaria in general paralysis and later Professor Muhlen of Hamburg applied it to cases of naturally acquired malaria and he

established that Plasmochin * in combination with quinine is very effective in the destruction of gametes as well as the schizonts. Manson-Bahr is positive in the opinion that plasmochin compound exerts a selective action on the gametocytes of subtertian and benign tertian malaria and contends that a drug which acts upon the crescents which are admittedly the most resisting form of human malaria is an improvement over quinine. This appears to be in general accord with the opinions expressed by other workers in the field. But Sir Ronald Ross strikes a discordant note that neither plasmochin nor mercurochrome can be regarded as having more than temporary effect in malignant tertian malaria. In my series of 80 cases of malaria, chiefly benign and malignant tertian infections, 30 were put on quinine and the rest on plasmochin compound. I found that the latter drug was superior to the former in that there was a comparatively rapid disappearance of clinical symptoms and of the M.P. from the peripheral circulation. Though I could not follow up the cases to study the question of relapse, I was led to believe that relapses must have been less frequent as the gametocytes originally observed in some of the cases were absent from the peripheral circulation. I did not observe any untoward toxic symptoms arising out of the use of plasmochin as has been pointed out by some other observers. It is however safe from our point of view not to underate any toxic symptoms but use the drug with discretion and discrimi-

* Plasmochin is an alkalamino-6-methoxy quinoline salt obtained by synthetic methods. It is a tasteless light yellow finely granular powder easily soluble in water, less so in water and is converted by the hydrochloric acid of the stomach into hydrochloride of plasmochin. It is put up in tabloids each weighing about $\frac{1}{2}$ of a grain and one tabloid is given three times a day with occasional intervals. It is also put up in ampoules for injection. Plasmochin Co. contains quinine in addition.

nation. I have used plasmochin and plasmochin injections in the treatment of malaria in pregnant women and I am gratified to find that unlike quinine it does not produce abortion or miscarriage. Though my cases were only a few which could not warrant an authoritative statement yet I have no doubt in my mind that it deserves a wider trial, if at least to know that is comparatively safer than quinine. There is also another field for plasmochin in black-water fever. If the theory that black-water fever is due—as Donovan puts—to “an as yet undifferentiated species of *Plasmodium*” or as I believe it, to be due to excessive hæmolytic brought about by virulent strains of *Plasmodia* not commonly met with plasmochin is well worth a trial in this malady.

INSULIN IN DIABETIC AND NON-DIABETIC AFFECTIONS.*

The discovery of Insulin by Banting, an extract of the active principle of the internal secretion of the islets of Langerhans of the pancreas from the slaughter house animals form one of the sensational advances in the treatment of diabetes mellitus. Though experience with this product has made it clear that it can in no sense be called a specific yet it has opened up a new vista of attacking the disease and its complications. Its ability to restore the carbohydrate tolerance of the patient, its influence in utilising the daily waste of glucose in the diabetic to the advantage of body metabolism, its efficiency in preventing the formation of ketone bodies—the

* Insulin is marketed in sterile vials of 5 or more C. C.—each C. C. containing 10 or 20 units. One unit of insulin when injected subcutaneously into a diabetic patient will enable him to utilise 1.5 to 2 grammes of glucose. The dosage of insulin varies according to the severity of glycosuria and carbohydrate intolerance. Frequent urinary and blood estimation of sugar is necessary. The dosage must be increased gradually and patient must be well guarded against hypoglycæmia.

result of imperfect metabolism of fat; its contribution towards a reasonable solution of many surgical risks attendant in the diabetics are some of the outstanding values of insulin. How insulin acts is still unknown and there are many romantic theories based on animal experiments, none of which have been proved or even partially established. Hypoglycæmia is one of the chief dangers in the excessive or indiscriminate use of insulin. It manifests itself when mild, in the form of sweating and pallor, dizziness and tremor of the hands; when severe, in coma, epileptiform fits and even delirium. Mild attacks are relieved by a few lumps of cane sugar while; in severe attack, 15 minims of adrenalin hydrochloride (1 in 1000) or 1 c. c. pituitrin will restore the patient to consciousness within 10 minutes; in desperate cases 200 c. c. of a 5% solution of glucose or dextrose will work like a miracle.

No sooner insulin was established on a firm foundation than attempts to manufacture insulin substitutes—synthetic as well as organic—were made by continental workers; the chief reason why substitutes for insulin have been and are being sought is because it is necessary to administer insulin hypodermically. *Synthalin* and *Myrtillin* which can be administered orally are the names of some of the substitutes which German scientists lay claim to insulin-like qualities. They have not as yet been introduced into India and we therefore cannot talk with the authority of experience on these products. It is well however for us to take a most conservative attitude towards these substitutes as some of these apparently sensational discoveries may pass into the limbo of obscurity in course of time.

Insulin in non-diabetic affections has attracted the attention of other workers

* Synthalin and Synthalin B, are available at all Schering Depots in India.—B. ED.

and has opened up a useful field of therapy in heterogenous conditions such as emaciation, chloroform poisoning, shock and collapse, toxæmia of pregnancy—especially hyperemesis and eclampsia—cachexia of cancer, mild attacks of pancreatitis, hepatic insufficiency, sterility of a diabetic woman, alimentary intoxication, in a word, in conditions which are generally regarded as pathologic manifestations of carbohydrate metabolism. Intolerance to insulin and hypoglycæmia must always be borne in mind and it is well to give a certain amount of glucose or cane sugar during the periods of treatment as a prophylactic against hypoglycæmia in those type of maladies without the taint of glycosuria.

BISMUTH IN SYPHILIS.

The ideal remedy has not nearly been reached and probably never will be, because the pathological process of syphilis prohibit the resolution of connective tissue or complete restoration of injured cells; and the history of the ever-changing therapy of syphilis corroborates the truth of this observation. The use of mercury began from the year 1497; unfortunately its opponents held the field for 300 years. During this period decoction of cinchona bark, sarsaparilla, guaiacum and even opium were freely used. Iodine was introduced in the early part of the 19th century. In the year 1908 Paul Ehrlich discovered the now famous Salvarsan and Neo-salvarsan group of arsenical remedies. To-day mercury, iodine and salvarsan constitute the standard therapy of syphilis which is as yet unsurpassed. Yet there remains certain percentage of persons who are uncured as evidenced by positive Wasserman and by recurrence of symptoms. Bismuth, as an anti-syphilitic remedy was introduced in the year 1922 and since that time various soluble and insoluble preparations of Bismuth were used as an

active spirochaetocide. The claims made for Bismuth as against Mercury are:

1. That it is more rapid in its destructive action on the spirochaeta *Pallida in vivo* than mercury.
2. That it influences surface lesions of syphilis more rapidly than mercury.
3. That it gives more negative Wasserman reactions than mercury.
4. That it is valuable in cases where there is intolerance to mercury and arsenic.
5. That it is of some value in neuro-syphilis as it seems capable of passing through Corpus Choroideum and is soon found in the spinal fluid.

It must be mentioned that Bismuth cannot replace salvarsan and iodide; and that its superiority is only over mercury; that it is only a useful and necessary adjunct in the treatment of syphilis. The controversy regarding the superiority of the insoluble preparation of Bismuth over the soluble one is still acute and the opinion of eminent men is equally divided. I personally have come to prefer soluble preparations such as Benzo-Bismuth (A. F. D.) after a long use of insoluble preparations such as Trepol, Neo-Trepol, Bismo-stab, Bismuth Salicylas suspension, and Hypoloid Bismuth, which are messy from the point of view of the technique of injections and which uniformly give pain and post-injection indurations. It is said that insoluble preparations are less toxic than the soluble variety but my experience with Benzo-Bismuth is not in accordance with this view and even in susceptible cases I noticed no more alarming symptoms than excessive salivation and the appearance of white lines in the gums.

MALARIAL THERAPY IN NEURO-SYPHILIS.

The treatment of Neuro-Syphilis still remains a baffling problem. Salvarsanized serum, silver-salvarsan have all been tried but in vain. Bismuth was given its chance and was found wanting. Promising results obtained by the induction of artificial malaria in cases of General Paresis prompted a trial of this method in para-syphilis where the cerebrospinal fluid was morbid. There is a daily growing accumulation of favourable reports but unfortunately I had no chance to gain any personal experience on the value of this method. It may be noted in this connection the broad fact that nerve syphilis is less common in India where malaria is ubiquitous than in temperate climates where it is uncommon. This method of treatment is of the nature of the Proteinshock therapy. It is done as follows: Benign Tertian Malarial Blood is generally used either by direct infection by mosquitoes or more commonly by a subcutaneous inoculation of the serum from a malarial patient. Eight attacks are usually sufficient at the end of which favourable results are seen.

Recently Swiss workers have been trying an intramuscular injection of a compound called *Sulfosin* (5% sulfurated olive oil) which gives malarial-like paroxysms of fever with ultimate benefit to the para-syphilitics. This has been favourably reviewed by the British medical press; but the drug is not yet available for general use.

LIVER EXTRACT IN PERNICIOUS ANAEMIA.

Close on the heels of the discovery of insulin by Banting, Minot and Murphy of Boston published their first report on "The treatment of pernicious anaemia by a special diet" in 1926. The essential part in their dietary

schedule is the daily administration of 100 to 200 grammes of cooked liver along with raw vegetables. In his series of 125 cases, observed over a period of one to three years, he found in every case where and when Liver diet was tolerated regeneration of Red Cells and Haemoglobin along with the recovery of general health. Whether the therapeutic effect was due to some unknown active principle in the liver substance or to its iron and protein contents or to both was investigated by Cohen and he was able to extract an active principle, soluble in water, precipitated in alcohol and insoluble in ether and free from Iron, Protein, Carbohydrates and Lipoids. This extract has been so favourably received by the Medical Press that manufacturing chemists have prepared this and offer for sale in powder and in concentrated liquid form. These preparations however are so costly * that the patients coming from middle and poorer classes cannot afford to pay for a complete course of treatment while the richer class who could afford do not present many cases of Pernicious Anaemia. I have no experience of this liver extract except that I have been prescribing them in anaemia of all sorts. I have however used cooked Goat's Liver in two girls—both Hospital patients—in 1927. One of them was a Muslim Girl of a poor family about 18 years old who had amenorrhoea, imperfect development of the breast with other clinical symptoms of anaemia, together with a typical blood picture of pernicious anaemia. She tolerated the liver diet very well and the response was something magical. Within three months the breasts began to develop, menstruation returned, palpitation, breathlessness, numbness and cold feeling of extremities disappeared, pallor of the

* *Hepalix* and *Levosplen* (Pereira) are identical products made in Madras, and can be had at comparatively cheaper rates—B. Ep.

body was rapidly disappearing and the blood count showed an increase of four millions R.B.C., megalocytes disappeared from the peripheral blood, and the colour index and hæmoglobin percentage returned to very nearly normal. No other medical treatment was given to her except small doses of dilute Hydrochloric Acid for a month and a half occasionally changing it to Liq. Arsenicalis Hydrochloricus. She was discharged from the hospital after four months of treatment and I was in touch with her for nearly one year after her discharge during which period I noticed no relapse.

I consider liver therapy, judging it from the reported cases and from a little experience of mine, limited as it is, as a hopeful remedy in pernicious anæmia, a disease which has up till now resisted many methods of treatment such as vaccines, iron, arsenic, etc. Incidentally it has to be mentioned that the result of the treatment of pernicious anæmia has changed the outlook on the causation of this disease which is hitherto believed to be due to intoxication, alimentary and otherwise.

KURCHI IN AMOEBIC DYSENTERY.

Major Chopra of the Tropical School of Medicine in a paper under the caption "Observations on the Pharmacological action of Conessine, the alkaloid of *Holarrhena Anti-dysenterica*" traces the history of the use of Kurchi, in the form of the decoction of its bark, to ancient times and isolation of its active principle Conessine to Haiens (1858) and later to Ghosh and Datta (1880). When the usefulness of Kurchi was recognised, a standardised extract was prepared and was put to a large clinical use by the workers in the Calcutta Tropical School of Medicine with as good results as by emetine. In the year 1927 hypodermic medication of its alkaloid Conessine hydrochloride

was tried by the same set of workers but not with encouraging results. I cannot do better than summarise Col. Chopra's observations on this alkaloid.

1. It kills the *Entamoeba* enshrined in mucus flakes in dilutions of 1 in 280,000 in 8 minutes in an alkaline medium and in 18 minutes in the absence of an alkali. Emetine under similar conditions kills *E. Histolytica* in dilutions of 1 in 200,000 but in the absence of alkalies it has no effect.

2. Conessine salts can be given subcutaneously and intramuscularly without necrosis of the tissues.

3. The alkaloid has an inhibiting action on the activity of the digestive ferments such as ptyalin, pepsin, and trypsin.

4. Conessine cannot be given intravenously as it produces cardiac irregularity, increase of diastolic pause, heart block, and a persistent fall of blood pressure. These effects are not noticed when given intramuscularly or subcutaneously.

It has been observed by Knowles that the oral administration of the whole extract of kurchi or the injection of the total alkaloids of kurchi is more effective than hypodermic medication of conessine. It must be noted that kurchi is no good in amoebic hepatitis or abscess and emetine alone is our main-stay in these conditions.

The treatment of intestinal amoebiasis is one of the thorny problems in tropical medicine. Its history is replete with instances of shifting predominance of various drugs. Ipecacuanha cum opium was in full swing till the beginning of the present century and was used rather indiscriminately and with many fatal results. I well remember a case in 1920. While working at the Bassein civil hospital in charge of the dysentery

ward I was asked by my Civil Surgeon to try this ipecacuanha treatment in a few cases though the general routine at that time in that hospital was aperients, emetine and bismuth and soda powders. He believed that the condemnation of this method as against the rising wave of popularity in favour of emetine was mostly unjustified and unjustifiable. 30 grains of Ipecac in 2 divided doses was administered to a robust patient after a preliminary dose of Tr. opium ms. 20. Within half an hour he developed vomiting and in an hour distressing hiccough started which carried away the patient after about 4 or 5 hours. The Civil Surgeon expressed a note of regret next morning when I reported this incident; and that was the first and the last time I used this treatment in dysentery.

Next came the De-emetinised Ipecacuanha, the non-nauseating substitute of powdered Ipecac. It had a period of transient therapeutic greatness.

Then came Emetine hydrochloride isolated from Ipecac first by Pelletier in 1817 and later by others, introduced into India and tried by Leonard Rogers in 1912 and 1913. It came to be extensively used in almost all the Indian hospitals and in the late war. The clinical results in acute cases were really brilliant, the patient passing from a state of insufferable agony of tenesmus, gripping and frequent defaecation to one of comparative comfort within 48 hours.

While emetine gives a tremendous clinical relief in almost all acute cases it fails however to eradicate the disease and completely fails to kill the amoebic cysts. Relapses are therefore not uncommon and the problem of complete cure of dysentery which could be endorsed by a complete sterilisation of the intestinal amoeba still remains unsolved.

Du Mez in 1915 introduced Emetine Bismuth Iodide* in the carrier condition of amoebic dysentery. It is a costly and nauseating drug and not well tolerated by many patients. Dobell claims a complete cure in about 50% of carrier cases.

Mulhens in 1921 began to use Yatren orally and by rectal injections. Mansen-Bahr speaks very highly of this drug.

Marchoux in 1923 first used stovarsol in the treatment of amoebiasis; it was at first introduced in 1922 by Fourneau and Levaditi in the treatment of spirochaetal infections. This drug if used after a complete course of emetine and bismuth gives very good results, as destroyers of amoebic cysts to an extent but mostly as an haemetinic.

Kurchi is to day the last say on this subject and is the present competitor in dysentery against emetine.

The very promiscuity of drugs is a strong proof that none of them is a perfect remedy; and the *Therapia Sterilans Magna* is still very far from being realised in the treatment of this disease so widely prevalent in India but so easily trifled with by patients after the disappearance of severe clinical symptoms by a too brief course of treatment.

BACTERIO-PHAGE

THERAPY.

Bacterio-phage therapy is still in its infancy and Prof. "De Herelle's theory and application of bacterio-phage in the prevention and the treatment of

* E. B. I. is given in a daily dose of 3 or 4 grains up to 40 grains, 10 minims of Chlorodyne $\frac{1}{2}$ an hour previously is desirable to prevent nausea and vomiting.

† Three interrupted courses of Yatren seem necessary in severe cases. A course consists of 10 to 15 grains a day for ten days, supplemented, if necessary by a rectal injection of 200 c.c. of a 2.5 % solution.

intestinal infections such as bacillary dysentery, typhoid and cholera is a marvellous piece of human ingenuity in mobilising Bacteria's natural enemies against the invading host of pathogenic intestinal bacteria. Bacterio-phage, to define it shortly, is a phenomenon of transmissible bacterial lysis. If to a broth culture of typhoid, dysentery or cholera is added a drop of the filtered emulsion of the stool from a patient convalescent from any of these infections, there is a complete lysis of the bacterial culture in a few hours. A drop of this lysed culture of the bacilli is added to another pure culture of the bacilli. Lysis again takes place exactly as in the first. Thus the process can be repeated *ad nauseum* without impairing the effectiveness of bacterial lysis. This phenomenon is attributed by De Herelle to the action of an ultra-microscopic parasite of bacteria and he has named it the Bacterio-phage. Other workers believe that it is not caused by a living organism but by an autolytic enzyme produced by the bacteria.

The growth and effectiveness of the bacterio phage is directly proportional to the number and virulence of the intestinal bacteria. In the attempts to parasitize the bacteria the bacterio-phage may fail to adapt itself quickly, the intestinal infection takes the upper hand with the result that the patient dies. Or the bacterio-phage may multiply so rapidly that it may destroy the offending bacteria with the result that the patient recovers. Or it may not completely destroy with the result that it modifies the course of the disease and make the organisms a-virulent. De Herelle maintains that the cause—the chief cause—of the cessation of the epidemic or modification of its virulence is due to the preponderating influence of the multiplying bacterio-phage.

These bacterio-phages are therefore exploited in the prevention and the

cure of the disease such as bacillary dysentery, typhoid and cholera. De Herelle strongly condemns the permanganisation of water as it destroys the bacterio-phages and instead suggests treatment of water with a strong dose of cultivated bacterio-phages during an epidemic of these diseases. For curative purposes 2 of more c.c. of a potent culture or bacterio-phage is administered orally in an empty stomach and *no intestinal antiseptics must be given with it or subsequently*. Let me quote De Herelle; "Bacterio-phage treatment in the intestinal diseases of man such as typhoid, cholera and dysentery is more effective than the present accepted methods of treatment. 2 c.c. of a potent culture of that particular bacterio-phage is given by mouth and in every case all symptoms definitely disappeared within 24 hours whatever the gravity might be. Since 1919 this treatment is widely employed in Brazil and Soudan where thousands of cases have been treated and my first statement has been entirely confirmed. In the course of 1927, thanks to the Indian Research Association and with the collaboration of Major Malone and Dr. Lahiri, I have been able to make extensive researches in relation to cholera. In the great majority of cases the result of bacterio-phage treatment has been effective. But weak cultures are entirely useless for purposes of treatment."

URINARY ANTISEPTICS.

The disinfection of urinary tract by means of drugs is still unsatisfactory. Copaiba, though time-honoured, does more harm than good by inducing renal damage. I have ceased using this drug for the last six years. Sandalwood, cubeb, etc., are too weak and cannot be relied upon. Hexamine and helmitol—the latter of which can be used singly without the aid of acid

sodium phosphate—are to-day acclaimed on all hands as reliable antiseptics of the urinary tract ; but their prolonged administration causes cystitis and in some cases even hæmaturia when their use has to be suspended. Caprokol, otherwise known as Hexo-resorcinol, has been introduced by Veader Leonard in the year 1924, who claims it as an ideal urinary antiseptic. It is said that it sterilises urine of strepto, staphylo and gono cocci in a short period of two weeks and of bacillus coli in about a month. Alkalies and excessive drinking of water prejudices its effectiveness. I have used this drug in many cases of urinary infections, especially in acute cystitis and I am unable to substantiate all the claims of those who extol it. In one case of acute cystitis I gave caprokol alone for a month and a half at the rate of 5 grains a day which cost the patient Rs. 150 for the value of medicine alone. There was no relief of clinical symptoms for a long time, the patient still suffering from strangury and frequent micturition of varying severity. The urine was submitted to a periodical examination with positive results even at the end of treatment. This is in strong contrast to results obtained by the treatment with alkalies and later when acute symptoms subsided, with helmitol and cystic lavage with saline. In a few cases I tried oral acriflavine with massive doses of potassium citras and the clinical results were very encouraging and the urine after treatment carried less number of infecting organisms. I have also tried intravenous acriflavine (175 grs. in 10 c.c. of distilled water) in some cases of acute and chronic infections and the results are fairly satisfactory. 6 to 12 injections form a course of treatment and are given on alternate days. There was no reaction after injection and no untoward symptoms were observed by me.

VITAMINES.

Our present knowledge of vitamine is so confounding that, as Megaw tells, "we cannot see the woods for the trees". The naming of vitamins by letters such as A, B, C, D, E, F, is rather confusing and it would have been better if they had been named according to the action of that particular vitamine. It would be outside the province of this discourse if I were to dwell on the diseases caused by the deficiency of these vitamins. The treatment of rickets and osteomalacia has been made more effective by the introduction of irradiated Ergosterol but the use of cod-liver oil cannot be entirely given up. Polyneuritis resulting from the lack of Vitamine B. is treated by food cooked with unmilled rice, whole-meal bread and by extract of marmite. Jansen of Bavaria claims to have produced the Vitamine B. in the form of a crystallised hydrochloride and Eijkman of Japan confirms its purity. This has not yet been marketed for clinical use.

On the whole it can be stated frankly that vitamins are still elusive of chemical analysis and of chemical production. So far can be admitted, that they are essential for the growth and maintenance of life and their deficiency is manifested by the production of a definite pathological syndrome, the cure of which depends upon the exhibition of that particular vitamine containing food.

SOME OTHER NOTEWORTHY DRUG.

Extract of Kuth is well spoken of by Col. Chopra as an effective antispasmodic and he believes it is of great use in preventing or modifying a severe attack of asthmatic fits. The chief constituent of kuth is an essential oil; it is rapidly absorbed and is excreted into the lungs; during its

excretion it relaxes the bronchial muscles and exerts an expectorant action. It must be clearly understood—says Chopra—that it is not a specific for the disease and that the causal factors are to be carefully investigated and removed.

SANOCRYSIN.

Chemically known as Sodium auric thiosulphate, it was first introduced by Mollgard in the treatment of tuberculosis. Frimodt Moller of Madanapalle says "we who treat this disease and know how difficult it is to bring about a real amelioration in the more advanced stages are grateful for a new remedy which shows an improvement in about 50% of these cases. We believe therefore that the out-look in the treatment of tuberculosis is brighter and more promising than before." Severe reaction such as hyper-pyrexia, albuminuria, exanthemata, joint pains, vomiting, diarrhoea and focal reaction sometimes occur and Mollgard tries to combat them by a special anti-toxic serum, not however with much success. The reaction is much lessened by decreasing the dose beginning from 0.1 gm. and ending at 0.75 gm. with an average increase of 0.1 gm. per injection. Seven injections constitute a course and no second course is given until after a prolonged period of 3 or 4 months.

RECTAL INJECTION OF POTASSIUM PERMANGANATE SOLUTION IN PNEUMONIA.

This is being reported by the medical press as favouring reduction of fever, of restlessness and delirium and hastening speedy recovery. If at all it is used it must be used at the outset of the disease, and not as a last chance in desperate cases. It is not understood how it acts and its use is still therefore empirical; and like all empirical remedies it has to be based

on the solid rock of greater experience than is the case with this method at present.

TANNIC ACID IN BURNS AND SCALDS.

This is being reported as an enormous improvement over the older methods of treatment by picric acid and salines. Herzfeld (Practitioner, February 1929), claims that in his experience the percentage mortality has dropped from 38% to 9% and that this alone would justify its use. To be of benefit it must be applied within 12 hours after the accident before toxæmia sets in. Its application is painless; it prevents absorption and local sepsis; and it permits healing with minimum scar formation. How it acts is as follows: It produces a local coagulum over the raw surface and thus renders the products of the burns insoluble and incapable of absorption. Healing goes on undisturbed underneath the coagulum and once an effective coagulum is formed no further dressings are necessary. It is applied as 2.5% solution in distilled water and must be freshly prepared. In severe cases the usual treatment for shock and collapse must precede the application of this remedy.

I shall not dwell on the X-ray and radium therapy as I have no working knowledge of them. I shall leave it to those here who are qualified to speak on this subject.

ENDOCRINE THERAPY.

Of endocrine therapy I shall speak a word in general. It has not fulfilled the hopes it once raised in us. Para-thyroid in conditions where there is calcium deficiency has got a fair, though limited field of usefulness. The usefulness of pituitary extract is so well known that it will be superfluous for me to speak on that. Recent researchers

have recognised in the posterior lobe of the pituitary two distinct principles, oxytocic and oxypressin, the one affecting the uterus and mammary gland particularly, and the other affecting the blood pressure and the urinary out-put. The advantages of the pituitary extract of the posterior lobe deprived of its oxypressin principle will be obvious to all obstetricians who have to deal with post-partum hæmorrhage and eclampsia where the raising of the blood pressure, which will be the case if the whole posterior extract is used, is undesirable and unsafe. The administration of thyroid extract in myxœdema and cretinism is deservedly popular. The supra-renal extract in the form of Adrenalin hydrochloride is one of the brightest gems in the realm of therapeutics and its uses must be so well known to you that it would vain on my part to tell in any detail about it.

INTRA-VENOUS THERAPY.

A decade ago intra-venous administration of remedial agents was a dreaded ritual. To day it is a different story. I well remember the complicated salvarsan apparatus of my student days. To-day it is simplicity itself. We have gone further; the remedial agents that are introduced by the vein have increased in number and the increase is so enormous that one is justified in ascertaining and defining the real status of intra-venous therapy. One must realise the fact that the injection of any foreign substance straight into the human blood is ever a serious undertaking. There are conditions in which risks of intra-venous therapy will much outweigh the supposed advantages—and this is especially true of potent drugs such as antimony, soda salicylas, etc.

I shall relate to you an instructive incident of such a miscarriage. A

Civil Surgeon of eminence fancied that a combination of quinine-bi-hydrochlorid and antimony tartarate (10 grs. and $\frac{1}{2}$ gr. in 10. c.c. of distilled water to be injected intra-venously) is good for chronic malaria. He was so convinced of its usefulness that he asked one of his subordinates to try it in cases of chronic malaria among prisoners. It was given to 2 jailors and 4 prisoners. Unfortunately 2 prisoners died and the rest presented symptoms of poisoning. The Superintendent of the Jail—a non-medical man—thought it was a delinquency on the part of the S. A. S. and reported the matter to the police. A coroner's inquiry was held. The Civil Surgeon who was examined maintained that, though he had no fatal results with that remedy and though the S. A. S. was especially conversant with the technique of that injection, having worked under him at the civil hospital, the unhappy result must have been due to negligent weighing of drugs. The coroner's verdict was that the S. A. S. was rash and negligent and recommended a departmental punishment. The Inspector-General of Civil Hospitals prohibited that S. A. S. from giving any injections. When the affairs were standing thus I was posted to that Jail hospital as the First S. A. S. Going through the post-mortem notes and clinical history of those cases and being assured by my colleague that that he was careful in weighing the drugs I thought that the combination was wrong because it was chemically incompatible and that death and toxic symptoms were due to the formation of a new potent toxic compound, the result of an interaction between a base and an acid, as such are antimony tartarate and quinine-bi-hydrochlorid. I submitted a report to this effect to the higher authorities. The order against the S. A. S. was rescinded.

Secondly, there is a tendency among practitioners to resort to intra-venous

injections under conditions in which they are of dubious value. Thirdly, there are conditions where intra-venous injection is a risk but has to be done for the sake of probable advantages to the patient. Fourthly, there are indications where intra-venous injections of remedial agents are imperative and do relieve suffering and save life. In shock and collapse, toxæmia and hæmorrhage saline and glucose are of great value in restoring blood volume and overcoming dehydration. Severe acidosis is treated with great benefit by infusions of sodium bicarbonate, or glucose or both. Intra-venous insulin in diabetic coma has made it a less dreaded complication than before. Intra-venous quinine in malignant malaria is the only hope in that disease. Most of the antitoxic sera have to be administered by vein if used for curative purposes. Non specific proteins, to induce protein shock, are better administered by vein as in the case of typhoid vaccine in cases of arthritis. *Acrifalvine*, *mercurochrome*, *urotropine*, iodine are administered intra-venously to destroy the infecting organisms within the blood stream. In the aged and the arteriosclerotics, in those who are hypersensitive to proteins, and in those who possess drug idiosyncrasy, intra-venous injections are better avoided. The injection must be given, slowly—1 c. c. per minute—and in using such irritant drugs such as quinine, salvarsan, antimony tartarate, iodine, etc., it is better to wash out the walls of the vein of any remnants of the medicine by drawing 1 or 2 c. c. of blood and pushing it in once or twice before finally withdrawing the needle. This avoids effectively mild endophlebitis and consequent occlusion of the vein. In cases where there is a necessity for frequent saline infusions as in severe cases of cholera I have always preferred a careful transverse incision at the bend of the elbow so that vein after vein can be

used for repetition of infusion without submitting the patient to the shock of frequent incisions at the elbow.

I need hardly emphasise on the necessity of strict asepsis and the purity of chemicals used. The reputation of intra-venous therapy is in our hands; carefulness and discrimination are essential factors in its success; any rashness is criminal and culpable; any negligence is as fatal to our reputation as to our patients. We must not be carried away by the opinions of others; we have to think for ourselves and act. I shall give you an example of an extreme opinion. Col. Proctor of Calcutta in one of his post-graduate lectures in 1925 was positive in his assertion that quinine must never, never be given intramuscularly as it gives rise to tetanus, abscesses, painful indurations, etc., and that intravenous method must be the method of choice in every case where quinine has to be administered non-orally. I contradicted him in the pages of the Indian Medical Gazette and maintained, I even now maintain, that the bad results are due to the imperfect sterilisation of a busy practitioner who probably uses sterilising agents like Rectified spirits, Chloroform, etc., instead of boiling the syringe each time he uses it during the course of the day and that intravenous quinine must be reserved for malignant and resisting cases. Such extreme opinions must be received with caution if not with suspicion and must be modified or accepted by the results of our own experience.

I shall close this address with a an appeal and a quotation. It is high time that our medical graduates devote their time to pharmacological research and evolve satisfactory remedies for the relief of suffering humanity. I know they are hedged in by circumstances beyond their control but it reflects something against us, Madrassis,

if one notes the fact that those of Bengal are superior to us from the point of view of original research in medical science and medical enterprise. * The causes of it are: we are afraid to be original; we are content to follow the rut; we are not prepared to sacrifice comforts of life for the sake of science even temporarily. May I venture to appeal to those wealthy seniors amongst us to organise at least one private research institute and a few chemical and pharmaceutical works which will meet the medical requirements of this presidency. It will afford work and create opportunities to those young men who have got brains but not the wherewithal to back them up. There is vast field for research and pharmaceutical work in India. Here is what Sir Jagadish Chandra Bose says: "A very extensive field has been opened out by the discovery of the numerous Indian plants, the medicinal property of which has never been suspected, and by the employment of which the heart machine can be regulated and rendered highly efficient." A visitor at one of Sir Jagadis's demonstrations describes the experiment exhibited thus: "The sensation of the evening reached its climax when Sir J. C. Bose demonstrated before his astonished and

enthusiastic audience the extraordinary effects of some newly discovered Indian drugs. Pressure of a key released the smoked glass plate of his resonant recorder, the normal heart beat of the frog being instantly recorded in luminous dots. The pulse was remarkably regular. A few drops of a strong depressant were next applied and in less than a minute the audience saw the pulse beat becoming feebler and feebler till it almost died away. Life was swinging in unstable poise and a little more tilt one way or other the machinery of life would be interlocked in the rigidity of death. The heart has practically stopped. Was it possible to revive it? A moderate dose of an extract from a plant obtained from the Kumaon forest was next applied. The pulsation revived and the dying brought back to life." Sir J. C. Bose continued "In this way a very large number of Indian plants were discovered, the characteristic medicinal property of which had not hitherto been suspected. The efficiency of some of these is far greater than any in use. The investigations will no doubt lead to a new pharmacopoea and the establishment of vast industries for the utilisation of indigenous plants for medicinal purposes."

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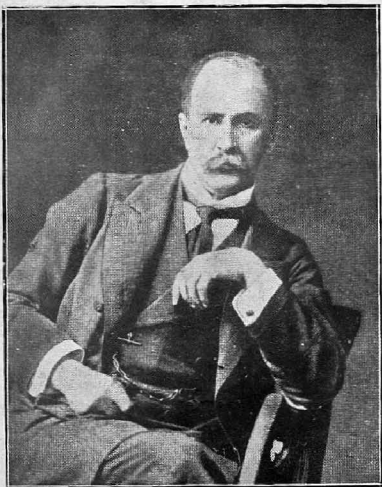
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