The Bulletin

OF THE

South Indian Medical Union.

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CONTENTS.

NOTICE.

1. *The Union does not accept any* responsibility for the views and statements of the *contributors* as published in the Bulletin; all *manuscripts, books, drugs, and other appliances for review and letters* intended for publication must bear the name and address of the author, not necessarily for publication.

2. Copy, cuts and blocks for advertisement should reach this Office at least before the 15th of the month of issue. Advertising rates will be supplied on application. Every effort will be made to accommodate advertisers' request for suitable space, position and proper display of advertisements but particular positions cannot be guaranteed. All advertisements are accepted subject to the above.

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

4. Medical *Students will be placed on* the free mailing list of the BULLETIN on application to the Publicity Section.

5. All communications should be addressed to the Publicity Section, South Indian Medical Union.

51, Poonamallee Road, Kilpauk, Madras.

South Indian Medical Union, Madras.

PROGRAMME.

NOVEMBER 1930

Meetings held at 32, Broadway.

Monday 10th, 6-30 p.m.

GOVERNING BODY MEETING

(Governing members only.)

Monday 17th, 6-30 p.m.

ASTHMA, AN ADRENAL DEFICIENCY SYNDROME

BY

Dr. M. Sriramulu, L.M.P., L.C.P.S.

Monday 24th, 6-30 p.m.

CARBUNCLES

BY

Dr. C. R. Krishnasamy, M.B. & B.S.

Members of the Union may exhibit any interesting case for demonstration at the meetings.

* * *

All members of the Medical profession and medical students are cordially invited to the open meetings.

Have you sent your membership form?

BULLETIN

OF THE

SOUTH INDIAN MEDICAL UNION.

MADRAS, OCTOBER 1930.

Dear Doctor,

Our last letter seems to have gone home. Every mail brings us suggestions and criticisms, some personal, others general, some utopian and others possible. Whatever it be, it is a very healthy sign that the BULLETIN is engaging the serious attention of the Independent Medical Profession not only of South India but of far away places like Burma and Malay States.

Only two issues more and we launch into our third volume. The Publicity Section has been gaining experience and feeling the pulse of the Profession and now want your opinion as to any new changes either in the get up or the contents. One of the letters we received read thus :

"We have enough scientific periodicals in the Profession. We can read about Hookworms and Hysteria elsewhere, but the one want is a Medical Journal for the lay public : One which puts our view point before him, one which educates him on medical matters. The BULLETIN partly meets it. I leave it in my waiting room and find that it is assiduously read by my patients. They seem to prefer it to lay journals and have admired it very much. Can you not enlarge that part and cut out the purely professional scientific articles"

This aspect is worthy of consideration. What do you say ?

Anyhow we want to make the January number a special one — worthy of an anniversary.

We have been promised a number of articles of scientifc interest by eminent men in the profession. We want our rank and file also to contribute. We want our members to be in touch with each other, to know what the other man feels, and what the other place is like. Will you write to us on matters of Medico-topical interest?

We want your articles before the 15th December 1930.

T. Krishna Menon

For PUBLICITY SECTION.

The Hon'ble Minister for Health.

The Independent Medical Profession owes a great deal to that great Statesman, the late Raja of Panagal. It was during his ministry that this important wing of the profession received any recognition at all from the Government. He rightly realised that the problem of medical relief could be met only by an able and contented Independent Medical Profession. We realise the difficulties he had to meet, one at least of which happened to be that in the early part of his official career he had to rely for technical information on members of the Medical Services. We know the strong opposition he had to meet from vested interests who feared that any progress made by the Independent Medical Profession would affect adversely the Pundits in the services. To whatever party the successive ministers belonged there has been no change in the policy adopted by the Raja Saheb in his endeavours to raise the Independent Medical Profession. It is a happy augury that at this time when, we understand, organised attempts are being made to extinguish the facilities granted by the Government for the unlift of the *non service* Medical Profession and to reduce them to be nothing but *feeders* for men in the Services, the control of Medical affairs has aptly fallen on the late Raja Saheb's political successor, Diwan Bahadur B. Munuswamy Naidu. We offer him our felicitations and promise all co-operation in his endeavours to improve the Independent Medical Profession and thereby solve the problem of Medical relief in the Presidency.

SHORT SKETCH OF THE DEVELOPMENT OF MEDICAL SCIENCE IN JAPAN*

By M. Miyajima, M.D.,
Professor in Keio University, Tokyo.

"Rome was not built in a day" is a well-known proverb. The same is true of the present state of Japanese medicine which is the result of a slow but steady growth that has extended over two thousand years since communication with the outside world had its first mythical beginnings.

Soon after the subjugation of Korea by the Empress Jingo (200 A D.) direct communication with Korea became more frequent and as a consequence Chinese learning and Buddhism found their way into Japan.

In the early part of the Fifth Century (414 A.D.) a famous Korean physician by official invitation came to Japan and treated the illness of the Emperor of that time so successfully that many physicians and pharmacists followed from Korea, where medical practice was fairly well developed under the Chinese influence. Thus exotic medicine found a strong footing in Japanese soil.

At the beginning of the seventh Century (608 A.D.) a number of students were sent by Imperial order to China to study medicine and various important medical works were also brought in at that time.

As a further outcome of the new knowledge and of its influence on the life of the people a law, known as the

* By courtesy of the Japan Medical World.

"Taiho-rei," was proclaimed in the second year of the reign of the Emperor Monmu (702 A. D.) and enacted to regulate and control medical education and practice. According to this ordinance medical students were educated at the public expense and their qualification was finally determined by a sort of state examination.

The progress of medicine, however, during the Nara Period (710—784) was impeded by the fact that medicine and other branches of learning were usurped by the Buddhists. And there were many priests of high reputation for their medical skill. The influence of Buddhists grew to such an extent that a charity hospital was established on a large scale for the purpose of giving medicinal benefits to the poor.

At the beginning of the Heian Period (784—1186) intercourse with China was as active as in the previous period. A good number of students went abroad and brought medical books back with them from China. Many medical classics of the Sui and Tang Dynasties were translated into the Japanese language and had a great influence on our medical knowledge.

Medicine in Japan now began gradually to assume an aspect that was more in consonance with the national character. Modifications and improvements were made in practical lines. Experiences were collected and compiled by prominent scholars of those days to make such voluminous books as Taido-ruijiho (100 volumes), Kinran-ho (50 volumes), and Oshin-ho (30 volumes). Among those oldest medical works written in Japanese, only the last one actually exists to-day.

When the Kamakura Government (1190—1333) commenced to rule the country, a marked change in the community took place, everything became democratized; whereas in the preceding period most of the learning had developed chiefly among the nobility. On account of such political changes and Buddhism, medical learning with literature was again handed over entirely to Buddhists, who monopolized study abroad. The practice of medicine also fell into their hands.

After the downfall of the Kamakura Government the country was in a perpetual state of war, and most schools were discontinued and learning generally declined. Only medical science survived and developed gradually along practical lines. The art of medicine was finally studied experimentally.

In the middle of the sixteenth Century (1549) a pioneer Portuguese Christian missionary, St. Francis Xavier, came to Japan and began to evangelize. Through him and other missionaries occidental medicine, especially surgery, for the first time was introduced into the country. To missionaries the medical practice was nothing more than a useful expedient for promoting their work of evangelization. But the new methods of treatment attracted many earnest students and led to the founding of a special school, known as the Namban School. A number of charity institutions were also established in several places, where the medical practice together with evangelization was carried on.

The time came when this status could no longer continue, since Taiko Hideyoshi, the powerful ruler, suppressed strongly the Christian missionaries because he believed that they were misleading the people. This policy was continued by the succeeding ruler, *Tokugawa. Thus the occidental medi*cine which began with Christianity did not prosper in Japan until the end of the Tokugawa Shogunate.

The long years of internal peace and quiet of the Tokugawa Regime (*1615*—1867) greatly favoured the development of medical science as it did other branches of learning. Chinese medicine, long since rooted firmly in the country, was speedily developed. It was strongly supported by the popularity of the Chinese Jugaku (classics), especially those dealing with Confucianism, which had a stronghold upon the intellectual classes of those days. Hence the school of Chinese medicine soon came to occupy the first place and prospered through the entire period of the Tokugawa Regime.

However, the fact must not be overlooked that at the same time the ancient Japanese medicine also existed and was advocated by many notable physicians who formed a school of their own. To the further impetus of this school the occidental medicine was introduced by Dutchmen, who were the only foreigners allowed to come to the country to carry on trade. As the first member of the medical staff of the Dutch East-India Co., Dr. Caspar Schambergen came to the country in 1549 and taught scientific medicine to Japanese students. Then followed many European physicians who communicated their art to the Medical men belonging to the ancient schools. Thus the propagation of the Western medicine was carried on unceasingly and several editions of Dutch, German, and French Medical books were brought into the country. Before that period the reading of foreign books was strictly forbidden.

As another member of the Medical staff of the Dutch East-India Co., Dr. Philipp Franz von Siebold, an Australian physician, arrived at Dejima off Nagasaki in 1822. He remained seven years. During his stay he practised and taught Medical science and natural history to young Japanese physicians.

The practice of medicine had the advantage that its results, whether success or failure, were apparent and men of Medical learning of that time who had principally to rely on the impartial evidence of their eyes, soon saw the new road to the study of occidental medicine opened before them and they eagerly set out upon it.

In the latter part of the Tokugawa Regime, therefore, eminent scholars in medicine appeared, such as Ranka Mayeno, Genpaku Sugita, Seikai Totsuka, Genboku Ito, Genpo Mitsukuri, and others. These were the harbingers of further progress and enlightment in the medical science of the Meiji-Era. To these men the imperative necessity of employing the new scientific methods of the Western medicine and of abandoning the old deductive methods of the Chinese medicine soon became apparent.

However, the success and progress of the Dutch School aroused the jealousy of physicians who were exponents of the old Chinese learning and could not adapt themselves to the new methods. The latter were most devoted to their old practices and prejudices. They left no stone unturned to get the Tokugawa Government to prohibit the new learning in general, and their efforts crowned with success in 1849 when a Prohibitive Law was enacted.

Strange to say this was in the same year that Jenner's method of vaccination was introduced by Dr. Mohnike, a Dutch physician for the first time into Japan. The new light, however, could not be quenched by any mistaken and prejudiced government legislation. The young devotees of occidental medicine took up the investigation of the new method of preventing smallpox and demonstrated its remarkable efficacy. At the same time they secretly carried on their studies in the Dutch learning.

Truth cannot be suppressed, and it was not long before that ill-advised prohibition was rescinded. Hence a number of vaccination institutions came into existence towards the close of the Tokugawa Regime. In these studies in Dutch learning, including medical sciences, were carried on by energetic medical men.

The vaccination institutions developed into medicinal schools, among which the oldest and most prominent was the Igakukwan (Medical Institute) in Yedo (Tokyo). This was first established in 1857 as a private institution and later (1860) transferred to the government. This was the forerunner of the present Medical College of Tokyo Imperial University. Then medical schools were established in Nagasaki, Kyoto, and other places and the study of medical sciences progressed more and more. At the same time various important European medical books were translated by such enthusiastic and indefatigable scholars as Genpaku Sugita, Ryotaku Maino, Kakuryo Katakura, and others from Dutch, German, and English into Japanese. These translated medical books gave a vigorous impulse to the advancement of our medical knowledge.

Soon after the Restoration of the Meiji-Era, the Medical School at Yedo was reorganised by a British surgeon, Dr. William Willis who had rendered great service to the shogunate army during the Civil War and later entered into the service of the new government. He began to teach the students medicine according to the British system and supervised the attached hospital.

Acting upon suggestions from the presdents of the Medical School, the Meiji Government decided to adopt the German system in the medical education of the Empire. And at the beginning of Meiji-Era (1871) two German doctor, Muller and Hoffmann, were invited to take the place of Dr. Willis. After that many German instructors followed them successively and taught medical science in the Medical College. Thus the German system took the first place in the Japanese medicine. Among the German instructors, Dr. von Balz and Dr. Scriba held their positions for the longest terms and received high recognition and reputation in Japan.

The British School of medicine, introduced by Dr. Willis, however, was not entirely obliterated. It continued in the medical service of the navy, and the English surgeons, Dr. Wheeler (1871-74) and Dr. Anderson (1876-79) were invited to the naval hospital to train young men. Up to the present two British ideals have had a good influence on our medical science.

In addition to the above mentioned foreign doctors, a certain number of medical men came to Japan from Europe and America and applied themselves to medical education and practice at several places in the country.

In 1874 the Government proclaimed "Isei," the Medical Ordinance, which prescribed the legal adoption of the European Medicine in Japan. This cornerstone for the foundation of the modern medicine was the result of the effort of such far-sighted men of medical science as the late Sensai Nagayo, the first Medical Director of the Meiji Government. According to this Ordinance many hospitals and medical schools were established in the chief cities of the country, and the modern medicine which rendered great benefit to the people of Japan began.

The results and achievements of the medical science in Japan were put to practical and most searching tests in the two great wars of Japan, the one with China, the other with Russia. Out of those tests the medical profession, in all its branches, emerged with a high reputation.

In medical education improvement after improvement has been attempted and accomplished to reach the present state. We have now eighteen medical colleges of "Class A" standing and nine medical schools of "Class B" standing in Japan including Chosen, Taiwan and South Manchuria. These altogether have enrolled about ten thousand students at present. The post graduate courses are also established in the medical colleges which are provided with adequate facilities to carry on researches and studies on special subjects.

The study of advanced medical science abroad commenced as early as in 1879 when the first graduation of the Medical College of Tokyo Imperial University was held. Since that time Japanese physicians of both sexes who have gone to Europe and America to further their studies in special lines, have numbered several hundreds annually.

At the end of 1926 medical practitioners in Japan proper totalled 45,900. These were classified as follows:—university graduates, 6,824; graduates from medical schools, 22,829; holders of state examination certificates, 13,625; holders of right to practice before the establishment of the present laws, 2,255; and all others, 164.

Besides the Medical Colleges and schools there are also a good number of research institutions which are well equipped for special investigations. The largest and most important of these number ten, of which seven are governmental and three private.

In Japan and her dominions, 45 associations for the Medical sciences were in existence in 1928. These are publishing their own journals. Medical periodicals totalled sixty. Most of these were published in Japanese but a few in foreign languages. The official publications of the Imperial Academy and National Research Council are issued in foreign languages. The journals issued from Medical Colleges and research institutes are printed in English, German or French. These publications contain the important scientific achievements in Japan which may be valuable contributions to the Medical science of the world.

UNION NOTES.

(*The Secretaries.*)

General Section.

The membership of the Union, we are glad to inform, is slowly and surely mounting up. This is a clear indication that the rank and file of the Independent Medical Profession is taking more interest in the Profession. It only remains for the Governing Body to consolidate the Union and make it one harmonious whole.

* * *

With regard to the communication from the Surgeon-General that he is in full agreement with the resolution of the Union regarding Post-Graduate instruction, the Governing Body considered this question and has referred it to the Honorary Medical Services Committee for its opinion.

* * *

We are glad to announce that the vacancy caused in the Governing body, due to the election of Dr. C. R. Krishnaswami as Secretary, was filled by that Body unanimously electing Dr. T. Krishna Menon (the late General Secretary). This is as it should be, as by the incorporation of many members of the previous Cabinet, the continuity of the policy is maintained. We never approve of the method which obtains in many institutions of electing new office-bearers every year.

* * *

The Drugs Enquiry Committee who are holding their session in Madras at present had sent their Questionnaire to the Union rather late, and as such we could not submit our considered opinion on many of the questions asked. We should here like to point out in contrast, the very able manner in which the Medical Education Committee which held its sittings some time back managed to get the opinion of the various bodies by (1) sending the questions in time to enable these bodies to circulate the questions to the several members of the Committee and (2) sending also a number of copies of the questionnaire to these bodies so that many were enabled to keep a copy with them, thereby to study the questions carefully and come out with considered opinions when their Committee meetings were held.

* * *

Many of us can well recollect the keen interest taken by the individual members of the Committee and we are sure that the opinion we offered on that occasion must have been very helpful to the authorities concerned in shaping their report. We should have wished the Drug Committee to emulate their example. We are glad, however, that not only several members of the Union gave their evidence in their individual capacity but that Dr. U. Rama Rao, one of the Vice-Presidents of the Union, was co-opted as a member of the Drugs Enquiry Committee in its sittings in South India. If the Drugs Enquiry Committee would still take our views we may be able to circulate the questions to such of those members who have not received them, and then call for a meeting, prepare a report and then submit it to the Drugs Committee, probably in time for consideration before the compilation of their report.

* * *

Scientific Section.

Members are evincing keener interest and quite a good number of them have promised to read papers, so that during the next few months we will have a crowded programme. It would be nice to have a larger attendance.

It is gratifying that we are having more visitors at our clinical meetings and we hope good deal of interest will be evinced by Medical Students also by attending our meetings in large numbers.

* * *

It will not be out of place here to remind the general practitioner that he should more particularly attend the meetings when papers on special subjects are read, and not stay away with the impression that these specialities do not concern the General Practitioner.

* * *

There is a cry among the practitioners for post graduate lectures. Those given at the clinical meetings may be considered as such and if sufficient encouragement is found it might be possible to expand them to fuller and regular Post Graduate Courses.

* * *

For sake of convenience all meetings of the Union will in future be held at **32, Broadway**, only. Keep your Monday evenings free as Union days.

Proceedings of a meeting of the Honorary Services Committee held on the 17th October 1930.

PRESENT.

1. Dr. V. D. Nimbkar.
2. ,, G. Zacharia.
3. ,, M. Sanjiva Rau.
4. ,, P. Rama Rau.

1. Surgeon-General's letter to the General Secretary was considered and the following resolution was passed.

(*a*) That the Governing Body be asked to draft a scheme modified according to local conditions, from syllabus of Post Graduate courses in other countries.

(*b*) The stages in the Post Graduate courses might be divided into a first three months ordinary Post Graduate Course and then the next 3 or 6 months as clinical assistants—also some academic lectures may be given.

2. The functions of the Honorary Committee

(*a*) To deal with all questions concerning the Honorary Medical Service in this Presidency and advise the South Indian Medical Union in such matters.

(*b*) To maintain a register of Honorary Medical Service men in this Presidency.

(*c*) To request such members to join South Indian Medical Union if they are not members already.

(*d*) To take cognisance of their grievances and advise the officers concerned if they seek the help of the Union.

(*e*) To draw up a scheme of Honorary Medical Service after considering the way in which such services work in other countries and also considering our own peculiar conditions.

(*f*) To supply members information on Honorary Service.

(*g*) To advise the Governing Body when necessary.

Medical Associations are invited to use these columns for the publication of their proceedings, notices, etc.

Chettinad Medical Association.

It was unanimously resolved at the meeting of the Association held on the 30th June 1930 at Devakkottai that "The Head-quarters of the Ramnad District Medical Officer be shifted to Sivaganga on the following grounds and that the same be communicated to the South Indian Medical Union and be moved to the Surgeon-General with the Government of Madras to consider the matter as it is an important issue."

The grounds on which the shifting is requested are :—

(1) The innumerable Medical men centre near Sivaganga and are far away from the present Head-quarters hospital at Ramnad.

(2) If any consultation is required, it is almost impossible to get down the District Medical Officer to these parts from such a long distance.

(3) Ramnad is quite out of the way place.

(4) When the District Medical Officer of Madura is requested to come to these places he pleads inability to come this side of Ramnad district as it is not within his jurisdiction.

(5) To start any association of Medical men will be out of question at Ramnad as the majorities of Medical men are more than 100 miles from head-quarters.

(6) There are numbers of aided and non-aided hospitals on this side of Ramnad and hence a fully equipped Head quarters hospital in the neighbourhood is essential.

(7) Ramnad being out of the way, even the other Chief Offices like the District Court, Collectorate, etc., are at Madura.

(8) Shifting the Head-quarters to Sivanganga and making Ramnad as an Assistant Surgeon's Office is not costly to Government.

(9) Ramnad is not a central place of the District, is a small place and after all a Union.

We therefore request the Government to scrutinise the matter and do the needful at an early date as it will be fulfilling a long-felt want by the public and the numerous medical men in and around.

All-India Medical Licentiates' Association (Madras Branch).

Under the auspices of the All-India Medical Licentiates' Association, Madras Branch, a meeting of the Licensed Medical Practitioners was held on 15th October 1930, at No. 323, Thambu Chetty Street, Madras, and the following resolutions were passed unanimously :—

(1) This meeting of the Licensed Medical Practitioners of Madras, while approving the formation of an All-India Medical Council, respectfully suggests to the Government of India that the proposed Council should be constituted on the same lines as the General Medical Council of Great Britain including in its scope all Registered Medical Practitioners in India.

(2) While appreciating the idea of attaching the Research Institute to any one of the University centres, this meeting is of opinion that in the matter of appointments and the granting of Research scholarships, the claims of all the Registered Practitioners in India should be taken into consideration irrespective of the qualifications, whether they are graduates or persons holding British Registrable qualifications or otherwise, basing the choice of the candidates solely on merit, special aptitude, previous training and experience in the line.

(3) This meeting authorises the Chairman, Dr. U. Rama Rao, to forward the copies of the above resolutions to the Government of India, Director-General of Indian Medical Services, the Minister of Public Health, Madras, the Home Member, Madras, the Surgeon-General with the Government of Madras, the President, Madras Medical Council, and the Press, both lay and Medical.

Delhi Medical Association.

Resolved that this Association urges upon the insurance companies working in India to regard Indian Medical Degrees as *equivalent*, in all respects, to the medical qualifications of the United Kingdom.

That a copy of this resolution be forwarded to all Insuranee cofapanies working in India for early consideration and to the Actuary of the Government of India for his intervention in this matter.

Also resolved that a copy of this resolution be forwarded to all *important* Medical Associations in India with a request to consider the feasibility of passing similar resolutions.

Madras Provincial Rural Medical Practitioners' Association.

Number of the order.	Date.	Subject.
G. O. No. 1701 P.	17—8—25	Leave to rural practitioners.
,, 1548 P. H.	16—8—27	Deputation of R. M. P's for other duties prohibited.
,, 360 Mis.	8—2—29	Naming of rural dispensaries after the Rajah of Panagal.
,, 1051 Mis.	15—4—29	Do.
,, 678 P. H.	1929	Appointment of L. I. M's to rural dispensaries.
,, 1633 P. H.	1—7—29	Do.
,, 942 P. H.	6—4—29	Increased subsidy to R. M. P's and midwives.
,, 1626 P. H.	29—6—29	Appointment of R. M. P's to the Medical Officer's place if his rural dispensary is converted into a regular one.
,, 1709 P. H.	9—7—29	...
,, 2011 P. H.	13—8—29	Deputation of R. M. P's for election work prohibited.
,, 37 P. H.	6—1—30	Permitting Taluk Boards to employ 2nd class midwives.
,, 143 P. H.	23—1—30	Leave to midwives.
,, 1131 P. H.	8—5—30	Maternity leave to midwives.
,, 1395 P. H.	...	...
G. Memorandum No. 30153, D. P. H.	19—9—30	Building grant to R. M. P's.

(1) It is proposed to publish in booklet form for the benefit of the Rural Medical Practitioners all the G. Os., circulars, and other rules pertaining to the Rural Medical Relief Scheme, the approximate cost of a copy of which would be about half a rupee. As funds would be required

for the initial expenses, all rural practitioners that are in arrears of subscription, are requested to remit it to me without any further delay. Copies of the booklet can be had of me when they are ready.

(2) The Secretary will be much obliged to any rural medical practitioner, who will kindly furnish him with any of the above Government orders, or any other orders, or circulars pertaining to the Rural Medical Relief Scheme, as he proposes to publish all of them in a booklet form.

(3) Some of my friends have suggested to me the desirability of holding the third conference of the rural medical practitioners of this Presidency before the year ends, I would therefore request all rural practitioners to kindly let me have their suggestions as to the time, place, and the name of the President, for such conference.

ADDRESS THE SECRETARY,

Viranganur, (Salem Dt.).

Indian Medical Association,

(Head Office—Calcutta).

The question of *affiliation* of the Patna Medical Association to the Indian Medical Association was discussed at a general meeting of the Patna Medical Association on the 16th July 1930. The general meeting referred the matter to the Executive Committee of the Patna Medical Association.

The Executive Committee of the Patna Medical Association at its meeting held on the 11th August 1930 decided to affiliate to the Indian Medical Association as its PATNA BRANCH.

The Pharmaceutical Society of India (Madras).

*The Pharmaceutical Society of India was started in the year 1923 under the name of "The Pharmacentical Association" but was changed into the "Pharmaceutical Society of India" in March 1925.

The Society at present has about 35 members qualified from the Madras Medical College on its rolls, and the working is carried on by a President, three Vice-Presidents, a Consulting Pharmacologist from the Medical Profession and five members of the Committee.

The foremost aim of the Society is to have a federation of Qualified Pharmacists in India with a view to establish an uniform system of education for qualification as Pharmacists and have a compulsory registration of pharmacists and control over the pharmacies in India. The Society has from its very beginning offered to co-operate with the Government to re-arrange the present Syllabus of Pharmacy and establish teaching centres and award Diplomas for Qualified Candidates. The Local Government has only recently recognised the Society and appointed one of its members on the Board of Examiners for the Chemist and Druggist examination of the Government of Madras.

It is also the aim of the Society to establish a laboratory to study the indigenous drugs of India with a view to incorporate the useful ones in an Indian Pharmacopœa, should it be published.

The Society is now pressing on the Government the need of a "Poisons and Pharmacy Act", restriction of dis-

* [Memorandum submitted by the Pharmaceutical Society of India to the Drugs Enquiry Committee].

pensing to the Qualified Chemists and raising the standard of examination of the Compounders to make them more useful to the Pharmaceutical Profession The Madras Medical College has a special course of study for those qualifying as Chemist and Druggist. No other medical college in India has such a course. The Syllabus of the same is appended herewith for the information of the Committee. The Society intends to move the Government, to establish similar courses in all the medical colleges in India so that when the Pharmacy Act comes into force there will be a sufficient number of qualified men to take up service under the Act.

It is only when such training is given that we shall be able to staff this important profession of Pharmacy with persons best fitted to handle medicaments of every description, to compound and dispense them and thus safeguard the public. The trained pharmacist by the acquisition of adequate knowledge of all that is requisite in modern prophylactic and curative treatment will be able to prove his fitness to be regarded as something more than a retailer of chemicals and other people's products.

The dearth of candidates for the course of Chemists and Druggists in the Madras Medical College is due to want of public support as well as Government encouragement to the candidates who have passed out. The Government of Madras even though they have a large number of Dispensaries have found employment only for two qualified men, while the Madras Medical Stores which is the biggest manufacturing concern in India has only one Madras qualified man. Owing to the unfair competition of the Drug market, the Qualified Pharmacist is not able to do any business in drugs and the private medical practitioners having their own dispensaries minimise the number of prescriptions going to him for dispensing.

The Society has also brought to the notice of the Government of Madras the need of better safeguarding the public in the matter of sale of poisons and the dispensing of prescriptions by not properly qualified men. The following summary presents some of the points which need urgent legislation.

DISPENSING IN GOVERNMENT HOSPITALS.

The dispensing in all the Government, Local Fund and Municipal Hospitals in Madras is carried entirely by Compounders. The medical man in charge is supposed to supervise the work but in actual practice, owing to his professional work, it is left entirely in the hands of the compounder. In the Madras General Hospital a Sub-Assistant Surgeon is specially appointed for the work of supervision of the dispensing department. Sub-Assistant Surgeons as a rule have very little training in Pharmacy and do not possess an adequate knowledge of the pharmaceutical work which a trained pharmacist has. The Society has been pressing the Government of Madras to appoint a qualified pharmacist to supervise the dispensing in the large hospitals instead of posting a medical man for the purpose. In this connection an extract from the report of the Surgeon-General to the Government of Madras on the Inspection of Civil Hospitals for the year 1929 will be read with interest :—

"The inspection of the medical institutions in each district was carried out regularly and satisfactorily by the respective district medical officers and civil surgeons. The Surgeon-General inspected 17 district head-quarters hospitals, 4 civil surgeoncies and 53 mufassal hospitals and dispensaries. Major-General Megaw has introduced, in conjunction with the Analyst to Government, a method of testing the

strength of quinine solution at dispensaries during inspections. When first introduced, this unexpected check revealed the most widespread fraud by compounders and showed that patients were getting only a portion of the drug intended for them. The continuance of this method of examination shows an improvement in the quinine mixtures, at any rate during inspection time."

Dispensing in Doctors' Pharmacies.

In Madras Presidency it is customary for most of the private practitioners to dispense their own prescriptions by employing qualified or unqualified compounders. In some places they also run it as a Public Pharmacy by dispensing prescriptions other than their own As a medical man has to attend to his professional work, the dispensing is left almost entirely in the hands of the compounder, who is lacking in adequate training and qualification. In the interests of the public, when a medical man runs a pharmacy as an adjunct to his professional practice and dispenses prescriptions other than his own, he should employ a qualified pharmacist to supervise the dispensing.

Drug Stores.

Anybody whether he has a knowledge of drugs or not can open a drug store in India. He imports the drugs from the cheapest market and sells at cut rates, so that the qualified chemists who import drugs of guaranteed B. P. strength find it impossible to compete with them as in many cases their landed cost is much above the selling prices of these drug stores. As there is no restriction on dispensing of any prescriptions, some of these drug stores also run a Dispensing Department employing a Compounder for the work. As the proprietor has little or no knowledge of pharmacy there is no check at all on the work of the compounder. The curriculum of the compounders do not include Chemistry, Botany and Materia Medica and he therefore lacks the training which a qualified pharmacist possesses and which enables him to foresee and deal with chemical reactions which may in some cases be intentional by the prescriber and in others unintentional and avoidable by special methods of dispensing. The rates usually charged by these drug stores for dispensing prescriptions are very low, the reason being as before stated, their import of cheap drugs irrespective of quality. Instances have come to the knowledge of the Society that some of them charge only eight annas for a six ounce mixture and twelve annas for an eight ounce mixture. This price hardly covers the cost of the medicines in most cases and in instances where the medical man has prescribed a costly drug, it can only be supplied either at a loss or the omission of the costly ingredient. It is quite impossible for the qualified chemist to do business by competing with these stores, as no customer will be willing to pay higher prices and is ignorant of the quality of the drugs to be used. Some of these stores do not possess all the licenses under the Dangerous Drugs Act; consequently they do not supply the customer all his requirements, but direct him somewhere else thus causing a delay which may be dangerous to the patient. The qualified man is therefore not able to sell his drugs owing to the lower prices charged by the drug stores for drugs of an inferior quality, but are now menaced even more by their opening dispensing departments and charging the public such incredibly low prices.

Use of Misleading Titles Describing Business Places.

The title "Pharmaceutical Chemists —Chemists and Druggists" should be restricted to qualified people so that the public may be able to discriminate between a shop where the dispensing of

prescriptions and sale of poisons is supervised by a qualified chemist from those drug stores run by unqualified persons. By calling themselves Pharmaceutical Chemists, they not only mislead the public but are a serious potential danger as well. It operates most unfairly on the qualified pharmacist who has qualified himself by two years of study in a college and an year's practical training in a recognised pharmacy as well as passing an examination to perform certain services for the community and who may reasonably expect in return some protection against his being competed by persons who are not in a position to do the same by reason of their lack of training and qualification to render skilled service to the public.

DANGEROUS DRUGS ACT.

Licenses under the above Act are granted by the Collector on the recommendation of the Excise Officials and not the Medical Department, as the Act is administered by the Excise Department. The Commissioner of Excise is the final authority for the issue or cancellation of the licenses. So long as the Excise Official is satisfied that any person can be trusted to conform to the regulations of the licenses, he is granted a license and there is no question, whether he employs a qualified person to handle and sell those drugs. In the interests of the public this state of affairs should be stopped and licenses only issued to qualified pharmacists or firms employing such qualified persons. The qualified chemist by reason of his status and knowledge will see that these dangerous drugs are supplied for legitimate medical purposes only.

The authority of the Excise Department should be restricted to the inspection of the licensed shops while the administration of the Act should be entrusted to a Board consisting of the Commissioner of Excise, the Surgeon-General with the Government and a representative of Pharmacy.

POISONS ACT.

This Act framed by the Government of Madras in 1919 is very defective. The following are treated as POISONS under the Act: Aconite, Nux vomica, Perchloride of Mercury, Potassium Cyanide, Stramonium, White Arsenic, Red Sulphide, Yellow Sulphide and Phosphorous.

The preparations of these drugs are not included in the Act. The license is granted to anybody who is considered by the Commissioner of Police or the District Magistrate as fit to stock and sell these poisons and so the license is more meant for bazar vendors rather than for qualified chemists. The Pharmaceutical Society of India represented to the Government of Madras that no excise or poison licenses should be granted to wholesale dealers unless they employ qualified chemists and to which the Government of Madras in their G. O. No. 1307 Mis. P. H. dated the 26th May 1930, replied "The Poisons Act is intended to control the sale, not of poisons as such, but only of those poisons which are found to be employed to any appreciable extent for criminal purposes. In view of this restricted scope of this Act, the Government do not consider it necessary to insist on the employment of qualified men by holders of Poison Licenses. A provision of this nature should properly find a place in a "Sale of Drugs Act" which at present does not exist in this Presidency."

It is therefore for the protection of the *public* that a comprehensive Poisons and Pharmacy Act should be framed as early as possible.

The Society is of opinion that the draft Bill submitted by Lt.-Col. C. H. J. Gidney, I.M.S, M.L.A., will satisfy the requirements, but that when wholesale dealers deal in Poisons they should come under the provisions of this Act.

BULLETIN
OF THE
SOUTH INDIAN MEDICAL UNION.

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THE ROLE OF THE GENERAL PRACTITIONER IN A MATERNITY SERVICE.*

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The problem of *Maternity* is one that is now engaging the attention of all civilized nations in the world. Within the last 25 years, people have come to realise that more than any other problem connected with the Public Health of the country, the problem of Maternity and Child Welfare is one intimately associated with the future welfare of the nation. From the statistical point of view, it will be noticed that the death rate among mothers is the same at present as it was 25 years ago in Great Britain, in spite of all the advances that have taken place in the technique of aseptic and antiseptic methods. It is unfortunate that the death rate among mothers has shown no appreciable decrease : on the contrary, in certain parts of the country, it has actually increased. This has led to a considerable amount of attention being directed both by the Public and by the Medical Profession and we have several investigation committees going into the matter. The fact that the deaths from puerperal sepsis are in nowise less than they were in the days when asepsis was ill-understood, is hardly a compliment to the progress of Medical Science in this particular field. I would like to state that it is not merely the death rates that should be taken into account, but the morbidity rate also. It is a well-known fact that consequent upon the damages resulting from the delivery or the puerperium, a large number of women are permanently damaged, and are chronic sufferers for some time ; in fact, bad midwifery constitutes a greater part of the gynaecological side of any hospital ; and as Dr. Comyns Berkeley has stated, any increase of accommodation in the Maternity wards meant a proportionate decrease on the gynaecological side of a hospital. It will thus be seen that this problem is largely a problem of preventive medicine and that nowhere is there a greater need for the close co-operation of the Medical Profession than in this particular field.

Maternity Service differs from many other services in that, it cannot be said that it is responsible for the life of one individual. Where the mother and child are concerned, steps may have to be taken which may not be quite so necessary in regard to other ailments of the general public. The Profession has got to realise that it has a responsibility for this matter and that it cannot possibly divest itself of this responsibility if it is to function as a useful element in the body politic. I would like to emphasize the fact that the *general practitioner is the pivot* round which any national Maternity Service should revolve. The general practitioner has opportunities of making himself felt in a Maternity Service that are absolutely unrivalled—I take the general practitioner to mean the family physician—and it is a well-known fact that more than anybody else, the family physician has greater privileges and greater possibilities of knowing the things in a family than any one else. In a country like India where the Notification of Pregnancy Act is not in force, the general practitioner can easily find out and will be in a position to offer suitable advice to all cases of

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

pregnancy within the family. It is he, more than anybody else, who will probably be consulted for the minor ailments of pregnancy, and it is he, in a predominant measure, that will be in a position to offer useful advice and to educate the public as regards the hygiene of pregnancy.

We hear a great deal to-day of ante-natal work. I would like to state that ante-natal hygiene is nothing new: it has always been existing. No doubt, the importance that should be attached to ante-natal supervision and the more detailed methods in which ante-natal supervision can be rendered to different communities, is a thing that was evolved within the last 25 years. The general practitioner has a great part to play in ante-natal supervision. I remember well a debate that took place at the Edinburgh Obstetrical Society, where the question was raised whether ante-natal supervision should be by the specialist or by the general practitioner: and I was glad to note that a great emphasis was laid by the general practitioners present there that ante-natal supervision was one which naturally fell within their purview and in which they could take a major role.

Considering that pregnancy is a physiological condition, and can be a physiological entity, it should be obvious that in a condition which is so widely prevalent, the best persons to deal with this case should be the general practitioners. I do not mean thereby that there is no room for ante-natal clinics being established in special centres: but what I mean is that a great deal of the ante-natal supervision work, both domiciliary and institutional, can be done with the help and co-operation of the general practitioner, such that it will be possible for him to perform his duty in a measure calculated to benefit the mother and the State as well. The ante-natal clinics will have the services of specialists available at all times: but it is necessary, to bring the general practitioner more and more into touch, so that the link may be maintained between the home and maternity clinic and maternity hospital Every facility should therefore be given for the general practitioner to utilise the resources of the ante-natal clinic for the benefit of his patients: and I feel sure that those in charge of such clinics and maternity hospitals would welcome the visits of general practitioners who would bring their cases and get in touch with the hospital. There should be no objection for general practitioners using the resources of these clinics for the furtherance of the welfare of the pregnant women of this country.

While the general practitioner would continue to exercise supervision over his case, it would still be open to him to seek such advice as he feels necessary in cases where any complications present themselves, which may require the advice of a specialist. In the large majority of cases, ante-natal supervision will obviate the possibility of complications supervening and when the patient is in labour, it should be possible for the general practitioner, with the help of a well-qualified midwife, to attend to the patient with benefit for all concerned. If I may state one thing—which I feel strongly after several years experience—it is that a reliable well-trained midwife is an asset in any Maternity Service. If, after ante-natal supervision, it is felt that the patient's condition is quite satisfactory and that there will be no complications, I would be perfectly willing to leave the delivery of the case to a well-trained midwife: I would go further and say that perhaps it would be better to leave such cases in the hands of a well-trained midwife. In a large majority of cases, a doctor is not necessary. At the same time, a well-

trained midwife would know her own limitations and would be in a position to consult the practitioner whenever a necessity arose.

So far as the actual conduct of labour is concerned, I would like it to be understood that, while the general practitioner will be of use in the conduct of labour, it would be necessary for him to be familiar with the methods that are adopted, and in cases where labour is likely to be complicated, it would be necessary for him to judge whether he should conduct the case, or seek the assistance of other persons.

There is really no conflict between domiciliary and institutional treatment of complicated cases. I would like it to be well-understood that whatever may be the merits of the obstetrician concerned, institutional treatment offers definite advantages in certain types of cases—If, for instance, I have myself to conduct the delivery in a case of placenta prævia, or eclampsia, or a difficult case of contracted pelvis, I would undoubtedly prefer an institution of the treatment of such cases to the house—whatever other facilities there were. I would, in this connection, like to emphasize upon the fact that good nursing is often as essential as good medical advice. In some cases, it is certainly the more important of the two and if a general practitioner finds that it is not possible for him to get this assistance, I would like to suggest that such cases should be treated in the institution: and the general practitioner should be given every facility to continue in touch with the patient. The essential thing in a Maternity Service is the best interests of the mother and child and although there may be certain difficulties, it should be possible for the profession to overcome such difficulties and evolve a smooth method of work. I would emphasize the fact that at every stage, it is desirable to maintain cordial relationships between the general practitioner, the trained midwife in the ante-natal clinic, and maternity hospitals and specialist service. By that means only will they be in a position eventually to reduce the maternal mortality and morbidity of mothers.

There is another aspect of the question wherein I feel that the general practitioner will be of immense service: it is well-known that post-natal supervision is as essential as ante-natal supervision. It has been found that there are many slight ailments from which a mother may suffer after confinement, which, if neglected, will naturally lead to a great deal of unnecessary suffering and perhaps to permanent damage at a later stage. It is desirable that these should be attended to. A case of retroverted uterus in the puerperium or early months after confinement can easily be corrected, but if left alone, it may constitute a troublesome spot for further pelvic complications. A laceration of the cervix, if neglected, may lead to chronic cervicitis and lead to complications resulting in the development of malignant growths. A lacerated perineum, improperly healed, may lead not merely to a relaxation, but later may tend to produce prolapse and other complications. There are many other slight ailments of this nature, which, if neglected, will certainly produce a certain amount of invalidism of the patient. The family physician will be in the peculiar position of noting these things at an earlier stage and it is well, that he should feel the responsibility for the treatment, or making the patient realise the necessity for treatment.

We have in Madras a scheme of Maternity Service which will compare favourably with similar schemes in other civilized countries in the West. There is no doubt that the Corporation of Madras has evolved a scheme of great utility to the City of Madras. I have

myself been a sympathetic on-looker of this scheme ever since its inception: and although there might be here and there a possibility of improvement,—as undoubtedly there would be in every institution with progressive ideals,—the scheme has gone a great way forward to improve the conditions of delivery in the home. I would like, however, that there should be established a closer co-operation between the family physician and the maternity service. It would be an advantage if it were understood that there was nothing incompatible with a Midwife of the Corporation Maternity Service conducting a case of labour, and the family physician sharing the responsibility. I do not mean to suggest that the scheme should necessarily be extended to those who can afford to pay for such services, but there are a large number of cases, who, although they may be poor, may at the same time wish to allow the family physician to continue his attention when the woman is confined: and I do not see any serious disadvantage in such a position, nor any great difficulty which cannot be surmounted. I should again emphasize that conditions of Maternity benefit preclude any hard-and-fast rules which could be laid down in any other form of medical or surgical work.

Lastly, I would like to touch upon the question of post-graduate training. I am convinced more than ever after my recent tour in the West, that the one thing that is necessary to keep up the standard of efficiency in the Medical Profession is a system of post graduate instruction which would conduce to benefit not merely the general practitioner, but even the so called specialist. Medicine is improving at such a rapid rate: the various branches of science are showing such phenomenal improvement on modern lines of research, that no one can pretend to a knowledge which is all sufficient in every department of Medical Science. Conditions are different from what they were 25 years ago: and it is necessary that steps should be devised, such that the recent advances in Medicine, Surgery and Midwifery and the allied sciences, should be brought to the general knowledge of the practitioner and of the specialist. I would like to mention this fact, that in every civilized country in the West such steps are being taken and the specialist considers it his duty to place at the services of the general practitioner what knowledge he possesses in his special domain. Such post-graduate instruction will be useful not only to the general practitioner, but also to the specialist, because the specialist in one branch of science has much to learn about the different other branches of Medicine from specialists in such branches. I hope that the South Indian Medical Union, which is eminently fitted to organize such post-graduate lectures will take this aspect of the question in right earnest and will try to evolve a scheme of post-graduate instruction which will be essential for all concerned. Such a scheme ought to enable the general practitioner to come into touch with the larger hospitals in the City and to gain what knowledge he can from recent developments in the different branches of Medical Science. I am told there are some difficulties in the way and that matters being as they are at present in the Medical Profession in the City of Madras, it is not desirable to introduce a post-graduate system of lectures which would naturally be predominantly in the hands of one set of practitioners. I sympathise with that point of view, but I must at the same time confess that there is another aspect of the question which requires your attention just as closely. In any case, I hope that whatever may be the scheme that you may evolve—I would like that scheme to be tried—so that the general practitioner and the specialist may have opportunities of

deriving as much benefit as possible from practitioners who can speak with some amount of confidence in their own special departments.

I have spoken at great length of the role that the general practitioner can play in a Maternity Service. I would also like to emphasize that such part implies a great responsibility, and the general practitioner will not be in a position to discharge such responsibility unless he takes all measures to see that his knowledge is got up-to-date. There are many things which are constantly changing; the general practitioner has to keep abreast of the times not merely by reading the different journals that he can possibly lay his hands on, but even more by seeing the practice in the different institutions where perhaps some of the modern methods of treatment are adopted.

In conclusion, I would like to make it clear to the members of the Association that my object in coming over here this evening and taking part in the discussion is not at all with a view to advertising some particular methods of treatment or any institutions or any persons connected therewith: it should not be necessary for me to make this assurance, but I feel that taking every thing into consideration it would be as well for me to make it quite clear that I came here purely in the interests of a Maternity Service—and an efficient Maternity Service—in the City of Madras, and with a view to make this appeal to the general practitioners, that they have a large role to play in such a scheme of Maternity Service and it is well within their competence to play that role. I hope that much interest will be stimulated in these problems and that a large number of practitioners would take a leading part in ante-natal and post-natal work and in the scheme of Maternity Service in general.

INFECTIONS OF THE HAND—II.

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The utility of the lateral incision is more markedly seen in the cases of the middle and proximal phalanx only when you have to open the sheath, in that the tendon does not start forward.

When a case of flexor sheath infection is allowed to go on for some time the middle phalanx (bone) gets infected, the proximal phalanx not so frequently. It is probably because the palmar aspect of the middle phalanx is in direct contact with the theca whereas there is the interposition of a thick fibro-cartilage between the head of the proximal phalanx and the theca. Before even the bone gets infected as pointed out above there is generally a suppurative arthritis of the distal inter-phalangeal joint.

The best and most satisfactory treatment when the distal inter-phalangeal joint is involved is amputation through the middle phalanx. When, because of inability to get proper flaps, we have to go a little higher and disarticulate at the proximal inter-phalangeal joint, it is advisable to suture the flexor to the extensor tendon to preserve flexion at the metacarpo-phalangeal joint. If for any reason such suturing cannot be accomplished, it is much better to disarticulate through the metacarpo-phalangeal joint especially in the middle and ring fingers.

In the case of the index and little fingers as they are of great use to oppose to the thumb, they are better not disarticulated at the metacarpo-phalangeal joint more especially if they are the only fingers left in the hand.

We have all along been considering the infections of the *fingers*. We shall pass on to infections in the palm.

For purposes of description they may be divided under two broad headings according to their relationship to the palmar fascia (*i.e.*),

1. Suprafascial.
2. Subfascial.

Suprafascial.—This is relatively unimportant. This may be subcuticular or subcutaneous or may be an extension from infection of the finger. After a cuticular or a subcutaneous abscess is opened one has to bear in mind the possibility of an hour glass abscess and open the deeper abscess also.

Subfascial infection may be of the following types:

1. Of the ulnar bursa (synovial).
2. Of the radial bursa (synovial sheath of the flexor Longus pollicis tendon).
3. Of the middle palmar space (cellular tissue space).
4. Of the thenar space.
5. Of the hypothenar space.

The first two are generally the extension of infection from the little finger and thumb respectively or they may be extensions from the middle palmar space and thenar spaces to these areas.

Just a few words about each of them.

Ulnar bursa.—There is invariably infection of the little finger which gives the clue to the diagnosis. There is a good deal of dorsal oedema. The important sign is marked tenderness in the palm where the proximal transverse crease of the palm crosses the tendon of the little finger. Inability to extend the finger and pain on passive extension are present in a pronounced degree though these signs are minimised when once the infection has burst though the bursa into the forearm.

While treating such a condition, one's attention is first directed to the primary infection in the flexor sheath of the little finger. The incision is next extended into the palm, such extension being carried out in the *ulnar side* of the tendon of the little finger boldly up to the lower margin of anterior annular ligament. The retro-tendinous pouch of the ulnar bursa which was mentioned in the early part of the paper should be particularly drained.

Ordinary rigid rubber drains which are tabooed for many cases in general surgery should be more particularly eschewed in drainage of palmar infections for fear of secondary haemorrhage. A rubber glove drain is very much more preferable. While carrying the extension of the incision in the palm up to the anterior annular ligament one anatomical fact must be borne in mind, *i.e.*, the position of the deep division of the ulnar nerve lying just below and to the ulnar side of the hook of the unciform bone and this nerve should be carefully avoided. So far about treating ulnar bursa infection, primary in nature. But when ulnar bursitis is a complication of middle palmar infection, the surgeon's attention should first be directed to the original seat of mischief and then deal with the ulnar bursa.

The best site for incision for exploration of the ulnar bursa as a likely complication of the middle palmar space infection, is an incision between the two transverse creases of the palms where they cross the tendon of the little finger and to the ulnar side of the tendon. When proof of its definite involvement is obtained, the incision is prolonged both upwards and downwards. Some surgeons prefer to leave a bridge of skin and subcutaneous tissue at the base of the little finger with an idea of preventing the anterior dislocation of the flexor tendon of the little finger.

Radial bursa.—The signs and symptoms in this case are more or less similar to the ulnar bursa infection except that this is found in a different area of the hand.

The incision in this case must be placed anteriorly and to the *ulnar side of the thumb* and its prolongation upwards must be placed in the *ulnar side of the thenar eminence* to spare the muscles of the thenar eminence. Further this extension of the incision should stop short of about 1½' to 1½' to the lower border of anterior annular ligament in order that the branch of the median nerve which supplies the thenar muscles may not be severed.

Infection of Middle Palmar Space.—This is not very common. This may be due to a penetrating wound or *extension from a whitlow (rupture of* the tendon sheath in the ring or middle finger and involvement of the cellular tissue at the upper end of the theca) or, osteomyelitis of the metacarpal bone of this region.

The signs and symptoms are not so localized as in the case of the two above mentioned types but rather vague and diffuse. The hollow in the palm is obliterated.

The course a primary infection of this type may take, is that pus may track along the Lumbrical and may point in the web of the ring and middle finger or the ring and the little finger. This appearance when the pus tends to point at the web is known as "The Knavel's Hand". Primary drainage of the space is best obtained by *a deep incision in the web between the ring and the little finger or ring and middle finger*, identifying the Lumbrical muscle, and passing a blunt sinus forceps along the dorsal or deep surface of this muscle taking care not to plunge the forceps blindly inwards beyond the III metacarpal bone so as not to break the septum dividing the middle palmar from the thenar space or outwards and upwards infecting the ulnar bursa.

Thenar Space.—Infection of this space is a little more frequent. Thecal infection of the index fingers extending upwards beyond the confines of the theca of the index finger is the usual route of involvement of this space or it may osteomyelitis of the metacarpal bone of the index or more rarely of the middle finger.

The swelling of the thenar eminence caused by infection of this type simulates a thecal infection of the thumb, but the distinguishing feature between the two is, while movement of the terminal phalanx of the thumb is comparatively painless in the former, it is exquisitively tender in the latter.

Treatment.—An incision is made in and parallel to the web between the thumb and index finger. A blunt Spencer-Wells forceps is passed in front of the adductor transversus posteriorly and the short muscles of the thumb anteriorly.

If the infection of this space has resulted in a thecal infection of the index finger, the incision in the web between the thumb and index finger is prolonged downwards on the anteroradial aspect of the index finger.

When infection in the ulnar bursa extends to the lower end of the forearm and if not evacuated early, pus ruptures the bursal wall and spreads on to the space of Parona—the cellular tissue space between the deep flexors in the synovial sheaths anteriorly and the Pronater quadratus and the interroseous membrane postively.

The following steps should be borne in mind in the proper dealing of this complication arising out of an ulnar bursal infection.

(*i*) Dealing with the condition of this palm.

(*ii*) Passage of a director from the palm through the retro-tendineous portion of the bursa into the forearm.

(*iii*) Longitudinal incision above the anterior ligament in the forearm between the ulnar third and middle third in the forearm.

(*iv*) Get between the Flexor capi ulnaris and Flexor sublimis digitorum until the Flexor profundus digitorum tendons are reached.

(*v*) Now open the ulnar bursa on the ulnar aspect of this tendon.

The director passed from the palm will now help you to pass a glove drain from the forearm to the palm.

(*vii*) Side by side with this procedure drainage of Parona's space should be undertaken by the following procedure.

(*a*) An incision in the antero-internal aspect of the ulna 1½ inches above its tip.

(*b*) Passage of a closed artery forceps deep to the Flexor profundus digitorum to the radial aspect.

(*c*) Cut down on the forceps.

(*d*) Establish a transverse drainage by a glove drain.

(Note that these incisions for transverse drainage should not be made very low down for fear of hurting the Radial artery).

When infection from the Radial bursa spreads on to forearm, similiar procedure should be adopted.

Just a few words on the prognosis and I am done.

Subcuticular paronychia. Prognosis is good in incisions lateral to the nail fold. If an incorrect median incision is employed, permanent split nail results.

Subcutaneous Whitlow of the terminal phalanx. Prognosis is good if treated early. If delayed, necrosis of the diaphysis of the terminal phalanx not infrequently results.

Thecal Whitlow. Prognosis is poor resulting in stiff finger. The prognosis depends on the situation also. Those from the thumb and little finger being more risky, than those of the index, middle and ring fingers.

Ulnar bursal infections. If not treated early, massive binding down of the tendons results in a clawhand. The prognosis is always poor.

Radial bursal infection. The prognosis is better than in that of the last mentioned. Suppurative arthritis of the wrist joint, and necrosis of the carpal cones are common complications.

Infections of middle palmar and thenar spaces. Prognosis is not at all bad.

Certain broad and salient points must be borne in mind while treating infections of the nerves.

1. Begin movement early, see that the part is put through its full range of passive movement.

2. Avoid wrist drop by putting up the hand in Jone's Cock-up Splint.

3. If the parts get sodden due to continuous bath treatment, dress with gauze soaked in weak spirit.