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THE VALUE OF GYNAECOLOGICAL KNOWLEDGE IN GENERAL PRACTICE *

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> "Symptoms are universally available; they are the voice of nature; signs, by which I mean more artificial and refined methods of scrutiny—the stethoscope, the microscope, etc.—are not always within the power of every man, and with all their help, are addition, not substitutes."
>
> *(From the Introduction to Horae Subsecivae).*
>
> JOHN BROWN

In the art of medicine, the practitioner should take a careful history. That means he should listen to the patient's complaints and not brush her aside in a hurry, for something important may be missed which alone points strongly to the diagnosis. In many cases, obtaining a good history may itself enable one to make a reasonable guess as to what is the matter with the patient. The taking of a history is then followed by a physical examination. This should be comprehensive and nothing should be missed. In the majority of cases, the history and the signs obtained from physical examination would suggest the diagnosis, or at least narrow down the diagnosis to a few conditions. Where there is still doubt and a precise diagnosis has to be made, or other aspects of the problem such as a confirmation of the diagnosis, or the choice of the right line of treatment has to be considered, recourse must be had to special investigations. The diagnosis has primarily to be made on the history and physical signs. There is no magic about it. So, if you differ from someone else on the diagnosis, you have to return to

* This was the subject of an address to the Salem branch of the Indian Medical Association on 23rd April, 1961.

the history in which something may have been missed, or to the physical signs in which there may be differences of opinion as to its nature. When it comes finally to choosing between three possible conditions, this is where experience comes in and shall we say intuition also. What makes one doctor cleverer than his colleague as a diagnostician ? It is this alone. He takes a better history and his examination is thorough and he does not overlook physical signs. What makes a consultant an expert in his speciality ? By devoting his interests and study to a particular branch of medicine or surgery, he has acquired more experience. By performing more examinations and checking his results again and again, he is able to evaluate the physical signs more accurately. By a detailed study of the disease affecting the region in which he practices, he is able to narrow down the search for the right diagnosis better than his colleague, the practitioner. By being experienced in special methods of investigation, he is able to do them and to obtain further information. By being trained in special methods of treatment, he is able to perform operations which his colleague may not be able to perform for want of training and practice. This is the difference. Be wary of your consultant who makes a smart diagnosis on your case for which he cannot give adequate reasons based on sound principles of medicine and surgery.

The specialist, they say, is a man who knows more and more about less and less. Although this may be true to some extent, for specialism means getting better knowledge in a particular branch of practice. A specialist who has cut off his moorings and drifts from the mainstream of medical knowledge and experience, ceases to be a good specialist. Similarly, a general practitioner who completely neglects a particular field like gynaecology cannot be a good practitioner, for it is as much a part of medicine and surgery as any other subject and some fundamental knowledge is most necessary. I shall endeavour to present to you brief case records of instances where for want of elementary gynaecological knowledge, the management of the patient left something to be desired.

GYNAECOLOGICAL SYMPTOMS AND SIGNS:

There are only four important gynaecological symptoms and these are bleeding (abnormal uterine haemorrhage), pain, vaginal discharge and vulval pruritus. Any history that does not take account of these four symptoms is necessarily imperfect.

There are other symptoms; but these, important though they are, are less so. They are dyspareunia, frigidity, sexual disturbances, infertility and sterility. In addition, there are three important physical signs and these are swelling or tumour, ulceration, and prolapse or other mechanical displacements. There are many other conditions the gynaecologist likes to find out such as symptoms relating to obstetrical conditions, symptoms relating to general diseases which may complicate pregnancy, labour or the puerperium; symptoms arising from systemic manifestations of gynaecological or obstetric disease and symptoms of general diseases which may or may not be related to gynaecological disorders.

ABNORMAL UTERINE BLEEDING:

Normal menstrual periods occur regularly and are generally predictable. They come at regular intervals

and the duration of the bleeding remains constant. Between periods there is no bleeding. Occasionally, during ovulation, bleeding (usually spotting) may occur between two periods and this may be considered to be within normal limits. You may have noticed vaginal bleeding in the newborn child. This is not serious and is due to the effect of maternal œstrogens on the baby. It is termed genital crisis. In this there may be engorgement of the breasts as well. When a child between the age of 3 and 8 years has bleeding, one should consider the presence of a foreign body or trauma. When there is a foreign body in the vagina, no benefit will accrue by simply treating with antibiotics. Often, in addition to vaginal bleeding, there will be an offensive and intractable vaginal discharge. The best method of detecting a foreign body in the vagina is by Schauffler's method. Divert the child's attention by rectal examination, and insert a cotton tipped applicator into the vagina gently. The vaginal wall can be palpated between the applicator in the vagina and the finger in the rectum. If a foreign body is present, it will be detected and it can then be removed with a dissecting forceps. If necessary, a small nasal speculum may be used and the foreign body removed under direct vision.

Rarely, vaginal bleeding in children may be the result of precocious puberty. In the majority of cases it is due to constitutional precocious puberty; but then one has to rule out the possibility of a hormone secreting tumour like granulosa cell carcinoma by a rectal examination. If no tumour is felt, laparotomy is not indicated. However, such cases are best referred to the gynaecologist. Very rarely, vaginal bleeding may be due to cancer and should you meet with any case where a polypoid growth protrudes through the infant's vulva, you may presume it is a sarcoma of the vagina or cervix until it is disproved. The only treatment for such growths is radical surgery undertaken as soon as the diagnosis has been made. There is no other alternative for such a case.

Bleeding at the time of puberty could be due to blood dyscrasias and nutritional deficiencies and so both these factors have to be evaluated. Just when menstrual function is becoming established, it is not uncommon to get heavy bleeding. The periods are painless because they are not associated with ovulation and they are prolonged or irregular. These hormonal upsets, however worrying, usually settle down to conservative therapy, but then there is always the odd case which has to be treated more vigorously by blood transfusion or with hormones. I know of a case of a young girl who was brought in so severely anæmic that she did not survive inspite of treatment. Then the fault was with her relatives rather than with any doctor.

Bleeding during the reproductive years may present problems in diagnosis and management. Here bleeding due to conditions related to pregnancy have to be considered. Threatened abortion, ectopic gestation and hydatidiform mole are some of the more important of these causes. Having ruled out these conditions, other causes should be sought such as genital cancer, fibroid tumours especially submucous ones, infected polypus, pelvic inflammatory disease, severe chronic cervicitis, blood dyscrasias and the administration of hormone preparations. Here too have to be considered emotional states, endocrine disorders and dysfunctional uterine bleeding.

Bleeding at the menopause is not usually excessive, but the periods become diminished in quantity and gradually tail off. Whenever excessive or irregular bleeding occurs, underlying disease should be suspected. Although malignancy has to be thought of in this group, hormonal causes account for quite a number. If bleeding is severe, active treatment is indicated and in such cases gynæcological opinion may be sought. If you decide to do curettage, however harmless your trophy may look, send it for pathological study.

Postmenopausal bleeding in about half the number of patients is caused by malignancy. Carcinoma of the cervix and the endometriun has to be considered. In the remaining cases adhesive vaginitis, prolonged use of pessaries and exogenous hormones may be the cause. It should be remembered that it is particularly important to exclude the rare but nevertheless important condition of a hormone secreting ovarian tumour (granulosa cell tumour).

OTHER MENSTRUAL DISTURBANCES:

There are menstrual disorders other than abnormalities of uterine bleeding. A young girl may be brought to you as not having attained puberty when she should have done. In such a case, physical examination is most important, for there may be structural abnormalities such as an imperforate hymen (obstructing membrane) or vaginal agenesis associated with a lack of development of the uterus. Many of the unfortunate patients with this complaint, although they do not have menses, have their secondary sexual characters well developed and are quite feminine. The general practitioner who treats these patients with hormones without making a diagnosis does not help them at all.

14 year old Lakshmi's parents were worried because their daughter had not attained puberty. They took her to see a doctor in a local hospital. Lakshmi had an abdominal swelling and it was a little tender and the doctor advised a course of penicillin therapy for ten days. Her abdominal pain became slightly better and the doctor thought the swelling was much smaller and reassured her and sent her away. A fortnight later she had difficulty in passing urine. So the parents thought there must be something really wrong and took her to the big city hospital where they treat general diseases. Her abdominal swelling was recognized and she was submitted to a great number of investigations some of them of quite a specialized nature and not without risk. The haemoglobin was 70 per cent; the white cell count was 7200; the urine contained no albumin or sugar; the centrifuge deposit was normal; there were no ova or cysts in the motion; there were no acid fast bacilli in the sputum. A plain x-ray showed the lungs to be healthy. A blood urea and a special renal function test gave normal readings. Urographic studies and barium meal series showed no abnormality. Fortunately, Lakshmi's parents did not have to pay for all these expensive tests. After a course of antibiotics, it was decided that the only way of finding out what the tumour was would be to open her abdomen. Fortunately, the surgeon recognized what he found and refrained from removing all the internal genitalia. The vagina was grossly distended with a collection of blood and above this a uterus with its tubes was perched. He released some of the bloody fluid and the swelling more or less disappeared. The abdomen was closed. Afterwards

the surgeon looked at the external genitalia and found an obstructing membrane to be present. In due course, after the patient convalesced from the operation, she was referred to a gynæcologist. The gynæcologist readily diagnosed the trouble and made a small incision on the obstructing membrane in the vagina, allowed all contents to escape and kept the vagina from closing by regular dilatations. This is a very instructive case in that the most elaborate investigations did not help in the diagnosis, when a simple thing like inspecting the external genitalia or doing a rectal examination would have made the diagnosis obvious. The poor girl was subjected to a needless abdominal operation, when a simple incision in the vaginal membrane would have cured her. There is one consolation. The operator recognized what was wrong on opening the abdomen. Sometimes the true nature of the condition is not recognized even at operation and the internal genital organs are sacrificed. There are plenty of references to such tragedies in the medical literature. Closely allied to this problem is intersexuality. Here again special care is necessary, for the problems of such persons are, to say the least, quite complicated.

A young girl of 13 years who had just begun menstruating a few months previously was admitted to the Gandhiji Memorial Hospital at Trichy. She had repeated attacks of abdominal pain and at the time of admission she was having a subacute abdomen and a palpable abdomino-pelvic tumour. The diagnosis was suggestive of an ovarian tumour. In a case such as this an x-ray can be of considerable help. In this case it showed the soft tissue swelling of a tumour with innumerable calcified areas. A diagnosis of ovarian teratoma was made and torsion of the tumour was suspected and this diagnosis was verified at laparotomy next day and its correctness confirmed.

It is sometimes remarkable how patients may not say anything about what may seem quite obvious. A sixty year old lady presented herself at the outpatient department with retention of urine of 4 days' duration and difficulty in passing stools. After catheterizing her, three kidney trays full of urine was obtained. A pelvic examination was made and surprisingly enough there was nothing wrong. One might have expected some fibroids or something like that. Incidentally it was noticed that the patient's jacket was stained and on lifting it up it became evident that both the breasts were the seat of advanced cancerous growth and the left axilla was the seat of enlarged axillary nodes. She said that she had had this for a year but did not think it worthwhile mentioning. She couldn't walk properly either and her back was tender. A subsequent x-ray disclosed the 5th dorsal vertebra to be collapsed due to carcinomatous deposits. The moral of this story is that invariably a patient should be examined systematically and this should include her breasts also, as a routine.

60% of all cancers in women choose the breast or reproductive organs or the skin as sites. Yet the tragedy is that two of these sites are neglected when examining for a general ailment. The practitioner could do a considerable service by including these two sites in his purview and most particularly at those periods of life when something may very well be wrong in these places. The general

practitioner is after all in the forefront in the fight against gynæcological as with all other cancers and he can make an early diagnosis and refer the patients to the gynaecologist. It is true that the patient's neglect may be the cause in some, but the doctor is not free from blame either. Inherent feminine modesty should not be encouraged to result in a dead patient. Cancer of vulva is notorious in that the woman, usually an elderly woman, has had pruritus for quite sometime and rarely turns up with an early growth. Yet such women stand radical surgery and many are cured unless the growth is very extensive. The doctors may also be partly to blame if they treat pruritus or leukoplakia or a vulval ulcer for some time without referring the patient for gynæcological opinion. Early diagnosis before lymph nodes become involved enables successful cure by radical surgery. We call the operation radical vulvectomy and bilateral lymphadenectomy.

Vaginal cancer is a depressing growth for so often it becomes evident only when the growth is advanced and the results of treatment are not exactly bright.

Cervix cancer is a very common female genital cancer and one which is so often overlooked. Much is talked about these days about recognizing this growth in the very earliest stages even before an invasion of the underlying tissues has taken place. This is done by taking vaginal smears and staining by special stains such as Papanicolaou. The exfoliated cells examined by a trained cytologist will lead to the discovery of the early growth in the cervix. I do not suggest that you should become proficient in vaginal smear techniques and interpretations but I would urge that all practitioners have in the forefront of their minds the possibility of cervical cancer and would take a look at the cervix or at least do a rectal examination and refer such cases for opinion. The growth may still be early enough for effective surgery or radiotherapy. I have seen more than one case treated by well known physicians for digestive complaints and for infections with antibiotics until the pain became unbearable. Vaginal examination in these cases showed an advanced growth filling the pelvis. Even general surgeons have opened the abdomen for complications such as intestinal obstruction or hydronephrosis resulting from ureteric obstruction without recognising the presence of primary genital malignancy in the cervix.

Cancer of the body of the uterus is a rare tumour in our country and the results of treatment are encouraging and the best way to pick these up is to make a habit of performing diagnostic curettage in patients who have irregular uterine bleeding. Menorrhagia at the time of the menopause and that too in a fat diabetic woman, perhaps with a touch of hirsuties should suggest cancer of the endometrium until it is disproved.

Cancer of the ovary is lethal. Indeed it is termed a silent killer. The over all salvage of cancer of the ovary (if you exclude certain special forms) is only about 20 to 25 percent. The text books on gynaecology are also to blame to some extent because they leave the student with the clinical picture of an advanced ovarian malignancy. Uterine bleeding with consequent anaemia, a foul irritating discharge, fixed bilateral pelvic masses, enlarged hypogastric nodes and cachexia, abdominal swelling

often due to associated ascites, omental masses and distant supraclavicular and other metastasis are not helpful signs which make for early diagnosis. Perhaps the only hope of recognizing ovarian cancer at an early enough stage is to perform routine examinations on all women of cancer age. Although this may hardly be practicable, it should be a wise policy to include a pelvic or a rectal examination as part of a routine examination before performing abdominal or other operations on surgical patients and to do as a routine this examination in medical cases with obscure presenting symptoms such as anaemia, vague abdominal pain, dyspepsia, etc.

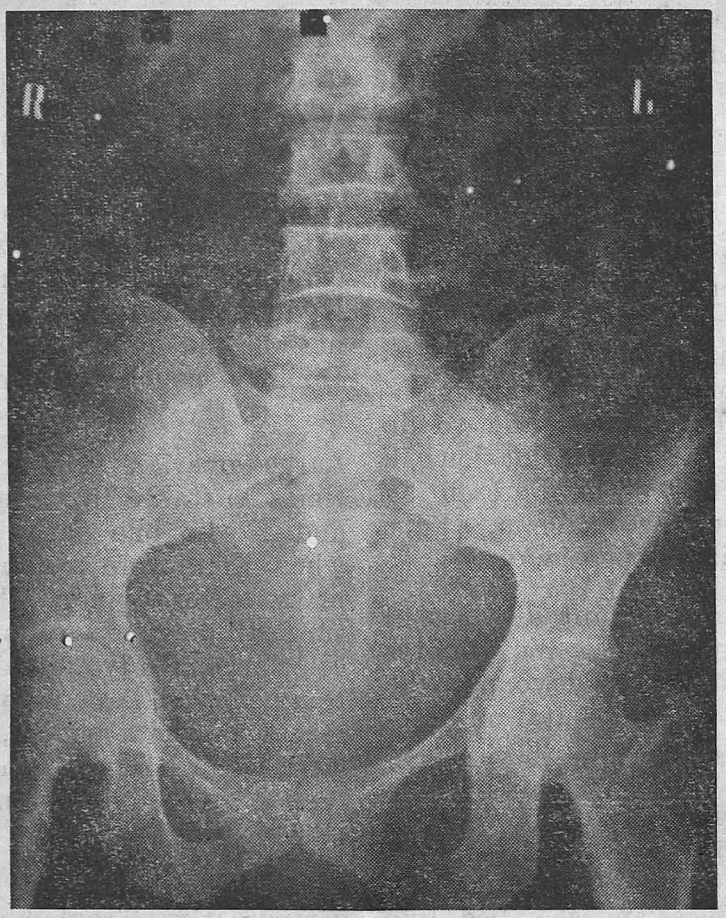
In his book on malignant diseases of the female genital tract, Way quotes the case of a 52 year old woman who was referred to the hospital on account of postmenopausal bleeding of 3 weeks' duration. On examination, bilateral ovarian carcinomas with a deposit at the lower end of the vagina were found. The condition was quite hopeless and she died two months after laparotomy. The history revealed, however, that two years previously she had been investigated in a London teaching hospital for vague abdominal pain thought to be due to pyelitis, and six months after this she had been investigated in the medical department of a large provincial hospital for indigestion thought to be due to a gastric ulcer. Way remarks, " How many early carcinomas have been nurtured in a sea of bicarbonate of soda and potassium citrate by the practitioners of the world cannot be even guessed, and it is sad but probably true to say that if bicarbonate of soda were reserved for the obvious case with abdominal swelling and pain and the case with vague symptoms was investigated at once, the results would probably be much better ".

When I was Dr. Rodney Maingot's house surgeon for a short time, once I remember a case which was wheeled in for radical surgery for gastric cancer. The patient had been elaborately investigated, but one little examination had been left out. Rodney Maingot did a pelvic examination and found secondaries in the Douglas' pouch and sent the patient back to the ward.

Large ovarian tumours are sometimes mistaken for cases of ascites and I saw one such case recently where there were residual abdominal masses after tapping. The provisional surgical diagnosis was lymphosarcoma arising in lymph nodes. Laparotomy showed large ovarian psuedomucinous cystadenoma, one of the large loculi having been successfully tapped by the physician.

I cannot resist telling you about a type of cancer which interests me very greatly. Trophoblastic growths arise from foetal elements, from the chorion. The benign growths are the hydatidiform mole, the intermediate ones are locally destructive (destructive mole or invasive mole) and finally we have the lethal chorion-carcinoma. In our part of the world, these growths are far more common than they are in England or in the States. When you come across patients who develop evidence of toxaemia early in pregnancy, hypertension, albuminuria, oedema (especially vulval), think of vesicular mole. When a patient has post-abortal bleeding or continuous bleeding following a molar pregnancy, presume you are dealing with the dreaded chorion-epithelioma until it is disproved by the most meticulous investigation.

BENIGN OVARIAN TERATOMA



(Courtesy of Dr. S. Sundaram, F. I. C. S., Sundaram Surgical Clinic and Nursing home, Salem.)

This interesting x-ray is that of a 30 year old patient with an abdomino-pelvic tumour and abdominal pain. It shows evidence of multiple calcified teeth in a soft tissue shadow representing the tumour. Such an appearance is pathognomonic of an ovarian teratoma. A benign cystic teratoma of the left ovary was removed at operation.

Remember that every patient who has haemoptysis has not got pulmonary tuberculosis. Have a look at the suburethral region for bluish deposits and more than that get a correct history and evaluate them. If you can't, you can do them a service by sending them speedily for a gynaecological consultation. These growths are dangerous to temporize.

A female patient 35 years old was admitted to a hospital for general diseases for investigation of fever of a week's duration and diarrhœa on the day of admission. You will be surprised to know in what detail she had been investigated, but nothing much was made out. She was kept in the hospital for two weeks and given a course of treatment for diarrhœa with bismuth, diaphoretic mixture and sulphadiazine. At the end of this time the patient told her attendant that she had a vaginal discharge and a few days later that she had something bluish in the region of the

vulva. She was quite ill. It became evident that female genital tract disease should be enquired into and she was sent for gynæcological opinion. Note the difference in the attitude between the physician and the gynæcologist. If the general physician viewed the patient mainly as "heart, lungs, liver and spleen" and the genitalia as secret parts which should be dealt with great discretion, if at all, the patient was now viewed as "an ambulant female genital tract with heart and lungs, the function of which was to maintain its nutrition". The multiparous patient now gave a history of an offensive vaginal discharge and episodes of profuse uterine bleeding of four month's duration. On further questioning, she gave a history of a molar pregnancy having been terminated by abdominal hysterotomy a year previously and what is more she bore a fine scar in the hypogastric region which had not been noticed. She had a midline hypogastric tumour almost 20 weeks in size and a vaginal examination revealed an open cervix through which the finger could be readily inserted to feel a necrotic vascular growth. A frog test on the urine was positive. Soon after admission she had nausea and attacks of haemoptysis. A chest x-ray revealed multiple metastatic deposits in both lung fields. The patient's condition deteriorated in spite of treatment and her relatives took her away to die at home. Here is a case of chorion-carcinoma which could have readily been diagnosed on admission by any doctor with a little care and thoroughness; in this particular case it may have made no difference to the outcome, for there is little hope for advanced cases, but then the diagnosis was missed because of neglect in history taking and lack of thoroughness in the physical examination.

I hope I have not imposed on your time, but I would like to say this. If the specialist has something to teach the practitioner, let it not be forgotten that the practitioner has also much to teach the specialist. It is only by sharing our experiences and our knowledge that we can benefit each other and thereby advance knowledge and progress in the art of medicine.

Acknowledgment :

I am grateful to Dr. V. R. Thayumanaswamy, F. R. C. S. (Eng.), M. Ch. (Ortho), Director of Medical Services, Madras for permitting me to address your association.

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PSYCHO - ANALYSIS *

AN ELEMENTARY EXPOSITION

K. S. KRISHNAN, M. B. B. S., F. I. C. S., Madurai,
(Member, The Madras Psychological Society).

> "Personalities are like icebergs; the nine tenths that lies submerged might be protesting against your being that type of personality"
>
> — *Lelord Kodel.*

Psycho-analysis is an analysis of the mind. It is a study of the "depth psychology" or "emotional psychology" of the human mind. A psycho-analyst can make an analysis of his own mind which helps him to lead a happier and more satisfying life and can analyse the mind of another person towards the same end or towards the relief of mental stress as in neuroses. So it is important for both the medical and the layman to have a working knowledge of the human mind in a world which is rapidly changing and creating more and more problems.

Sigmund Freud (1856—1939) was the founder of psycho-analysis. He explained the basic psychology behind dreams, wit, mythology, slips of the tongue, art and literature, civilisation, religion and philosophy and especially human achievements and lapses. With him Alfred Adler (1870—1937) and Carl Gustav Jung (1874—) became the leading exponents of psycho-analysis. Their theories have helped teachers and medical men to understand a great deal about the normal and aberrant child and the adult. Neither one nor the other of these theories is applicable to all types of behaviour, but they assist in the understanding of them. Adler's psychology is more useful in understanding the child than the adult. † Jung (pronounced as யுங்) is fortunately alive. Other key figures who contributed to the epoch-making discovery of the unconscious mind are Sandor Ferenczi (1873—1933), Earnest Jones (1887—1958), Anna Freud (1895—), Freud's daughter. There are the neo-Freudians among the most modern psychologists, notable among them being Kardiner and Karen Horney. Spock has studied babies, and Gesell has studied the older children. They want emphasis more on sociology than on the biology of Freud's conception. Psycho-analysis influences every field of human endeavour — literature, art, drama, every science and particularly law, criminology, philosophy, medicine, education, politics and business. "Everyone has an unconscious. It governs our breathing, our digestion, our heart-beat, every step we take; it also serves as a store-house for our secret, seething memories. Our unconscious helps propel us to success or failure. It can haunt us, making life a nightmare or it can delight us, helping us to live more richly". (Freeman and Small).

Robert Assagioli in the U.S.A. is developing a new school of *Psycho-synthesis.* Says he, "A new 'art of living' can be developed in the world

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* Based on the lecture delivered before the Chettind Medical Association, at Karaikudi on 30—7—1960.

† Since writing this article, C. G. Jung died on 7th June, 1961. (Author).

if the wealth of psycho-physiological and spiritual practices found in the various Yogas of India can be properly integrated with the western methods of psychotherapy and psychological training. What is needed by a humanity which at present throws its energies, interests and desires to the attainment of material possessions and power towards "Success" in the external world, is the realisation and acknowledgement of the reality, value and supremacy of the inner worlds. The source of human drive is found in the inner realms of thought and feeling; that man's actions are determined by his conscious and unconscious valuations—by inner realities and motive powers. From this follows the indisputable deduction that, while doing all possible to alleviate physical ills and improve material conditions in the world, the necessary remedies of effective therapy are to be looked for, and applied from, the same inner regions of reality ".

RECENT PSYCHO-PHYSIOLOGICAL RESEARCH :

Henry M. Fox has given an excellent review on this subject. A brief summary is given here. Psycho-physiological variations have been demonstrated during sleep, wakefulness, rest, activity, pregnancy and the different phases of the menstrual cycle. There is necessarily the mediation of the central nervous system. Neuro-physiologist, Mc Intyre says: "Complex and inextricably intermingled processes of perception, mental activity and motor performance, all depend on symbolic processes. One's appreciation of the external world and awareness of self depend not only on the play of physical and chemical influences (stimuli) upon the sense organs, but upon their conversion into symbolic representations by incredibly complex pathways of quite different physico-chemical events within the nervous system, symbols of which as such we have no direct awareness. It is the dynamic play of symbols in specific spatial and temporal patterns within the cerebral cortex that creates the perpetual world of each individual, a world that is not the same as the outside 'physical world' from which the external stimuli take origin ".

It must be said to the credit of Freud that he always regarded the highly complex activity within the central nervous system as an active process for biological adaptation. Fischer, Klein and his associates have made very interesting observations by tachistoscopic studies. The tachistoscope is an instrument which exposes an object, say, a picture to view for an extremely short time. A three-field tachistoscope alternately exposes two stimulus figures in quick succession. The patient is asked to recollect and describe what he has seen of them in the waking state and in dreams. The studies confirmed Poetzl's earlier findings (1917) that those portions of the exposed picture which were excluded from conscious perception went to make up the manifest content of subsequent dreams and that distortion of the image resulted "from the influence of unconscious wishes and primitive drives..... Perception and consciousness are not equivalent". (Fischer) Klein *et al* reported subliminally (below the threshold of perception) presented "sexual pictures and symbols affected conscious impressions of faces ".

They further point out that long term confinement to bed and toxic influences on the C. N. S. serve to

blur the differentiation between the images formed in the mind and the conscious perception of reality, thus helping to explain the psycho-pathology of hallucinations in states of delirium, alcoholism, etc. Confinement to bed, especially alone in a darkened room, produces a degree of visual and intellectual dysfunction. E. E. G. records show changes. Mescalin, lysergic acid, pervith, A. C. T. H. and cortisone can produce psychotic manifestations while the patient is quite conscious. The normal daily variations in adrenal function has been studied by the level of 17-hydroxy-cortico-steriod in plasma. It is at its minimum level at midnight, begins to rise steeply from 4 A. M. and reaches a maximum between 6 and 8 A. M. and dips finally between 8 and 10 P. M. Perkoff *et al* have shown that this routine is "altered by the states of consciousness, disrupted sleep and patterns resulting from illness". Murawski and Crabbe point out variations in other circumstances as also in keeping awake while lonely (lowering of next day noon values) and in company (normal or higher values). Recent experiments support a correlation between blood pressure patterns (as an index of adrenocortical function) with changing of psychological patterns. "The more a person reacts emotionally the higher the level of the 17 - H - C - steroids. The more guarded and withdrawn the individual, the more control is exercised over feelings, the lower the 17 - H - C - steroids"

FREUD'S THEORIES AND TECHNIQUE:

To understand psycho-analysis, one must have a grounding in Freud's way of thinking. It was not as if by any accident that he got into that unique way of thinking, He was a physiologist doing research on the nervous system and mental disorders in Vienna. He suffered persecution as a Jew in the hands of his Christian oppressors. Though he did not have any particular attachment to Judaism, he was determined to undergo the torture and suffer the indignities that the Jews had to suffer in Europe. He wrote in his autobiography, "My parents were Jews and I remained a Jew". Brill who interpreted him in the English language and who introduced the terms *abreaction, tranference, repression, displacement, unconscious*, etc. as Freudian concepts, writes, "Freud's works had the honour of forming part of the sacred pyre on Hitler's accession to power. The fact that the bulk of this pyre was composed of works of non-Jewish thinkers plainly shows that truth knows no creed or race. I feel, however, that Freud's Jewish descent — constitution as well as the environment to which he was subjected because of it—fate—exerted considerable influence on his personality. One might say that only a Jewish genius, forged in the crucible of centuries of persecution, could have offered himself so willingly on the alter of public opprobrium for the sake of demonstrating the truths of psycho-analysis". Another psychologist says, "His contribution covers more than half the field; and today, a therapist who attempts to get along without him (Freud) is as helpless as a blindman fumbling here and there where others pick their way with some assurance".

As a student of the great French teacher-physician, Charcot, Freud was impressed with his casual remark that in all cases of neurosis there was some trouble in the individual's sex life. Later, Breuer, a fellow physician with Freud, found that when he hypnotised one of his women patients

who suffered from hysteria, she was able to recollect certain otherwise forgotten and highly emotional incidents of her past life, when he enabled her to recall those incidents by suitable methods. During her ordinary working state, her symptoms disappeared (Abreaction). Freud had similar experiences. He and Breuer worked together and developed the special method called *mental catharsis* and used it with considerable success. It was to recover by the use of hypnotism certain memories of which the patient was otherwise unconscious and then encouraging the patient to talk these over freely and so give them normal emotional expression. Breuer left Freud. The latter working alone found that many people were not susceptible to hypnotism. One of the hypnotised ladies abreacted by violently falling in love with him and this was the signal for him to wind up hypnotism for ever. He discovered a new method called the *free association*. It is the foundation stone of Freud's technique. The patient does not concentrate on any particular subject but allows his thoughts to wander freely. He relates to the physician (or analyst) whatever happens to come to his mind, however trivial or embarrassing it may be. This is one way of salvaging submerged elements of the patient's mind. The analyst then reads into them the latest incidents in life which produced the symptoms.

From his own experience and from those of the patients, Freud found that dreams formed an excellent basis for starting this free association method and *dream analysis* was grafted on to it. Freud wrote, " Dreams are not nonsense but wish-fulfilment ". He explained: the conscious self called the 'ego' offers a resistance by keeping a vigilance over the unconscious called the '*Id*' in the waking state. When the vigilance is relaxed in sleep, dreams symbolising the unconscious wish appear. His great book " The interpretation of dreams " was published in 1900. Analysis of his own and his patients' dreams made him come to the conclusion that the dream contained latent manifestations of unfulfilled desires (especially childhood or forgotten). As examples, it is stated that polar explorers dream of sumptuous dinners and mountains of tobacco. Orphanage children dream of home and family life. There is a relation between the patent and latent contents of a dream. The dream is the dramatisation (patent content) of the plot (latent content).

When childhood memories were brought out and discussed with the patient by the analyst by a process of *transference*, the analyst becomes the father substitute (or father symbol), or mother, brother or sister substitutes. In other words, the patient treats the psycho-analyst as if he were his childhood father, mother, brother or sister. He may hate the analyst bitterly or love him passionately. (A child may show its hatred of any member of the family by beating the father doll, mother doll, or brother or sister doll accordingly). The psycho-analyst encourages the transference and cancels repression which is done by 'weaning' the patient by discussing the realities and possible adaptations. The essence of this process is that the unconscious comes into grips with the conscious mind, faces the facts of life and considers seriously possible adaptations to the environment. Brown, a follower of Freud expresses this briefly thus: " The unconscious

motives made conscious by psycho-analysis are then subject to conscious intelligent control".

While using the methods of free association and dream analysis, Freud found that some active force within the patient seemed to oppose the resuscitation of the patient. More-over, the past memories unearthed were predominently of a sexual nature. Some women patients of Freud gave memories of incest which were found to be fictitious. The root cause of the symptoms was not the buried memory of a particular incident, but an unsatisfied childish wish of a sexual nature. With this concept Freud explained why, earlier, the hypnotised woman patient fell in love with him. (Breuer also had similar experiences with some women patients). By a combination of his methods, Freud's analysis showed that there was a sexual factor behind most neuroses. In the last two world wars, Freud's methods were used very much to treat neuroses. Narco-analysis and hypnosis were used to recall lost memories in battle emotions.

A furore was caused in the field of psychology when it was asserted that there was an unconscious sex drive even in the infant and so neuroses were the result of sexual maladjustments. This infantile sexuality (libido) was not of the same intensity as the one resulting from the development of the gonads and the production of hormones. In fact libido was "divorced from its too close connection with the genitals and was meant as a pleasure-seeking energy such as eating, creating art, scratching and having sexual intercourse—the so called basic appetites. A hungry baby sucks due to hunger, but why should a baby suck the thumb when not hungry?" Freud asked the question himself and answered that it was the sex urge that produced this pleasureable 'oral reflex', the 'anal reflex' of getting satisfied by passing motion and the 'genital reflex' of manipulating the genitalia. These auto-erotic reflexes may get sublimated in later life, as some form of social service. "So the oral-erotic individual is acquisitive, the anal-erotic thrifty and orderly, the repressed genital-erotic ultra-conscious" (Woodworth). Freud regarded love, hatred, art, music and all the achievements of mankind as results of the inherent sex-energy in everyone, that is libido. (Sex energy and sexuality are not to be confused). The traditional sex behaviour of the adolescent and adult is only a secondary affair in life. Freudian clinical observations on neuroses have withstood the test of time though the theories have been controversial.

Freud described four other complexes making use of some of the names in Greek mythology - namely, Oedipus, Narcissus, Eros and Thanatos.

The *Oedipus complex* according to Freud, closely connected as it is to the sex urge in childhood, is the basic complex in all human beings. "The child not only loves its parents but inevitably feels a sexual craving for its parent of the opposite sex" (Puner). Freud recalled by analysing himself that it was the case with him during his childhood. "Though the child's libido is at first auto-erotic, not focussed on any external love object, in the course of the first few years it begins to attach itself to some person or persons" (Wood-worth). The story of Oedipus in the Sophocles' play "Oedipus Rex" runs as follows:— Oedipus was the son of Laius, king of Thebes and Jocasta,

the queen. His father was informed by an oracle that he must perish at his son's hands and he consequently ordered the destruction of the child. Child Oedipus was hung to a tree by a twig passed through his heel, but was rescued by a shepherd. In ignorance of his parentage, Oedipus later slew Laius, his father and went on to Thebes where the regent of the king had promised the hand of Jocasta and the whole kingdom to the person who was instrumental in destroying the Sphinx which was plagueing the country. Oedipus successfully accomplished the task, married Jocasta, his own mother, without knowing her relationship to him and had children. Having discovered the facts, Oedipus, in his horror at his crimes, put out his own eyes and fled the land, while Jocasta hanged herself. Freud discovered the same complex working unconsciously in the mind of Shakespeare who put into mouth of Hamlet, the words:

"So conscience doth make cowards of us all"

Hamlet, in the play, behaves like the hysterical patients of Freud in bringing punishment on himself. Freud referred to this complex in Goethe's Faust:

"And the shades of loved ones appear
And with them, like an old, half-forgotten myth
First love and friendship—"

He applied his theory to all children and according to him the Oedipus complex becomes established in the first years of infancy. Sexual curiosity reaches a maximum between the fourth and fifth years of life and then after a period of repression, depression and latency rises again to a high level at puberty. Between these two periods, "the reaction formation of morality, shame and disgust are built up". The sexual life of puberty "is a struggle between impulses of early years and inhibitions of the latency period". At puberty the Oedipus complex is associated wish emotions and it is at the bottom of neuroses.

Linked with libido, is another phenomenon which Freud called *Narcissm* which is another early phase of psycho-sexual development where the sexual object is the self. According to another Greek legend, Narcissus was a handsome young man who was never attracted by the most beautiful woman, but who fell in love with his own shadow in a glassy pool of water and got transformed into a flower, bending over the water. Narcissist is a person who loves himself by admiring at his image in the mirror. He is excessively preoccupied with himself and his own concerns. The schizophrenic personality is of this type—withdrawn from his environment, concentrating on his own self and over-rating his own charms and merits.

Even with this theory, he could not explain all neuroses. So he propounded another theory of life and death instincts which he called *Eros and Thanatos*. Every life, biologically considered, had the instinct of love and construction, for the preservation and propagation of the species and a death instinct for the inevitable goal of death. The death instinct resulted in aggression, conquering and destroying. Probably, Hitler had this instinct most marked in him. When frustration occurs in external aggression, self aggression results and destroys the self (suicide and self punishment). Between Eros and

Thanatos, there are many grades and combinations. "Any concrete motive is a fusion of love and hate, of constructiveness and destructiveness. Eros tends to bind men together in families, clans, etc. and over larger groups, always with love and justice within the group, but with hostility and aggression for outsiders. Civilisation develops through the conflict and fusion of these two major drives" (Woodworth). A child has both these and the resulting behaviour depends on the profit and loss account of Eros and Thanatos. Freud contended that the holding back of aggression is unhealthy and creates illness. So suitable outlets for the aggression must be found by work, play and sublimation (service to others).

About this time, Freud formulated his famous three-selves theory modifying the original two-selves, namely the conscious mind (ego) and the unconscious mind *(Id)* by adding a censor *(super-ego)* which is akin to the conscience and consequently it is the voice of responsibility. This is an inhibition which a person acquires by his learning, culture and upbringing. The three aspects of the personality of the three-selves may be explained briefly thus:

1. The '*Ego*' is the conscious which is in touch with the actual environment through the physical senses such as the eye, ears, touch, etc. It is in contact with time, space and all the physical reality around a person which others also can perceive at the same time. It has its own anxiety and fears and curiously enough it threatens the *id*. The *id* and superego, on the other hand, are entirely the properties of the individual which others cannot perceive by physical senses.

2. The *id* is the unconscious self. It is the psycho-biologic energy seeking pleasure and gratification. It is the infant sexual personality represented in the depth of the mind (depth psychology) which is *repressed* and is not allowed to come to the surface by the ego and the super-ego.

3. The super-ego is the third part of the psyche. It is akin to conscience which is developed by learning in the environment of an ordered society. It is said to be absent in criminals. The ego and the super-ego keep a close guard on the *id* and strive to keep it always submerged in the depths of the mind. While a person is in hypnosis or sleep or narcosis (state of stupor induced by certain drugs), the ego and super-ego relax their hold and the *id* comes to the surface. The author of this paper pictures in his mind the inter-relationship thus: There is a deep well at the bottom of which is the '*id*' always trying to come up and outside, while the ego and super-ego keep a close watch and threaten it with consequences not to come up. (Fig. 1). The poor *id* seeks security as evidenced by its fears and anxieties.

The psycho-analyst puts the ego and super-ego out of action and when the motives of the unconscious mind, *id* is brought out, he allows the patient to argue with the ego and super-ego in the waking state. (Fig. 2). The argument with reality cures the neurosis. The *id* comes to a peaceful settlement with the ego and the super-ego.

AN ILLUSTRATIVE CASE:

Some years ago in Madras I had to treat a neurotic. He was employed in an insurance firm as a clerk and did his work to the satisfaction of his superiors. As long as he was in

Fig 1

Id is Submerged; Ego & Superego threaten and Keep vigilance.

Fig 2

Id Comes to the surface while the Ego & Superego Sleep

the office at work, nothing wrong could be noticed about him. But, at home, he behaved in a peculiar manner. When washing his hands after food, he would hold up the vessel containing water, as in the act of washing, but would remain in that same state for minutes together after the water has run out of the vessel. Some one would have to touch him and say that it was time for his office, to get him to move from that position. When putting on the shirt, he would hold up the hands for minutes together with the shirt half-worn, till he got fatigued. Though I did not have much knowledge then of psycho-analysis, by a commonsense method I tried to help him to open out his mind to me, making him talk as much as he liked. After about three hours of such a procedure patiently carried out, he hinted that his parents did not get him married to the girl of his choice. Asked whether that girl was still unmarried, he answered that she had got married and that he could not get her. For the next one hour I argued this theme with him and pointed out to him that he should realise that in the society and environment in which he lived, he could not get the same girl again at any cost (arguing with the ego to release its hold on the *id*); his own conscience should revolt against thinking about her because he would not like another man to concentrate his mind on his wife when he got married (arguing with his super-ego or the conscience); and it was time that he forgot about the married girl and thought of taking the hand of some other girl of his own choice. I undertook to talk to his parents to allow him to choose a girl among other offers. He woke up to the reality of the situation. He knew I enjoyed the confidence of his parents. A new glow was seen in his face and he was looking happier and agile. I sent him to George Town in the electric train from Theogarayanagar with my servant to escort him upto the station and see him board the proper train. The servant returned and informed me that the patient on the way had told him that he had been treated by a "wonderful" doctor and that he was a new man with immense potentialities. The patient's brother hastened to my clinic the next evening and asked me with amazement what I did to make the young man behave normally. Later the parents took my advice, of course. About six months later, the patient accosted me on the road one evening and showed me a bundle he was carrying. It contained new sarees which he had chosen and bought for the girl he was going to wed soon. The cause of the neurosis, evidently, was the concealed (repressed) desire to get the first girl married which was the *id* in him. I had played the part of a psycho-analyst unawares!

ADLER'S INDIVIDUAL PSYCHOLOGY:

Freud was the founder and master of psycho-analysis. He is much respected by all psychologists, in spite of their differences in views. Adler and Jung who were closely associated, along with a few others, with Freud as their leader dissented from him and started different schools of psychology, some principles of which Freud incorporated in his own system. Adler was also a great thinker. He founded the school of "Individual psychology". By that he meant that individual personalities depended more on early environment (ego development) than on the libido of Freud's conception.

The child is born and grows with a feeling of inferiority towards the parent and the world. It strives for power to assert itself. The sense of inferiority is stronger in the handicapped. In some cases the striving for power in older children clashes with the educational authorities unless that urge finds an outlet which will not disturb school duties.

Two classical examples of striving for power are quoted by psychologists. The foremost Greek orator, Demosthenes was born a stutterer (stammerer). To overcome this defect, he usually went to the seashore where no one watched him and with pebbles in his mouth he practised public speaking successfully. A modern application of this practice, is to allow a stammerer to speak to his horse or dog while he is under the impression that he is not being watched. The stammering disappears. Theodore Roosevelt, to overcome his frail frame, became a "rough rider" and an explorer. The inner lives of many great and prominent men of the world show many inferiority complexes.

Adler's theory can be applied to Freud himself who wrote in his autobiography that once when he was an older child he passed urine on the carpet in the hall. His father taunted him by saying that he would never amount to anything in life. This insult stung the youngster to the quick and he promised within himself to strive hard and achieve something by which he would demonstrate the falseness of the paternal taunt. In this he succeeded. Freud, beside becoming a famous physician and psychologist, suggested for the first time in the history of medicine that the local anaesthetic effect of cocaine would be useful in the diseases of the eye. Latterly cocaine was used successfully in his father's operation for glaucoma. With a sense of satisfaction Freud said, "By means of the glaucoma, I reminded my father of cocaine, which stood him in good stead during his operation, as though I had thereby fulfilled my promise".

A mother may pamper her child and make him feel a superiority complex to tyrannize over her; or she may be too much of a disciplinarian and kill his independent spirit which will make him feel helpless and dependent especially after the loss of the mother. (This is mentioned in the etiology of chronic idiopathic ulcerative colitis). Thus, Adler emphasized the dependence of individual character on the family environment. "The style of life and the peculiar goal of superiority adopted in childhood and still followed in some way or other" are the ones to be discovered in the course of psycho-analysis. Of dreams, Adler said that they referred to some present or pending problem in the dreamer's life and revealed, when analysed, his style of life. So a dream is an allegorical picture of his waking problem.

JUNG'S "ANALYTICAL PSYCHOLOGY": Carl Gustav Jung, the well-known contemporary Swiss psychiatrist (also a medical man) accepts Freud's libido theory, oedipus complex, free association and dream analysis. But he made a modification in libido by depriving it of its distinctively sexual nature and by adding Adler's theory of striving for power. He put forth a concept of what he called "archetypes" by which he meant that a person's personality is influenced greatly by instincts and ways of thinking and acting, all being of a primitive nature. This explains how magic, mythology and fairy tales

make an appeal to neurotics (or even to normal individuals) in a beneficial manner. "So in his treatment of neuroses, Jung encourages patients to immerse themselves in mythology and to give free expression to their unconscious, in the from of some artistic activity". (Woodworth) Religion and theological readings have a place in those neurotics who had faith in them.

ANALYSIS OF A DREAM (AN ILLUSTRATIVE CASE):

This case is quoted in its entirety from Jung's paper with the comments of Woodworth :—

A young man who had just finished his University studies was unable to decide on an occupation and had become neurotic. His dream was : "I was going up a flight of stairs with my mother and sister. When we reached the top, I was told that my sister was soon to have a child".

This would be an easy one for a Freudian analyst, climbing stairs being accepted as a regular symbol for sex behaviour, and mother and sister being the regular objects of infantile sex desires. (Adler could easily see a dependent style of life in this dream, since the dreamer did not climb the stairs alone). Not satisfied with such a ready-made interpretation, Jung proceeded to obtain his patient's free associations suggested by the dream. The mother suggested neglect of duties, since he had long neglected his mother. The sister suggested true love for a woman. Climbing stairs suggested making a success of life, and the prospective baby suggested new birth or re-generation for himself - an archetype. Jung concluded that this dream revealed unconscious energies beginning to work on the young man's present problem".

THE STATUS OF PSYCHO - ANALYSIS TODAY :

In general, psycho-analysis is "theoretically a hotbed of controversy", but empirically it fits in with clinical observations and many successes have resulted from its use for diagnosis and therapy. It has come to stay. The theories have been substantiated by experiments in psychological laboratories. Modern psycho-analysts have added newer concepts and methods by the scientific study of neurotic cases which cannot be explained by the older theories of Freud, Adler and Jung. For example, there is the behaviourist school which is slowly penetrating the psycho-analytical field.

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THE ERECT POSTURE OF MAN

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Posture is defined as the bio-chemical inter-action between organism and gravity. The erect posture is one of man's singular attributes. The mechanics of his body working out his progression and several other bodily movements are pivoted around his erect posture. More than this, his intelligence and binocular vision have evolved alongside the several progresses involved in the attainment of his erect posture. He stands supreme in the biological kingdom possessed as he is with high audition, stereoscopic vision, manual skill, the gift of speech and his capability for conceptional thought.

Organic life on this earth began about hundred thousand million years ago. Aquatic organisms of the earlier ages moved by the Pterggia and the tail. The Pisces were the first to possess the notocordal axis which helped them to wade their way in mid-stream. With growth of size and weight, they evolved limbs to paddle. The water newt was an animal which lived both on water and land. These possessed four limbs each endowed with equal skill. The reptiles used their limbs for progression only, but with the mammalian age limbs become specialised in the several species of animals. The greatest skill was achieved by the primates who in their arboreal habitat found freedom and the need to steady themselves on their haunches to perform their toilet, tend their young and look out for distant and higher branches to leap and spring for their food. These complicated movements they performed on trees, permitted them to specialise their fore-limbs for prehension and the hind limbs for support and progression.

Terrestrial man must have ascended the scale of life from one of the basal mammalian quadrupedal stock from which a particular primate with a semi-erect posture evolved which formed the progenitors of living man, possessed with plantigrade posture and orthograde progression.

Palaeontologists and anatomists have dived deep into the discoveries made of prehistoric man and the primates. The Pithecanthropus erectus or the Java man was discovered by Dubois in the year 1890. This prehistoric man exhibited a spinal column and atlanto-occipital joint, which indicated the posture and progression of this species in the erect position. An erect posture demands the sinuous (curves) of the vertebral column with an exaggerated lumbar lordosis. The architecture of the thorax needs to be flattened dorso-ventrally. The weight of the body will need to be transmitted along the vertebral column and from the sacrum along the lower segment of the ilium through the dorsal and posterior regions of the acetabulum to the femora. The weight passes in front of the knee and ankle joints to the two longitudinal arches of the foot which are architecturally fitted to allow man to perform movements of walking, running, jumping and other activities. The poise of the head over the vertebral column permits of free movements of the head over the trunk. Ocular movements help man

to perceive and analyse his enviornment through observation. The upper limbs, liberated from supporting functions, have evolved into skilful appendages—the hand, forearm and the arm. Alongside the radical changes adopted by the locomotor system, other functional systems have also evolved concurrently to undertake the task of respiration, digestion and reproduction suitable to the mechanism of his erect posture.

From the stand point of his gait and posture, modern anatomists consider man as a super-primate who retains all the characteristics of the primate order. These features are especially pronounced in the architecture of man's hand and feet.

The human foot has the same structural composition as the apes, only the arrangement is different. The heads of the metatarsal bones of the monkeys can be approximated by muscle action. In man the heads of the metatarsal bones are separated by ligaments. The adducted position of man's great toe is obtained by an arrest of development at an early stage of man's digital differentiation.

In the monkey the foot has a prehensile or grasping function, but in the human it has become a stepping off lever. In man the tarsal component is more than 50% of the length of the foot and the digital element is less than 20%. The increase of the tarsal component is related to its supporting function and the diminution of the digital component accounts for the detraction from the grasping function. The architecture of the foot of man is responsible for conferring on him the status of a terrestrial biped.

The emancipation of the upper limb was also made possible during arboreal life. The erect posture leaves the fore-limbs for manipulations and manoeuvres for which the hands and fore-arms have become well adapted. A well developed clavicle is a con-comitant of the great mobility of the fore-arms. Man is the only animal who is definitely a tool–maker and tool–user. He is the only animal who kindles and utilises fire. He is capable of articulate speech. His brain exhibits great and extensive convolutions which are able to accommodate more grey matter consisting of highly specialised nerve-cells.

Man was the only primate who specialised in his activities by the standards of his brain in the struggle for obtaining mental and physical superiority in order to subdue external forces and enjoy nature freely. Posture has a direct relation to the comfort, mechanical efficiency and physiological functions of the individual. The moulding of structural form to postural functions has occured during the evolution of the early primates. The antiquity of the orthograde posture can be traced to the Pliocene and Miocene ages. The changes towards the plantigrade posture are entirely in the lower limbs; the knees and the thighs get more extended and strengthened; the lower limbs appear as if they are the downward continuation of the trunk. The pelvis forms the fulcrum between the lower limbs and the trunk. During these several stages of evolution, the hip and knee-joints as well as the pelvis have been modified. Above all the foot was transformed. Changes occured in the trunk concurrently.

Also the spinal reflexes in relation to functional adjustments co-ordinating with the erect posture had to be established. These account for the formation of several cell-stations in the red nucleus and other cell-masses in the mid brain which regulate postural tone. The cerebellum has also undergone elaboration and expansion because it controls the timing of the spinal centres. For the automatic and voluntary control of the muscular system, the expansion of the basal ganglia and the cortical centres of the brain were elaborated. Brain and body had to be modified in unison.

The erect posture of man undoubtedly bestows a dignity on man; this is one of the factors which confers on him the supreme status in the biological kingdom.

DANGERS OF BED REST

"Look at a patient lying in bed! What a pathetic picture he makes! The blood clotting in his veins, the lime draining from his bones, the scybala stacking up in his colon, the flesh rotting from his seat, the urine leaking from his distended bladder, and the spirit evaporating from his soul".

— *Asher 1947.*

* * * *

MEDICINE A LIFELONG STUDY

"The situation for practicing physicians is truly frightening; if he has been qualified for five years and has not been reading regularly or has not attended post-graduate medical instruction, he is distinctly out of date ..... If ten years he is dangerously misinformed. The situation of many who left medical school twenty years ago, and are still relying on the instruction they received as students is almost medieval".

— *The Bradshaw lecture before the Royal College of Surgeons — 1956.*

* * * *

Scientists are the bricklayers of knowledge. Each brick in the wall rests on the ones laid underneath it and gains support from the ones laid on each side of it. Hence, all scientific investigators who contribute so much as a brick or the mortar between bricks share credit for the entire wall.

— *Greer Williams in the dedication of his book VIRUS HUNTERS.*

ABSTRACTS AND EXCERPTS

HEALTH EDUCATION OF THE PUBLIC:

This month's symposium is on a highly controversial topic indeed, the education of the public in matters of health. In this symposium, an attempt has been made to discuss the various responsibilities for this activity.

There are two other persons who might have been asked to say something about health education. One is the ultra-conservative doctor, who maintains that there is already too much health education and that the avidity of the public for more and more information about their health is a sign of decadence rather than an index of a desire for self-improvement. The other is the lay health educator who would change the well-known maxim that "war is too serious a matter to be left to the generals" to read "health is too serious a matter to be left to the doctors". The health educator would maintain that most doctors are too busy or too disinterested to spend much time on health education, and that in any case special teaching techniques are needed which the average practitioner does not possess. The doctor may retort that the first essential in teaching a subject is a knowledge of it, and that it is difficult to see how any one without a medical degree can give effective service in this field. He would also say that people who are actually rendering a service in treating the public are more likely to be listened to, as one contributor stresses in mentioning the opportunity for health education during therapy.

From time to time, sterile arguments break out about the best person to educate the public in health matters, but it would seem that no one profession or branch of a profession has a monopoly in this. The engineer may be the best person to instruct on prevention of accidents in the home or on sanitation; the public health nurse may be the only one who can gain the confidence of women in an area full of taboos; sometimes, as another contributor has shown, only the local social leader can persuade the people to take some obvious step for their good.

But with all this, the medical profession must see to it that they do not lose their opportunities for leadership in this field as a whole; the trusted family doctor can get results where nobody else can, and the medical association can and must speak with the voice of authority to the public. Anyone reading the symposium will see evidence that during recent years there has been a trend towards loosening the bonds in which doctors have been held by their organization on ethical grounds. At the time when medical associations were formed there is no doubt that in many areas there were professional brethren only too eager to obtain whatever publicity they could to fill their pockets. Hence the associations found it necessary to introduce strict rules which may by now have outlived their usefulness. About the beginning of this century, the *British Medical Journal* for example warned its readers about the folly of talking to journalists, and in

1902 the great Osler advised his students not to believe anything they saw in newspapers. "If you see anything in them that you know is true, begin to doubt it at once" Now, however, many medical associations find it advisable to cooperate with the press in order to ensure correct reporting of medical news. In Berlin, we heard of the excellent work of the press bureau of the Austrian Medical Association, and in this symposium our Canadian contributor mentions the code for cooperation published by his Association as guidance in liaison with the press, radio and television.

It is difficult to imagine that the trend towards cooperation between organized medicine and the mass media of information will be reversed, and it would seem that in addition to its traditional role of adviser to the individual the medical profession will be called on to play an ever-growing part in the education of the community as a whole.

— *Editorial - W. M. J. Vol. 8 No. 3 (May, 1961).*

CHLORAMPHENICOL IN TYPHOID FEVER - A REDUCED DOSAGE:

The dosage of chloramphenicol in typhoid fever has tended to become standardized at about 3 gm. daily for adults until the temperature falls, and a reduced dosage thereafter for a few days. An initial loading dose of 2-4 gm was at first recommended, but later was often omitted because of the occurrence of Herxheimerlike reactions. The high cost of the drug is a severe burden in some countries, and this article from East Pakistan describes an investigation to determine a minimum effective dose schedule. The number of people studied was 200, in 4 groups of 50 (all over 10 years of age).

The loading dose in all cases was 500 mgm. and then a dose of 250 mgm. was given in all cases, but at intervals of 2, 3, 4 and 6 hours respectively in the 4 groups. This was continued until the temperature fell to normal, when the time interval between doses was lengthened to 6 hours in all groups except the first, where it was changed to 4 hours. The results were practically similar in all groups, as judged by the day of response to the drug (average 4 days), and the number of relapses (6-10%). The deaths among the 200 cases (all from perforation and shock) were distributed at random among the groups, and seemed unrelated to dosage. The 7 cases of intestinal haemorrhage were also randomly distributed. The conclusion from this investigation was that an initial dose of 0·5 gm., followed by 1 gm. daily until 4 to 7 days after the temperature becomes normal, is as effective as larger dosage schedules, and considerably cheaper.

— *Islam, N and Haq A. Q. M. N. Southern Medical Journal 53, 1291—95 (1960).*

THE GREAT DEBATE:

In November 1960, Drs. E. L. Wynder and C. C. Little appeared before the New England States Chapter of the American College of Chest Physicians, assembled in Boston, to present their separate and opposing

views on the cigarette smoking-lung cancer issue. As is generally known, Dr. Wynder, of the Solan-Kettering Institute, is making a career of cancer and its causes and has become a dominant figure in the crusades against immoderate cigarette smoking. Clarence Little, a doctor of science, director emeritus of the Jackson Memorial Labortory, Bar Harbor, Maine, is scientific director of the Tobacco Industry Research Committee and devotes his highly developed talents to a defense of what many cherish as man's second or third best friend. Both authors are dedicated, sincere proponents of their points of view, each upholding what he believes to be the truth and nothing but the truth, each ready to admit that the whole truth has not yet been revealed to aspiring man.

It is enough to say that most of the evidence is statistical and demonstrates a close association between heavy cigarette smoking and lung cancer. However, it is generally believed that statistics in the hand of a master can be made to prove almost anything. Dr. Wynder seeks to show, not by the adroit deployment of small clusters of statistics but by swinging the heavy artillery into action, that a strong causal relation between cigarette smoking and bronchogenic cancer must in fact exist. Dr. Little's strategy is based, at least partly, on demonstrating that Dr. Wynder's statistics are inconclusive.

Many conscientious observers believe that there are strong indications in favour of a causal relation in the vast majority of cases, and no acceptable evidence that disproves it; others remain unconvinced or have taken a determined stand behind Dr. Little. Certain facts stand out - that the stakes are high in terms of life and death, that smoking has been indicted as a sometimes lethal agent and that non-smoking is certainly harmless. Each individual must choose his own course.

— *The New England Journal of Medicine June 15, 1961 – Editorial.*

TOLBUTAMIDE IN CIRRHOSIS OF THE LIVER:

Fortynine men and 6 women patients of poor economic status and confirmed examples of diffuse hepatic fibrosis, were given tolbutamide (1 to 1·5 gm daily) in addition to basic treatment consisting of a high-carbohydrate, high-protein, high-vitamin, low-fat, low-salt dietary regimen, aided by mercurial diuretics or chlorothiazide derivatives. The main presenting features were anorexia, emaciation, anaemia, and hypoproteinaemia with gross ascites, and variable amount of oedema of dependent parts. Outstanding effects of tolbutamide therapy were increased apetite, improvement in the general condition and weight gain and control of ascites. Apetite improved before the end of the first week. The earliest noticeable effect on ascites was that fluid ceased to collect and paracentesis was no longer required. Subsequently in 42 (76%) patients, the abdominal fluid progressively diminished to nil in 3 to 14 weeks. In 8 (15%) patients, a variable amount of ascites persisted but remained within easy control. Five (9%) patients did not show any response.

The diminution of ascites was significantly associated with a rise in serum proteins, mainly due to albumin increase, with a variable degree of globulin fall in individual cases. In the failures, the rise in serum proteins was inadequate or inconsistent or both. Differences in portal pressure does not seem to have influenced the results. Liver-function tests did not show any significant improvement. The haemogram improved considerably in many patients.

On withdrawal of tolbutamide treatment, the remission from ascites in all 42 patients lasted from 3 to 10 weeks. After subsequent treatment and maintenance therapy with tolbutamide, 41 patients have been in continuous clinical remission during 8 to 17 months' follow-up. The remaining patient has died from severe gastrointestinal haemorrhage. The drug was tolerated well by all patients. There were no hypoglycaemic reactions.

— *Singh, I., Sehra K. B. and Bhargava S. P. The Lancet, May, 27, 1961, Page 1144*

SMALLPOX IN 1960 :

In spite of sporadic outbreaks, smallpox would appear to be coming under control. The number of cases in 1960, around 51,000, is well down. The decrease of around 23,000 cases compared with 1959, is attributable almost entirely to the improvement of the situation in East Pakistan and India, where some 27,000 cases were notified in 1950 compared with about 49,500 in 1959. Among the countries which did not report any smallpox in 1960 were Angola, Basutoland, Cambodia, Cameroun, Iraq, Singapore and Viet-Nam. This does not mean, of course, that smallpox has been eradicated from these countries, as is shown by the current outbreaks in Basutoland. On the other hand, the general situation is satisfactory, in so far as the number of cases throughout the world reached 489,000 in 1951, remained below 150,000 from 1952 to 1957, rising to 242,000 in 1958 as a result of the outbreaks in East Pakistan and India (218,000 cases), falling again to 74,000 cases (including 50,000 in East Pakistan and India) in 1959.

Success, however, is dependent upon continuous vigilance. In 1960, many towns near a seaport or airport reported cases of smallpox. The most notable instances of this were the export by sea of smallpox from Calcutta and the Persian Gulf to Suez, by air from India to Great Britain, and from India to Moscow where a small epidemic resulted. The factors responsible for this proclivity of small pox to spread by air transport are the long duration of the incubation period, the slight initial symptoms which may pass unnoticed in those who have been previously vaccinated, and the increasing speed of aircraft.

— *From World-Health News Bulletin (The Practitioner) June 1961.*

HAEMORRHAGIC SMALLPOX :

The importance of the distinction between toxic or haemorrhagic smallpox and variola pustulosa haemorrhagica is not always sufficiently realized. The former type of disease carries a mortality of 100%, and the true diagnosis is likely to be missed and the patient admitted to a general hospital. In variola pustulosa haemorrhagica, where haemorrhages accompany or follow the foeal eruption, the outlook is apt to be more favourable. Details are given here of 13 fatal cases of haemorrhagic small pox which occurred during a period of 7 months in Kanpur.

In the present series, the majority of the patients were admitted to the hospital on the 3rd or 4th day of illness with fever and severe low backache. Seven pregnant women were suspected of threatened abortion; 4 others presented as cases of " acute abdomen ". Except in 2 cases, high fever was not a prominent feature, but all patients had haemorrhagic manifestations, of which subconjunctival haemorrhages and bleeding per vaginum and at injection sites were prominent early. Most patients were mentally confused and restless. The average duration of the disease was just over 5 days. With 2 exceptions, the age of the patients ranged from 20 to 28 years. The exceptions were a male of 3 and a female of 40 years.

The vaccination state of each individual is not given: it is only recorded that, " Except for 2 cases who could not give a proper history, all the cases were vaccinated in childhood. The marks of vaccination, however, were not evident in 3 cases ". A leucocytosis of 15,000 to 27,000 per c. mm. predominantly lymphocytic (over 50% of the total count) was considered to be a characteristic finding.

— *B. L. Agarwal, J. Ass. Physicians India Vol. 8, 577—582 (1960) (Bull. of Hygiene).*

DIAGNOSIS OF TUBERCULOUS MENINGITIS :

Patients requiring treatment for tuberculous meningitis may be grouped into those diagnosed in the early, medium and advanced stages of the disease. The common presenting feature in the early stages are fever, vomiting and apathy. Tuberculous meningitis should be suspected especially if irritability is combined with periods of drowsiness. Constipation is almost invariable and often severe. Signs of meningeal irritation are usually absent. Infrequently the disease is heralded by a convulsion. A history of contact with a known case of tuberculosis is of great significance. A recent history of measles or a minor head injury are suggestive. A tuberculin test (seldom negative in the early stage), a fundus examination (to detect choroidal tubercles) and a chest radiography should be carried out.

In the middle stage of the disease specific neurological signs appear. Slight nuchal rigidity is common, a positive Kernig's sign somewhat rare. Cranial nerve palsies, spasticity and early blurring of consciousness should always be regarded urgently and their cause determined. In a child under

3 years, the advanced stage of the disease may be reached with frightening rapidity. At this stage the child is semicomatose. Head retraction, positive Kernig's sign and decerebrate rigidity are common. A crackpot sound on percussion of the skull and frank papilloedema are other late signs. Patients who recover from the advanced stage show various permanent neurological sequelae such as hydrocephalus, blindness, deafness, spastic palsies and mental deficiencies.

Confirmation of the diagnosis must be obtained by examination of CSF. The CSF is clear or slightly opalescent; the cell count is raised (50 - 500 per c. mm.) and lymphocytes predominate over polymorphonuclears. These findings are sufficient to exclude pyogenic meningitis. Highly relevant information in differentiating this from virus infections of CNS may be found in the history, or in evidence of tuberculosis (history of contact, positive Mantoux, positive chest x-ray or choroidal tubercles). The sugar content of the CSF is reduced in 90% of early cases (below 50 mg. per 100 ml.). The protein content tends to be higher in tuberculous cases (above 50 mg. per 100 ml.). The chloride content falls too late in the disease to be of much diagnostic importance. Direct examination of the fluid may reveal AFB in the deposit or the pellicle which forms when it is allowed to stand overnight.

— *(Editorial B. M. J., May 6, 1961)*

ASSOCIATION NOTES

BRANCH NOTES

Coimbatore Branch:

The monthly meeting was held on Saturday, the 1st July, 1961 at 6 P. M. Dr. G. T. Gopalakrishna Naidu, the President presided.

A condolence resolution was passed in memory of the late Dr. (Lt. Col) T. S. S. Shastry, I. M. S., who was a member of the Indian Medical Association for a long time through the Madras City Branch of I. M. A.

The Honorary Secretary then informed the general body that it was proposed to conduct a refresher course for the members under the auspices of the Association and sought the views of the house in the matter. After taking the consensus of opinion, it was decided to bring this subject before a meeting of the Managing Committee to chalk out plans in this regard.

Then Dr. Miss Ponnu Isaiah, M, B., M. D., M. R. C. O. G., addressed the gathering on "Induction of Labour", after which there was the usual discussion in which several members took part.

Madurai Branch:

A meeting of the Madura Medical Association was held on Sunday, the 25th June, 1961 under the Presidentship of Dr. Abdul Sathar, L. O., Madurai.

Dr. P. K. Krishnankutty, M. D., M. R. C. P., Honorary Physician, Government General Hospital, Madras, gave an interesting lecture on "Certain Aspects of Coronary Heart Disease" and Dr. V. Sankaran, M. S., Professor of Surgery, Tanjore Medical College in Madurai, and Surgeon, Erskine Hospital, Madurai, gave an interesting lecture on "Acute Abdominal Surgical Conditions".

Nagapattinam Branch:

A clinical meeting of the I. M. A. Nagapattinam was held at the Government Hospital, Nagapattinam presided over by Dr. A. Thigarajan on 4—6—1961.

Dr. Eswaran, Senior Medical Officer, took all the members to the wards and showed very interesting cases.

Tiruchi Branch:

A meeting of the association was held on Saturday, the 27th June, 1961 at the Association premises, Trichy. Dr. P. V. Sundaram, the President presided. A condolence resolution on the death of Dr. M. R. Bhat of Thiruvaiyar was moved from the chair.

The President requested Dr. G. Joseph Gnanadickam to occupy the chair for the symposium on Opthalmology.

Dr. T. V. Ranganathan, M. B., B. S., LO., ZO., DO., Honorary Assistant Medical Officer, Government Head Quarters Hospital, Trichy addressed the members on "Recent Advances in Opthalmology".

Dr. T. Amirudeen Ahmad, B. Sc., M. B. B. S., LO., DO., Trichy addressed the members on "Ocular manifestations of vitamin deficiencies".

Dr. G. Joseph Gnanadickam addressed the members on "Problems of headache and its treatment".

All the lectures were very much appreciated by the members. In the usual discussion that took place, many members took part.

SHORT REFRESHER COURSE — THE COIMBATORE DISTRICT MEDICAL ASSOCIATION

It is proposed to conduct a short refresher course in all the branches of medicine, namely — Surgery, Medicine, Obstetrics and Gynæcology, Orthopaedics, Otolaryngology, Paediatrics, Ophthalmalogy, Tuberculosis, Skin & Venereal Diseases and Public Health under the auspices of the Coimbatore District Medical Association. The clinical sessions in this connection are arranged to be held in the Government Head-quarters Hospital, and the lectures in the evenings in the premises of the Medical Association at Krishnaswami Mudaliar Road, Coimbatore. Eminent members of the profession have been approached to take part in the lectures, and the Director of Medical Services, Madras, has been addressed to permit doctors in service to take part in the course. The following is the tentative programme of the refresher course which is to last for four weeks — on Saturdays and Sundays of each week of October 1961, beginning from Saturday, the 7th October, 1961.

All the members of the medical profession are cordially invited to attend and take part in the course. Intending applicants are requested to address for further particulars and registration.

Sirukaliamman Kovil Street,
Papanaickenpalayam,
Coimbatore.

Dr. V. SRIRAMULU, B. SC., M. B., B. S.,
Honorary Secretary,
Coimbatore Dt. Medical Association,
Branch of I. M. A.

THE STANLEY MEDICAL COLLEGE OLD STUDENTS' ASSOCIATION — ANNUAL DAY

The above Association is holding its Annual Day on 24—9—1961 at the Stanley Medical College.

The tentative Programme is as follows :

4-00 P. M.	:	Tea.
4-30 to 4-45 P. M.	:	Unveiling of the portrait of Dr. M. G. Kini.
4-45 to 5-30 P. M.	:	Presidential address by Dr. S. Balasundaram.
5-30 to 6-15 P. M.	:	Business meeting.
6-15 to 7-15 P. M.	:	Symposium on "Coronory Heart Diseases". President: Dr. N. Vaidyanathan, M. D. A panel of experts will take part.
7-15 to 8-15 P. M.	:	Entertainment.
8-30 P. M.	:	Dinner.

All old students of the Stanley Medical College and Royapuram Medical School are earnestly requested to enroll themselves as Life Members. Life Membership Fee is only Rs. 25/-.

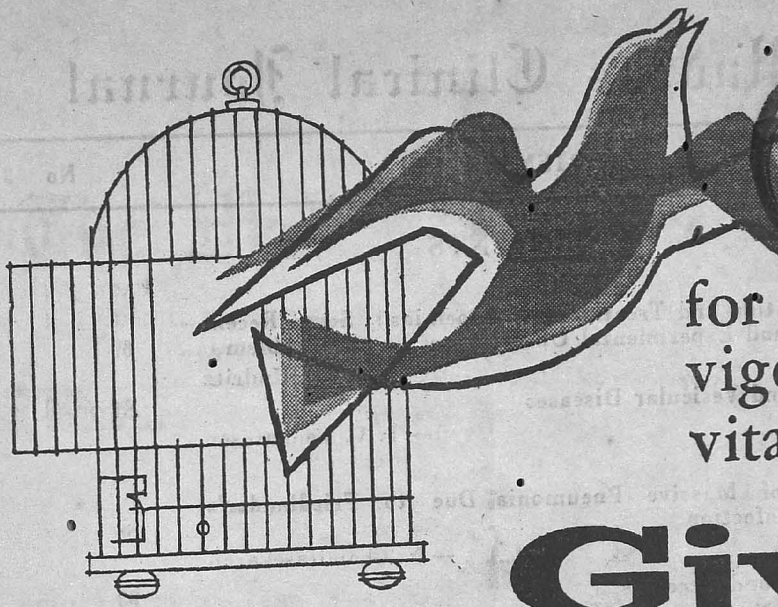
It is earnestly hoped that many will turn up for the Annual Day.

Dinner is by subscription, which is Rs. 5/- per head. Guests are also welcome at the same rate.

Kindly address all communication to the undersigned. Cheques should be drawn in favour of the Treasurer, Stanley Medical College Old Students' Association, Madras.

72, Armenien Street,
Madras-1.

D. R. VARMAN,
Honorary Secretary,
S. M. C. O. S. Association.



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