

THE
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[No. 3



A QUARTERLY JOURNAL OF MEDICINE

General Editor:

Dr. M. R. GURUSWAMI MUDALIAR, B.A., M.D., C.M.

FOR DETAILED LIST OF CONTENTS SEE WITHIN.

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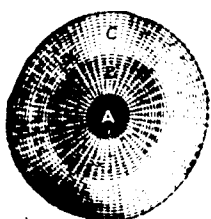


Diagram represents inflamed area. In zone "C" blood is flowing freely through underlying vessels. This forms a current away from the Antiphlogistine, whose liquid contents, therefore, follow the line of least resistance and enter the circulation through the physical process of endosmosis. In zone "A" there is stasis, no current tending to overcome Antiphlogistine's hygroscopic property. The line of least resistance for the liquid exudate is therefore, in the direction of the Antiphlogistine. In obedience to the same law, exosmosis is going on in this zone, and the excess of moisture is thus accounted for.



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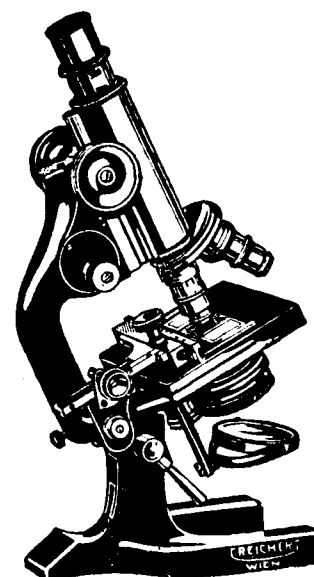
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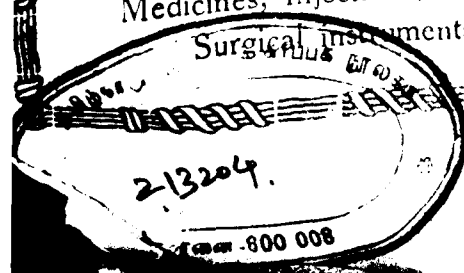


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IN MEMORIAM

(Sir Gerald Godfrey Giffard.)

With hearts of grief we lay to rest,
Him who in life gave of his best,
Who worked with will, amongst us toiled,
And leaves a memory now unsoiled.

He oft amidst our beds of pain,
Did move with healing art,
His gentle touch gave life again,
New hope, new courage—heart.

But that though much, that was not all,
He was a man to dare,
Obeying forthwith his Country's call,
Her honour was his care.

See, silently he treads the deck
Of his proud bark that ploughs the wave,
His dauntless soul in war braves wreck
Some brother-comrade's life to save!

The buds of peace which burst at last,
Upon those sanguine tracts of war,
New fragrance gave to all his past,
A deeper love for man he saw.

In his great heart there was a place,
A tender nook for woman too,
Ah! See! How proudly does he trace,
His vision, now in concrete true.

And as we pass within those walls,
The precincts where he loved to dwell,
Where once with human hands the calls
Of sufferers he did tend so well.

Let us like him then learn to give,
Give to the world our very best,
To die, that some one else might live,
In happier state, this life more blest!

VICTOR CONRAN.

THE MADRAS Medical College Magazine

Vol. V

JANUARY

No. 3

Kala-Azar*

By T. K. RAMAN, M.B., B.S., D.T.M., (*Research Student, University of Madras.*)

Epidemiology of Kala-azar

THE fact is clear that Kala-azar is increasing in Madras City, and as one passes through the wards of the General Hospital, the increasing number of cases that one comes across is ample proof of the statement. The investigation of the houses of patients admitted into the wards of the General Hospital is the only possible way at present. It is a hard job to go and have a look at the other people in the same house, all the more so in the neighboring houses that are not infected. The work is in progress and I hope to give something definite about the distribution of the disease in the Madras City within a reasonable period.

Out of the 38 cases investigated by me in the General Hospital, 21 proved to be Kala-azar cases, either Indigenous or Imported.

Distribution of Indigenous cases.

George Town.....6	New Town.....1.
Mannady.....1.	Chintadripet. ....1.
Royapuram.....2.	Choolai.....3.
Park Town.....1.	Triplicane. ....1.

Distribution of Imported cases.

- (1). Ramnad District.....1.
- (2). Tinnevely District.....1.
- (3). West Coast.....1.

* Extract from the Half yearly Report forwarded to the University of Madras.

The West Coast is one of the areas that has not been recorded by the previous observers.

Diagnosis and Treatment of Kala-Azar.

The basis of diagnosis was by:—

- | | |
|---|----------------------------|
| (1). Examination of the peripheral blood. | |
| (2). Liver puncture. | } Culture in N.N.N. Media. |
| (3). Spleen puncture. | |

The *Aldehyde Reaction* which is much advocated by the Calcutta School of Tropical Medicine cannot be much relied upon, any how as far as Madras is concerned. A short communication will be sent about the Clinical significance of Aldehyde reaction.

Examination of the peripheral blood—No doubt examination of the peripheral blood, if persisted in, will show the parasites in more than 85% of the cases. To find a suitable case for the feeding of Sandflies necessitated a thorough search, and resulted in finding the parasite in the majority of the cases.

The following are the results of the Peripheral blood examination:—

Total No. of cases examined.....	18
Positive blood findings.....	13

Of the cases examined one case showed the parasite in the 6th slide, one in the 4th slide, 2 in the 3rd slide, and all the rest in the first slide.

In one case a slide taken just before death. showed 34 parasites in one endothelial cell which is a rare phenomenon.

<i>Liver or Spleen Puncture.</i>			
Positive for	Malaria.	Negative	After
L. Donovan bodies.			Treatment.
Liver puncture	4.....4.....	3.....	2.....
Total number of Liver punctures.....13.			
Spleen puncture.	11.....5.....	1.....	7.....
Total number of Spleen punctures .....24.			

Is Liver puncture a safer operation than Spleen Puncture?

Each has its own advocates and there are arguments for, and against. But as one goes through Assam and Bengal, where Kala-azar is more prevalent than in Madras, the number of Spleen punctures done every day is proof enough to say that Spleen puncture is a safe operation and not so dangerous as is thought to be by some.

Spleen is an organ which is more vascular and less tough than the Liver, and people attribute the danger of Spleen puncture to these facts. But the preponderance of elastic fibres and the presence of involuntary muscle fibres in the Tunica albugenia of the spleen favour the closure of the opening of the puncture which the liver is not able to perform.

Puncturing the spleen that is not enlarged, or the one that is just palpable below the costal margin, is easily done by going through the tenth inter-costal space in the posterior axillary line. This technique has sometimes to be employed in the earliest stages of the disease where liver puncture smear is negative.

Morphology of the L. Donovan Body. Out of smears from the 15 cases of liver and spleen punctures, only two cases showed the *Rhizoplast*. No connection could be traced between the presence of the *Rhizoplast* and the clinical aspect of the disease.

None of the parasites seen in the peripheral blood showed the *Rhizoplast*.

Treatment of Kala-Azar. Through the kindness of Dr. Brahmachari a regular supply of Urea Stibamine could be had for experimental purposes. All the cases treated got completely cured within a short period of 14 to 35 days. Of all the drugs we know so far, Urea-Stibamine is the best in the treatment of Kala-Azar.

Breeding of sand Flies.

The method employed was that described by Dr Smith from the Calcutta School of Tropical Medicine with still further

The Kala-Azar Commission (Christophers, Shortt, and Barraud) then took up the question and confirmed the observations of the School of Tropical Medicine in Dec. 1924.

The experiments were repeated by me in Madras and the development of the parasite in the sand fly *P. Argentipes* was demonstrated in Madras also in October 1925. Now in all the three big Kala-azar centres in India (Assam, Bengal, and Madras) the parasite is shown to undergo development in the sand fly *P. Argentipes*.

According to theory of possibilities, the possibilities in which the sand flies could be incriminated in the transmission of Kala-azar, taking the three things:

- (1). Adult sand fly (female.)
- (2). Sand fly larvae.
- (3). L. Donovan body.

(a). Taking 2 at a time in which one (L. Donovan body) should always be present.

nPr.....4

(b). Taking 3 at a time,

nPr.....3.....6

Total.....10

Of these only four need mention.

(1). *Direct, as the development of the Malarial parasite in the mosquito.*—The parasites being taken in by the blood meal, the development taking place inside the gut and the final stage in the salivary gland. Patton lays special emphasis to the fact that “in order for this human parasite to find its way back to man it must be injected into the body in the non-flagellate form, the post-flagellate stage.” Till now nobody has seen the post-flagellate stage in the sand fly, either in the alimentary canal or in the salivary gland.

In two of my dissections of sand flies, on the second day after the feed the altered blood was seen not only in the alimentary canal, but also in the salivary gland. This might suggest the possibility of the flagellates regurgitating back and the final development (a flagellate stage) taking place in the salivary gland.

(2.) The female after having taken in the parasite, the development of the parasite taking place in the next generation, as of the Piroplasmosis in the Tick. There does not seem to be any possibility of such a method of transmission taking place in the sand fly.

(3.) The larvae taking in the flagellates from the dead infected female. It is quite likely that such a thing should take place, and the infectivity of a vacated house could clearly be accounted for. But all experimental evidence in that direction has been negative. Larvae of sand flies were fed on flagellate cultures, and the flies bred out from them were dissected. Nothing in the way of L. Donovan bodies could be seen either in the fresh preparation or in the stained specimens.

(4.) The larvae taking in the L. Donovan body, the flagellate stage developing in the gut of the larvae and the final development in the adult female. Larvae can take in the L. Donovan body only from the faeces and urine. Critten in 1911 has recovered L. Donovan bodies from the faeces, and Shortt has cultivated the parasite from the urine, of Kala-azar patients. For this method of transmission to occur the presence of sand fly larvae should be demonstrated in the bath rooms and latrines. Experiments are being conducted in that direction to see whether such a method of transmission is possible.

Kala-azar in the Madras Presidency.

It is extremely unfortunate that the distribution of the disease has not been definitely worked out in Madras. No doubt K. A. is increasing in the Madras city; and new endemic foci have been recorded by different authors. Kayalpatnam has been reported by Cunningham and Pandit, Ramnad District by

Balasubramaniam, and the West Coast by Mudaliar, Raman, and Menon. It is of extreme economic importance to see how far Rameswaram is infected, on account of its religious importance and the increasing number of people flocking every year. So far we do not know the time required for an individual to get infected from an endemic area. Cases have been traced where only a night's residence in an infected area was sufficient for the individual to contract the disease.

Two cases in my series got infected in Madras. They went to Pattambi (a place in S. malabar), and having stayed there for 4 and 8 months respectively, came back to Madras. From reliable information we know that those cases have never been the starting point of fresh infection in Pattambi.

Incidence of Sand Flies and Kala-azar in Madras.

Patton in 1922, in his Reflections on Kala-azar and Oriental Sore problems, says 'In my opinion the sand flies in Madras at any rate cannot be seriously considered as the invertebrate host of the parasite of Kala-azar'. He is on the safe side when he says that he has not fed sand flies on Kala-azar patients.

He describes only one species of sand fly, and that too *P. Minutus*. Of course his statement cannot hold good to day. Now Madras has:—

- (1). *P. Squamipluris*. (Sinton)
- (2). *P. Annandale*, (Do.)
- (3). *P. Argentipes*.
- (4). *P. Papatassi*.
- (5) *P. Minutus*.

Of the 5 species of sand flies *P. Argentipes* is the commonest that one comes across in the stables and cow sheds of Madras. Plenty of sand flies could be caught in the months of July, Augt. Sept., and with the onset of the rains the number seems to be diminishing.

From information available so far, the disease is distributed in George Town, Royapuram, Park Town, Vepery, New Town, Chintadripet, Choolai, and Triplicane. *P. Argentipes* could be caught from all the areas investigated, but the stables and cow sheds seem to be the place where they are found, and not houses and sleeping rooms.

Egmore was supposed to be an area free from Kala-azar, and no second case is reported after the introduction of a new case. *P. Argentipes* are found in Egmore but only in smaller numbers as compared with the other areas.

From the reports of the Research Workers's Conference held in Calcutta in 1925, it would seem as if the whole question of Kala-Azar transmission problem has been "virtually solved", and that the sand-fly (*Phlebotomus Argentipes*)—is the vector of the disease, the mode of infection being the regurgitation of flagellates when the infected sandfly bites a susceptible individual.

If that is so, a few of the observations have to be accounted for—under experimental conditions it is extremely difficult to feed the sandfly a second time—whether they do so in nature is very doubtful.

If that is the mode of infection, it is against one of the essential principles laid down by Patton: "In order that this human parasite might find its way back to man it must be injected in the non-flagellate i.e., the "aflagellate stage."

The maximum number of days a female *Phlebotomus Argentipes* could be kept alive under experimental conditions is only 8 days. If we assume that one generation of sandfly is enough to transmit the disease, how can the infectivity of a vacated house be accounted for? "Kala-azar houses" are supposed to be infective at least six months after the occupants have left the house.

On investigating one of the villages in the West coast, where there is no Kala-Azar at least for the last ten years, *Phlebotomus Argentipes* are found in numbers both in cowsheds and in

sleeping rooms. This might also mean that the conditions of the village are absolutely identical for the transmission of Kala-Azar, the only condition necessary for the incidence of cases being the introduction of a new case. Mudaliar, Raman and Menon reported indigenous Kala-Azar in the West Coast and assumed that conditions in the West Coast are favourable for the transmission of the disease. But on visiting one of the infected houses in Madras, it was observed that a case was in that house for one year, *Phlebotomus Argentipes* were also present and no second case has occurred in that house.

Each one of these taken by itself might not mean anything, but all of them read together make one pause before accepting the findings of the Research Workers' Conference of Calcutta as convincing. Nay, these findings seem to negative their assumption.

My thanks to Col. Christophers, to Major Sinton for identification of sandflies, to Col. Choudri, Major Malcomson, Dr. Guruswami Mudaliar, and Dr. T. K. Menon for their valuable advice and assistance, and to Major Pandalai for giving me all facilities to work in his laboratory.

[The treatment with Urea Stibamine has no doubt a very promising future. But it cannot be ignored that two of the cases came back with signs and symptoms of K. A. It is a pity that no spleen or liver puncture was done on these on readmission.

With the amount of information at present available, it does not look as if sandflies would prove to be the carriers of infection in Madras. The infected houses where the sandflies are abundant, where the infected individual lives along with his relatives, and where the relatives in the house have failed to catch the infection under such circumstances even when observed for a full year, seem to prove that sand-flies are not the culprits.

We congratulate Dr. T. K. Raman on his fine work so far, and hope that he will pursue the research till the question is solved.—EDITOR.]

The Glands Regulating Personality.

By Captain C. S. S. SARMA, Assistant Surgeon, Atur (Salem District.)

Medicine has been enriched within the last generation by the addition of three kindred branches of scientific enquiries, viz., Bio-chemistry, Analytical Psychology, and Preventive Medicine. These three have enlarged the horizon and opened out untrodden paths for the betterment of body and mind. Of these three, Bio-chemistry takes the palm for being of most intimate concern to medicine proper in all its branches. It is also the most fascinating. Ecstatic writers have been singing its paeons and their audacity stops at nothing short of a 'chemistry of the soul.' They claim that it is through Bio-chemistry we are to unveil the mystery that resides behind the cell.

With this wide significance Bio-chemistry has now come to embrace a heterogeneous mass of knowledge, which are designated experimental physiology, chemical physiology, organic chemistry, cell-pathology, micro-biology, parasitology and dietetics. In short it proposes to concern itself primarily with the physical basis of life itself. Consistently, the methods and instruments devised have yielded vast data, while the promise of to-morrow seems much more than the achievements of yesterday. Medical science has no doubt been benefitted by the very useful additions of knowledge towards a rational therapeutics, but if ever there was an instance of a part usurping the functions of a whole, it is here. What purported to be an annexe to medicine, has now come to command all attention to itself and withal point its fingers alluringly from Pisgah to the Promised land of Penultimate knowledge of no less than life and death.

One such authoritative beckoning is the relation of the glands of internal secretion to human personality.

The subject no doubt is taboo to the orthodox Medico, who deprecates cults, whether in or outside the professional circle. It cannot be the function of the Doctor, says he, to take upon himself the role of Eugenist, Thought-reader, and Pope rolled into one, to the detriment of the art of healing which is summarised in one phrase—*Relief of pain*. A decided handicap to the alleviation of pain in an individual, when and where you find him, can be no excuse whatsoever to all the brainy pre-occupations of that full-blown son of Aesculapius, about mass-pain and mass-mortality in the abstract. The laity could but turn away from people such as he, as from so many truants to their profession. But as Bernard Shaw has said, "it is all the young could do to the old to shock them and keep them up-to-date." And one such shock is the influence of the glands on Personality. For medical orthodoxy is being battered down to admit that good old proposition—that the Doctor like many other professionals, should know "something of everything and everything of something"—if he is to fit in nicely in the little scheme of work with justice to himself and others. It is just here that the curse of specialism is sought to be lifted by the no less awful proposition of the Ideal General Practitioner. Medicine has now realised that it takes all men to build a church, and the role of a reliever of Pain has to take stock of all and sundry aids, if it is to fulfil even that one object as largely as possible. It is thus that the bone-setter and the faith-healer have been received into the fold of medicine proper, only shorn of their charlatanry. The Bio-chemist asks for nothing more when he attempts to survey the problems of Personality from the heights of endocrine data he has been accumulating all these eventful years.

And we cannot grudge him this little indulgence.

To digress a bit, it would be worthwhile to enter into a short history of just how the glands were discovered, and it is no exaggeration to say that the veriest romance tinges its early beginnings. One author traces the beginnings of this science to a certain Theophile de Bordeu, a Paris physician who, though very erratic in his ways, yet managed to work himself up into the

court of Louis XV, and finally by his courtly manner secured that monarch himself for his patient. He flourished in the eighteenth century and was enthusiastic over the then newly discovered microscope. He published a work called a "Medical analysis of the Blood," which embodied his observations of eunuchs and capons. He was the first to point out the conception of secretions from the sexual glands getting absorbed in the blood and the secretions being at the back of the distinctive secondary sexual characters in man and woman. But the early nineteenth century saw little further advance. Even the celebrated physiologists of the times did not properly apprise the value of these insignificant looking glands situated in different parts of the body. Henle, Johann Muller, Laennec, all but ignored these glands and vaguely conceded that they might in some way affect blood or lymph, or chyle. The first research worker to develop the experimental method was Berthold of Gottingen. He removed the testes from four roosters and transplanted them under the skin. He showed the animals so treated retained their male characteristics of voice, reproductive instinct, fighting spirit, growth of combs and wattles. The inference was inevitable, that though the gland duct was put out of action by the experiment, something was getting absorbed in the blood—the interstitial elements—which maintained the masculinity. Berthold called it the "*testicular internal secretion*." Berthold's experiment was a single swallow and it did not make a summer. His fugitive article in the medical press of his time attracted no notice until Claude Bernard revived an interest in internal secretion by his study of the glycogenic functions of the liver. He propounded that glycogen was the internal secretion of the liver, and startled the teaching of his day—that the liver was only an excretory organ discharging bile into the intestines. Claude Bernard published his "*Researches in Experimental Physiology*" in the years 1855–56. Dr. Thomas Addison also wrote his epoch-making paper on "*The constitutional and local effects of disease of the Suprarenal bodies*" ascribing albeit timidly that the ensemble of signs and symptoms now known as '*Addison's disease*' was perhaps due to the loss of some specific secretion of the

suprarenal. This paper stimulated Brown Sequard, who occupied the Chair of Physiology in the College of France, to follow up experimentally Addison's clinical deductions on the suprarenals, and to reproduce the disease by extirpation of the glands in animals. Subsequently thyroid and thymus cropped upon the scientific stage. And the names of eminent physicians and surgeons came to be associated with much experimental work on the thyroid during the latter half of the nineteenth century. Amongst them, the eminent Swiss surgeon, Theodor Kocher, performed the first excision of the thyroid gland in man for goitre. J. L. Reverdin described the details about a case of operative myxoedema. Sir Victor Horsley produced experimental myxoedema in the monkey. Parry ascribed to exophthalmic goitre a definite thyroid origin. Schiff worked with thyroid extracts, and thyroid feeding and thyroid preparations were the order of the day. And the thyroid miracles received and perpetrated the widest advertisements for the rest of the glands. Lay interest in cretins and giants got a fresh fillip from the medical press. Attempts subsequently by Horsley and others to remove the pituitary from animals for experimental study of its functions, proved futile, from 1866 to 1908. But Paolesco of Bucharest and, later on Cushing, succeeded in their attempts. They postulated that this little gland lodged in the brain in what is effectually a "*skull within a skull*" was intimately concerned with growth. Pierre Marie in Paris studied cases of acromegaly, and inclined to the belief that pituitary disturbance was related to it. Rejuvenation, especially of sexual activity was fostered as a cult in Paris in the late nineties and was fittingly championed by the seventy year old Brown Sequard. The glands of internal secretion were the sensation of the hour. "The wits of the salons crackled, the bourgeoisie chortled and the proletarian roared that the elixir of life had been discovered." Much horse-fun was enjoyed at the expense of Brown Sequard. But he withstood both the charlatany and quackery ascribed to him, and emerged out victorious as the most modern path-finder to the realms of internal secretions. Then the advance from the idea of definite secretions to the conception of hormones was the next great step.

Experimenting on the pancreas, Pawlow ascribed a nervous origin to the pancreatic stimulation provokable by the presence of dilute acids in the intestines. Bayliss and Starling shut out the nervous system in their experiments and proved a blood origin to the pancreatic stimulation, independent of dilute acids but dependent on an emulsion of the intestinal mucous membrane plus a dilute acid. This substance, they thought, was of the nature of a chemical messenger or "*Hormone*," and they named the one responsible for the provoking of the pancreatic secretion as '*the secretin*.'

Thus from Claude Bernard to Brown Sequard and from them on to Bayliss and Starling, we seem to step from the vague beginnings of Endocrinology to the *terra firma* of accepted therapeutics, and from there onwards the enquirer is wafted to vistas and vistas of undiscovered domains with manufacturing chemists employing teams upon teams of research workers, not merely to wrest the secrets of the complex chemistry of the cell and press their achievements to the amelioration of human suffering, but what more, to change the entire face of human personality, and in fine to precipitate the Superman in a test-tube.

But Human personality has baffled all attempts at scientific survey so far, though yet the lure to chart its domains and control its output for the weal or woe of mankind, is still as incessant as it is subtle. It is of a class with Amundsen's daring flights to the Pole, or to the much nearer attempts to scale the Everest, full of adventure, full of import, and full of the spirit of pure knowledge. So then to envisage the objective of one's quest, it is fitting that Personality should be cribbed and confined into a definition. And it is just a definition that is hardest to hit upon for "*human personality*" which is compounded of so elusive a thing as the soul and so subtle an aroma as the mind. Should one chance to find a definition midst the tangled skein of words the poets and philosophers amongst mankind will pull it to pieces as being far short of their dreams. But for our practical purposes it will do to merely tune the definition to a lower key and connote "*personality*" to mean simply "*the mind in action*."

It is then essential to have a conception of the chief elements that constitute mind and the various human interests that it translates into action. The mind is primarily occupied with the elementary interests of the body. An interest is a primordial rut in which the forces of the body and mind of the organism find their wonted path to achievement. Such interests are connected with nutrition and reproduction. As subordinate and corollary interests are developed, self-assertion, self-preservation, self-repression and other familiar traits of the mind in action. In this the needs of the body are primarily sought to be subserved and the result is a mental adjustment of such an alignment as would facilitate the accomplishments of the primary human interests or better instincts, without undue struggle. Thus anger is thwarted self-assertion, which in turn may hinge upon thwarted nutritional or reproductive demands of the organism. Fear is a defensive mechanism directly concerned with self-preservation. Bias is an attitude similarly conditioned. Forgetfulness and memory, day-dreams and repressions, will and imbecility, are all the final efflorescence of the mind in the stress of visceral readjustment. It is clear that the mind is thus a reflex of the penultimate metabolism of the body, the prominent currents of which swirl past the glands of internal secretions unmistakably as round so many landmarks. Auto-suggestion of a particular kind can be shown to be related to the steady change of intra-visceral pressure in a particular organ, which in turn may mean increased or decreased metabolism, innervation, or pathological irritation. Will, at whose shrine the great Nietzsche worshipped, may be the safety valve on which the latest evolved nervous system entrenches itself to undo the fierce onslaughts of the earlier vegetative system for the sole mastery of sentient existence. The emotions are all excellent touchstones that betray the quality of the visceral vegetative output, as they enter into the alloy of the conscious and new-perfected brain-and-nerve apparatus. "Thus the mind shares in the ups and downs of visceral history, and itself transmutes the cell to remould it nearer to its highest longings," says the endocrine enthusiast.

And as a consequence in the life of the world emerge those spectacular episodes and crises, successes and failures that are the puzzles of poets and philosophers. Personality tinged by the particular endocrine constituent gives rise to genius and dullard, weakling and giant, the saint and the sensualist; in a word it divides the world into "careerists" and "slaves"—into those two large camps where the *few* shape the destiny for the *many*.

A word at once of explanation and warning is necessary here. It is not to be lightly assumed that the mind-stuff at last has been brewed in a test-tube, or that the endocrine enthusiast has at long last cried "Eureka" to the problem of Personality. When we speak of a person as such and such a '*gland-centered*,' we but give a local habitation and a name to the ensemble of facial features, nutritional tendencies, mental outfit, disease diathesis, sexual peculiarities, social attitude, religious propensities, and physical configuration that stand out strangely and typically correlated midst the mass of metabolic mixtures, peregrinating as men and women. A '*gland-epoch*' is a period where a particular physical entity has its maximum organ and function capacity. A '*gland-dominance*' is a specific superiority of its particular innervation, secretion-rate and quality, and the systemic absorption and liability to its influence. A '*gland-compensation*' is a feature analogous to cardiac compensation against physical handicap, whether they be located in the valve endocardium or the peripheral arterioles or deranged innervation central or peripheral. Such compensation has a maximum, a minimum, and an optimum level of efficiency, as well as a periodic or cyclic variation, dependent on circumstances directly or indirectly connected with the organ affected. The glands of internal secretion show this feature in their economy, and from the data now available it would appear that the ancients were well-advised when they divided humanity into the 'sanguine, the lymphatic, bilious, to which might be added the modern neurotic,' types and for the treatment of whose affections they suggested varying regimes of diet, medicaments, and medical or surgical handicraft. The latterday saints of Ayurveda are not slow to

make capital of this similarity amongst the superficialities in the theory of disease and to jump to the conclusion that the Tri-Dosha theory is on all fours with the conception of an endocrine origination. Be that as it may, the astute clinician cannot fail to see the behaviour of the thin and well-fed types to infection and immunity. A pandemic like Influenza provides ample opportunity to pick out glandular types and classify them in their reaction to toxæmia, local and general.

With this preamble, it is possible to give a resume of the endocrine personality. A short tabular statement of the chief points will serve to fix the traits so well in memory that I make no apology for adopting *in extenso* the tables from Louis Berman's excellent book on the subject.

1. Thyroid	....	Thyroxin	....	Gland of Energy Production, Controller of growth of specialised organs and tissues, chiefly Brain and sex e. g. swells with excitement, pregnancy, menstruation.
2. Pituitary	....	Gland of Energy Consumption.		
Anterior lobe	....	Unknown	....	Growth of skeleton and supporting tissues.
Posterior lobe	....	Pituitrin	....	Nerve-cell, and involuntary muscle cell, brain and sex tone.
3. Adrenal			....	Gland of Combat.
Cortex	....	Unknown	....	Brain growth.
				Tone development of sex gland.
Medulla	....	Adrenalin	....	Energy for emergency situations.

4. Pineal	....	Unknown	....	Brain and sex development. Adolescence and Puberty. Light and maturity.
5. Thymus	....	Unknown	....	Gland of Childhood.
6. Interstitial Glands			....	Testes in the male, Ovaries in the female, Glands of secondary sex traits.
7. Para-Thyroids.	...	Unknown	....	Controller of Lime metabolism.
8. Pancreas	....	Insulin	....	Excitability of Muscle and Nerve. Controller of Sugar metabolism.

The above is a scheme of the general role of the influence of Glands on the body. Distinctive facial types emerge out in clear-cut contrast, and to study one's physiognomy is thought to be epitome of developmental history of the individual. Thus the "Hyper-Thyroid" face typified in the features of the immortal Shelley, is described to be oval, delicately chiselled, with wide high brow, large, vivacious prominent eyes, with a sheen about them, a small mouth with sensitive lips, with perhaps a flush of rose over the cheek-bones, bestowing an effeminate atmosphere to the whole countenance. Amongst the variants to this Shelleyan type occur all those faces which are remarkable for being the least animal and brutish amongst their fellow-men.

The "Sub-Thyroid" face typified in the unmistakeable face of the "Cretin" is a common enough phenomenon. The coarse, dull, pudgy look, with a pug-nose, thick lips, dry, coarse fore-shortened hands, a stupid countenance, with wide separation of the eyes, filled with a vacant stare, is an unforgettable caricature of humanity, hard to be confounded with anything else.

The "Thymic" face of the 'angel-child' is equally remarkable, for its general hairless, smooth, soft skin, with large eyes, and long lashes, thin lips, oval chin, in fact a perfect child that Sir Joshua Reynolds would have loved to transfer to the canvas. In adult age, the thymic face is said to be characterised by a receding chin and under-developed mouth.

The "Adrenal" face is said to be hairy, irregularly broadish, perhaps freckled, with a low hair-line, and a low brow, and with some hair growth over the cheek-bones.

Two types of the "Pituitary" face are described, the hyper—and the sub-pituitary type. The former is said to be long, narrow, with prominent bony parts, a square protruding jaw, a high thin nose, with emphasized eyebrows and marked cheek-bones. The sub-pituitary type is said to possess a moon-face or rounded, a receding chin, with the cheek-bones buried under fat-pads, a flatter nose, a complacent tranquil air about it, with perhaps a sleepy or dull countenance. The hands give a clue to the excessive or diminished absorption of the secretion. In the former, the hands are large, bony-shaped, gross, and in the latter they are said to be plump, with tapering fingers.

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An "Interstitial" facial type, dependent on well-functioning sexual glands in either sex, is described. The secondary characters of sex manifest themselves in the epochal growth or arrest of the terminal hairs over the chin, the disposition of the sexual hairs over the pubes, the configuration of the skeleton, the proportion of the length of limbs to the trunk, the shape of the pelvis, nates, etc. As a sub-variety occurs the "Eunochoid" type, where three different facial sub-types occur. In the one the face is smooth, cool, marble-like, poor in pigment and colour. The other possesses a sallow wrinkled skin, while yet in teens and looks 'wizened and wan' as the expression goes. The last is the frankly feminine type with hairless, delicate, clean-cut features, almost girlish.

The above types are some of the outstanding features of the face that betray the glandular make-up of the individual. But the component parts of the personality embrace still wider facts of physiology in addition. Taking the sharply contrasted Thyroid personality, we shall be able to trace the ups and downs of the individuals in the ups and downs of his Thyroid gland. The "Thyroid-Insufficient" starts life as a cretin, and the peasant-faced, broad-nosed, tough-skinned, coarse, straight-haired baby is the result. There is under-growth writ largely on the face, both physical, and mental. There is retardation of self-control, he sleeps excessively, snores and is tired in the morning. At school reaction-time, learning-time, and remembering-time are all increased, and he is put down a dullard. He perspires little, fatigues easily, and is subject to colds, adenoids, and tonsillitis. Puberty and menstruation are delayed, secondary sexual characters are slow in coming out, and they very often imitate those of the opposite sex.

But let us see how the "Thyroid-Dominant" starts life. As a child he is healthy, thin, robust, active, fair complexioned, straight-nosed, with a high bridge, eyes rather inclined to be prominent enough to deserve the appellation 'pop-eyed,' with excellent teeth, regular, firm, white, with a pearly translucent enamel. He seems never to get tired, sleeps lightly, and is hardly ever a subject to the numerous diseases of childhood except perhaps measles. The adolescence of such a child is something out of the ordinary; it is apt to be more stormy, full of adventure, episodic. It is said that adjustment to people and surroundings is lacking, and the thyroid-dominant joins the ranks of those who exhibit the 'wander-lust', and roam far and wide to chalk out their own careers. At maturity such a person exerts a magnetic personality on those around him and is again remarkable for the ease with which he flounders into depression. He continues rather leanish in adult age, and has a knack of getting lean under stress, mental or physical. The features of the thyroid-dominant are clean cut with thick, wavy, hair, thick long eye-brows, large frank brilliant keen eyes, regular well developed teeth and mouth.

His sexuality is well-differentiated and finely susceptible. He has a noticeable emotivity with which he richly colours the stuff of life, and he has a remarkable rapidity of perception, which manifests itself in a quick volition, impulsiveness of utterance, and action almost explosive. The energy such a one liberates is restless, inexhaustible, and not infrequently he suffers from insomnia. If in such a *thyro-centric* individual there should co-exist a thymus dominance, we have the person noted for emotional instability, subject to brain-storms, and fits of furious rage verging on a state of semi-consciousness. In fact, they have seizures which may be designated true "psycholepsy." Irresponsible acts of insubordination and violence become their second nature. For, it is ascertained that amongst the distinctive thyroid functions of the mind are chiefly a resource-fulness that comes natural to the gifted few, an inherent capacity for learning and educability, and habit formation. During adolescence and sex-epoch it helps in the unfolding of every organ and function of the human being.

Following the thyro-inferior through life, emerge the possibility of the reconstruction of the cretin, at puberty or after thyroid-feeding. He develops into a passable human being, with his height below average, a tendency to obesity, a sallow complexion, with the hair dry, hair-line high, with eye-brows either scanty, sometimes the whole or the outer-half of the eye-brow wanting, with the eyes deep-set lacking lustre, with the teeth irregular, becoming carious early, with the extremities cold, and subject to, chilblains. If neither puberty nor gland-feeding avail, there results a vicarious pituitary or adrenal pre-dominance, when the thyro-centric possesses a superior intellect with a sad lack of energy, or degenerates into the more animal, and less self-controllable type of humanity.

The *adrenal* personalities are no less remarkable. They easily divide themselves into the *adrenal compensated* and the *uncompensated*. The skin in the former is pigmented, this pigmenting manifesting in the fair-skinned as a profusion of moles, birth-marks, and freckles, and as a child he suffers from diphtheria, tubercle and influenza, diseases supposed to be adrenal-attacking. The

adrenal type possesses ubiquitous hair, thick, coarse, and dry, and specially prominent over chest abdomen and back. The hair line is low and the complexion is darker than the racial stock warrants. The teeth are well-developed and the canines particularly so, for they may be specifically named the 'adrenal teeth'. The size of the canine teeth is said to be directly proportional to the adrenal development. The teeth have a yellowish colour, and a reddish tinge is imparted to the grinding surface. They have again a tendency to be long, sharply pointed as opposed to the stumpy canines of other types. The adrenal cortex and the brain join issues and mutually re-inforce each other. An excess in its secretion means all round energy and masculinity. It emphasizes the masculine traits and where the preponderance of its secretion operates on a female organism, the effect tends to be a masculinization or eviration of the woman. With adequate reaction on the part of other glands, the woman bursts into one of those spectacular successes which the fair sex now can claim for itself in almost all the walks of life where man has distinguished himself hitherto. In the absence of such a harmony, the woman precipitates herself into the variety of prudes and spinsters, maiden-aunts and cranks, that are the bane of their kind and the problem of all sociologists.

The "*Adrenal-Uncompensated*" is a most familiar phenomenon. In fact the apostles of Endocrinology maintain that the world-war has sapped the adrenal reserves of mankind and the appalling mortality of the pandemic of influenza that followed on the heels of war was useful in demonstrating among other things, that post-influenzal depression and shell-shock and war-neurasthenia may all hinge upon a couple of cockle-hat shaped affair astride the kidneys. Such an adreno-deficient is energetic in the morning, fagged in the evening. He requires more sleep, long recreational trips, and holidays. He seems to develop freckles, and more or less pigmented moles emerge in the skin as he passes through life. He is the "*Neurasthenic*" par excellence. He has cold hands and feet, a chronic obsessive indecision plagues him through life, he is easily fatiguable, his blood pressure is low as

e temperature and sugar-metabolism. The skin is perverted and the tone of the peripheral arterioles, the skin giving a blanched or reddened effect to stroking. There is abnormal irritability of the skin, and prurigo. The individual if starting life as a congenital adreno-deficient with a nervous geneology his early child-hood is marked by feeding difficulties even after the second year. Growth is a strain, and the child does badly at school. In fact he is the sort of person not likely to get through a college course. He tries to compensate psychically for his failing adrenals and this faulty mental adjustment often lands him in hot water annoying both friend and foe alike—till at last the poor misunderstood creature gets thrown out as crazy, lazy, or hazy out of every job he might flounder into. Endurance power is sadly lacking and he is superseded at every step, by people who might be in every respect unfit to untie the latchet of his shoes, except for their superb adrenals.

The "*Pituitary-sufficient & dominant*" is a type by himself. He possesses a large spare bony frame, the eyes are wide apart, the face is broad, the teeth broad, large, unspaced, the chin square, protruding, with large feet and hands, and early hair-growth on the body. The skin is thick and the sex-organs are large. The mental outlook is aggressive, precocious, calculating, self-contained. The middle incisor teeth are especially prominent and their size is proportional to the amount of pituitary secretion. If the secretion is inferior the most usual dental anomaly met with is a crowding or distorted lateral incisor, delayed eruption, etc. The brows are thick and they meet in the middle constituting a 'nasal brow'. The muscles are large and well developed. The hair tends to be distributed chiefly on the extremities, that is on the hands, arms, and legs alone. The long, lean mentally acute individuals subject to high blood pressure, with plenty of initiative, endurance and sexual periodicity, the men endowed with a good appetite, are those who by nature harbour a large pituitary in their roomy *sella turcica*. The "*Pituitary-Inferior*" on the other hand presents quite a different picture. He has a small, sometimes even a delicate skeleton. is inclined to be adipose, his musculature is weak, the

upper jaw is prognathous, the skin dry and flabby, the hands and feet are small, he has an abnormal desire for sweets. His pulse, temperature and blood pressure are subnormal, and the control over the lower vegetative system is poor. Mentally he is dull, apathetic, backward, loses self-control quickly, cries easily, is discouraged promptly, in short has no psychic stamina worth mentioning. He is further subject to obsessions, and his sexual morality is frankly amoral.

The "*Thymo-Centric*" Personality perhaps arrogates to himself much of the romance of youth, or what Edward Carpenter would call, the romance of the "intermediate sex". The thymus persists up to the 5th, 6th, or 7th year. Its epoch is roughly upto such times as the permanent teeth appear, or till the essentially distinctive sexual glands—the gonads—dominate the scene. A preponderance and persistence of thymus-activity in a child gives, as we have mentioned above, the Angel-type of child, but a child that is easily wiped out by one of the many diseases of infancy, chiefly tuberculosis. Should the thymus not only fail to regress but persist, and if the pituitary gland does not enlarge in compensation, the thymo-centric male comes to have a slender waist, rounded limbs, a graceful body, long chest, and a feminine pelvis. The skin is smooth and velvety with little or no hair on the face. Often he is flat-footed or knock-kneed. The female Thymo-centric has a narrow waist, the breasts are poorly developed, the thighs are arched, the hair-growth is scanty, the menstruation is delayed in appearance, and often amenorrhoea is the result. In short the picture is one of obesity with juvenility. The reaction to muscular strain is abnormal, the blood vessels are fragile, the heart is small and the growing boy is not playful like other children. The teeth are milky-white, crescentic in outline and the sexual life of the thymo-centrics is strewn with aberrations, inversions and perversions. The annals of "*crimes passionalis*" draw their victims largely from the possessors of a large persistent thymus coupled with dis-harmony of the other endocrines.

The various anomalies of the distinctive sexual glands in the different kinds of real and pseudo-hermaphroditism are all well-

known. The presence of the external organs of generation is no guarantee that the distinctive sexual organs corresponding to that particular type will be met with inside. The manly man and the womanly woman are not the freaks of culture and civilization, but are dependent on the possession of well-functioning testes and ovaries, in the endocrine-directorate. The question of sexual periodicity in woman, with her periods of puberty, pregnancy, lactation, menopause are all such obvious demands on the endocrine stability that woman's metabolism is altogether intimately bound up with the superiority of her distinctive glands of sex. There is no distinctive personality apart from strongly accentuated secondary sexual characters like stature, proportion of limbs to trunk, the eruption and character of the terminal hairs, the teeth, the change in the larynx, the shape of the pelvis and nates, the disposition of the subcutaneous fat, the possession of a healthy libido and an aptitude for heterosexual mating. The influence of well-functioning and well-co-ordinating glands are nowhere more strikingly seen than in the pre-menstrual molimina as they appear in the different types. In the sub-pituitary type with perhaps a cramped pituitary the gland swells excessively with each menses, headache, malaise, sleepiness to surroundings and a sluggishness of thought feeling and reaction, aptly couched in the expression "a phlegmatic frillosity" appear on the scene, and make the periods an unnecessary bug-bear. The hyper-thyroid type whose co-ordinating post pituitary secretes excessively on the other hand, present an irritability and restlessness amounting to mania at times; she is sleepless, hot and tremulous all over.

The sexual glands and the adrenals are correlated so closely in evolution that unfolding of organ and function actually bears out this intimate connection. The adrenals are separate in the fish and in the rest they originate in the germinal epithelium. The adrenal and sexual cells are distinct in *petromyzon*, they are adjacent in the reptiles, enmeshed in the birds, and attains its largest size in the human beings. A deficient adrenal cortex in the foetus causes a pseudo-hermaphroditism; if deficient after

birth there is retardation of puberty in both sexes with a tendency to virilism in the female, and Addison's disease. On the other hand, should the adrenals predominate there is acceleration of puberty. The time of eruption of teeth, their regularity, appearance and decay are dependent on the balance between thymus and the pituitary and the balance between the pituitary and the gonads. Decay is determined by the upset of the thyroid and adrenal balance, the causative factor being a deficiency of thyroid secretion. The rapid decay of teeth in childhood is due to a deficiency of parathyroids. The decay of teeth in pregnancy, and the oft quoted adage "a tooth for each child" finds confirmation only on the assumption of an endocrine upset. Blair Bell observes that "in India, that land of chronic pregnancy, with insufficient food, there results a chronic ovarian oversecretion which goes uncompensated and the consequent diminished lime retention leads on to osteomalacia. Calcium metabolism and excitability of muscle and nerve go together, as the calcium content of the blood, and the needs for calcium storage during dentition, lactation, bone repair, and growth are all correlated. The parathyroids are chiefly concerned in the process, but their functional integrity in this respect is conditional upon the gonads, for it is common knowledge that all sorts of infantilism are associated with some abnormality of the skeleton and the piliferous system. *Gonado-centric* persons are further described to have their upper teeth small and irregular with the lateral incisors turned, stumpy or even missing.

The "*Pineal-gland*" is said to be the vestigial third eye of man, and the mystic lore of all ages have ascribed occult properties to this structure. The presence of pigment resembling the retinal in the gland, has probably lent colour to this supposition. But it possesses real secreting cells and curious lime salt encrustations called "*the brain sand*." It is said to be a brake on the adrenal and ergo the sexual glands. The gland normally involutes during the epoch of childhood, and its persistence produces one of those infant-prodigies who are wise beyond their years and think and act like a grown up. It is further concerned with muscle and sex function. One variety of progressive muscular atrophy has been traced on autopsy to a calcified pineal.

experimental methods used in thus wresting the secrets from insignificant looking structures, have changed the face of new physiology, and the study of comparative anatomy and physiology is joining hands with medicine proper to mutually extend their spheres. Tracing the evolution of the thyroid, it appears as scrubby pin head patches along the aorta in the fishes, it becomes slightly larger and more compact in the amphibians and the reptiles; when it reaches the birds it becomes larger and more prominent, until at last it attains its present size and position in man. Its internal secretion acting as it does on the hairiness and moisture of the skin, and through the para thyroids influencing the size and growth of the bones of the extremities and skull, finally makes itself felt on the brain and determines its intelligence and the complexity of its convolutions. It is said to be in effect the creator of the land animal. Thyroid-feeding experiments on the amphibians lends support to this unique assumption. The *Mexican axolotl* which is an aquatic newt breathing through gills, is transformed through thyroid feeding into the terrestrial *salamander* possessing amblyostoma with lungs. The thyroid contains Iodine, and it is remarkable that the Iodine-content of the blood and the sea-water is in similar proportion.

The thyroid deprivation experiments have demonstrated a failure to grow, especially of bones and cartilage, the abdomen gets large and flabby, the sex organs atrophy, sterility ensues, pregnant rabbits abort, and the hens lay very small or no eggs. Thyroid as a great energy liberator is seen in the thyroid-fed tadpole which transforms itself quickly into the frog—almost a pigmy frog of the size of a fly. Whereas Thymus-fed tadpoles grow into fat chubby wrigglers and do not change into frogs until Iodine is given to them. The dethyroidised animals have shortened life, and as a result meatfeeding, alcohol and morphia affect them even in small doses. The anti-toxic function of the thyroid is very essential to the organism as it somehow raises the opsonic index of the blood. The deprivation of the pituitary in young animals results in the disappearance of ripe spermatazoa and ova, and diminished fertility.

Complete extirpation results in death in 2 or 3 days with lethargy unsteady gait and fall of temperature. If only part of the anterior lobe is destroyed there is general fatty degeneration and inversion of sex. A physiological sub-action of the gland results in a dry skin, loss of hair, sugar tolerance, dwarfism and sometimes epilepsy. The developmental history of the pituitary—although itself a lump of tissue almost the size of a pea, at the base of the brain, a short distance behind the root of the nose—is highly interesting. The anterior part of it is derived from proliferating cells from the mouth area, viz, the embryonic oesophagus with the thyroid, and it consists of solid columnar cells with blood spaces. It secretes a gelatinous material. The posterior is derived from the oldest part of the nervous system, and secretes a glassy substance—pituitrin, the substance that has revolutionised the practice of obstetrics. From its well protected position, persistence throughout life, and its abundant blood supply, pituitary gland is a great regulator of organic rhythm. The specific action on the uterus is well-known. As a gland of energy consumption and by its plain-muscle irritability, to direct energy utilization and continued effort, the gland is unique. Its disharmony is directly inimical to brain-tone. Witness the piercing headaches of the Acromegalic and their sexual incompetency. The hibernating animals have a sub-acting pituitary. Before they retire to sleep they store glycogen in liver, and fat in all the fat depots of the body; there is a fall of temperature, pulse and blood pressure. The hibernation of the wood-chuck is the modified night sleep of the human. It is even said that certain sub-pituitary type of humanity in Russia go into long winter sleep on the line of the wood-chuck.

The diurnal demands upon the pituitary, and its sub-functioning conducing to sleep in the hibernating animals, might account for the phenomenon of human sleep, as well, as the harmonising of the organic rhythms of anabolism, katabolism, and rest depend mainly on the pituitary. Thus side by side with the dreams of the alchemist who longed for the philosopher's stone, there comes the alchemist of the cell who no less dreams about a key to the

typical example of the Neurasthenic genius. As he himself says, his life consisted of small doses of work with large doses of rest—a typical *Hypo—Adrenal* formula. Yet he has this astonishing output of intellectual industry that he has to his credit 23 volumes of scientific treatises and 51 original papers. It is a wonder to all the world that Darwin's father, a Doctor himself, thought his son would come to no good and become a disgrace to the family—who thought nothing of his career “but shooting pigeons and catching rats.” In his voyage of discovery, Darwin says that after an hour at the microscope he would tell those near him “My boy, I will have to take the horizontal for it now” and quietly stretch himself to rest by his work. And yet where was the secret of his enormous energy and scientific curiosity? It lay in his excellent anterior pituitary and a responsive superior thyroid. But the bane of his life was his inferior Adrenals. It was after the cessation of his gonad activities, he recouped his failing aptitude for intellectual work, and this clearly shows that the first demand on the adrenal is to subserve the gonad demands and after the gonadopause, corresponding to the menopause in the female the adrenals are relatively released to subserve the rest of the organism. So Darwin's “climacterium virile” was the saving of his adrenals, and he began to enjoy comparatively better health during the evening of his life. His own wife testifies to this and says he began to suffer less and less from indigestion, headaches and lassitude that worried him throughout life during his manhood.

Julius Caesar, like Mahomed, Dostoevsky, Byron and Flaubert was an epileptic and epilepsy has been found to be occasionally associated in all lands and times with undoubted genius. He was subject to headaches; and another pituitary trait was his enormous sexual libido, he having had three wives and a liason with Cleopatra. He had all the ante-pituitary traits of judgment decision and intelligence that served him so well in the fields of battle, but withal was subject to squirts of post-pituitary. It is said that he was personally present at over 300 actions and himself responsible for many a victory. Withal, he had the “fainting fit” and the deft Mark Antony makes capital of it when says that he

saw Julius Caesar that “God did shake”. He was particular that his attendants at the bath shampooed his skin until it was the colour of marble, and he carefully directed his superfluous hair to be plucked, traits that bring out forcibly his occasional post-pituitary predominance.

Perhaps the best formula for the ante-pituitary-centered, adrenalised woman is typified in Florence Nightingale, the founder of the British Nursing system. Her biography is a stern record of service, unflinching, dispassionate, betraying at every step the hard fibre of the male in a feminine cast. And she typifies a hos in herself—the woman whom modern civilization cannot tame into marriage, the woman who considers it a trifle to plan a world-lecturing tour on her eightieth year, or the one who lightly leaps the Niagara to be filmed as a star, are not all freaks of vanity. They have sterling adrenals to their credit, the cortex in particular, as the medulla is more a feminising section of the adrenals. The fleeing animals like the hare have a medullary predominance in their adrenals. The fighting animals like the tiger have a cortical predominance. And hence the woman who has chosen to be single adrenalises herself; and the climacterium may be a reassertion of the adrenal over the defunct ovaries. We have in the ill-fated Oscar Wilde—a poet and dramatist of no mean order,—a typical instance of a thymo-centric-person. He was born of parents whose facial peculiarities suggest a pituito-adrenal preponderance. But despite all that, glandular disharmony was the result in their gifted offspring. His mother wanted a girl baby when Oscar was born, and so she had young Oscar dressed and brought up as a girl. From then onwards, Oscar whose post-pituitary predominance on the thymus soil made him sexually unstable, continued to be drawn into homo-sexuality. His indictment for unnatural offence, his term of penal servitude in the Reading gaol, his exile in Paris, and his uncontrollable addiction to absinthe, are all common knowledge to be accounted for only on the supposition of protracted juvenility of the sexual neuter carried into adult life but to blend into inversion. With his reputation trailed in the dust and the fair promise of literary renown blighted for ever, even then he

was punctilious to the last, like a woman, about his appearance. It appears, when some one came to see him in the jail, his chin not being shaven, he held a handkerchief to his face all the while he was talking to the visitor! He loved to dress himself in thick soft velvet and satin like a woman; he himself was tall, handsome, with a high complexion, and a transparent skin almost like a baby's. His sudden death while yet a young man, in an alcoholic bout speaks both to the irresistible impulsiveness of the child as well as to the *status lymphaticus* of which there was ample evidence from his physiognomy.

It remains now to say in conclusion that ancient phrenology, physiognomy, astrology and paemistry apart, the endocrine enthusiast is not crying for the moon when he views the applications and possibilities of an Inter-national Institute of Bio-chemistry with something of the reverence of a new millenium on earth. He would include in that Institute a chemical laboratory for analysing blood, metabolism, and endocrine substances; X-ray and Radiographists will help him at photographing the thymus, the pineal and the pituitary. Trained psychologists will carry out for him intelligence tests, and emotional reactions in mental aberrations and deficiency. Statisticians will criticize and co-ordinate for him the data of the laboratory with the anthropologists and physiologists and librarians to collate the work of many countries. At any rate such is the assay of the Bio-chemist of the future.

And he says one of the direct results would be the revolution of Puericulture. A child that is experiencing difficulties in feeding, habit-formation, and adaptation to his surroundings, will attract notice as a Thymocentric. The child that has no difficulty with his studies but is awfully refractory in behaviour, will show thyro-centric peculiarity. The easily-tired boy that doses off in the class will have his weak adrenals trotted out before the school Inspector of Health. The magnates of Industry will survey their man-power and will weed out the fatigued hands from responsible jobs and increase their output proportionally. People

concerned in Public Health will pick out the thin, long-skeletoned type as hectic, and the plethoric choleric type as 'gouty,' and the mumps and diphtheria sufferers will have their pubertal epoch watched for any anomaly of their adrenals and gonads. The capacity of the thyro-centric to resist infection will receive attention in wide spread epidemics, the disease tendencies of the thyro-adreno-centrics to suffer from heart and kidney troubles will receive attention sufficiently early to be of use. The adreno-centrics who suffer from high blood pressure and acidity of stomach, and the pituito-centrics with their periodic upset function of brain and sex, the thymo-centric with his drug-addictions to compensate for a too-obvious endocrine lack—will all be subject to scientific therapy. Drug addicts especially with their diseased or intoxicated endo-crines will offer fruitful scope for medication and experiment. For it is said, cocaine in mild doses is thyroid stimulant. The aetiology of cocaine addiction as well as all kinds of dope may be but to lash a failing thyroid.

In medicine proper, the introduction of glandular extract and further modification of the endocrines by surgery, X-ray, feeding the fresh-gland, injection and radium-therapy, are all recent lines of advancement, loudly belauded by all and sundry. And the modicum of truth is finally balanced on the side of science.

The State is itself the primary beneficiary by placing the endocrine data at the service of Law. Financial swindles by men placed in high authority, the thyroid disturbance noticed in girl-delinquents, whose thyroids had been found enlarged in certain cases, crimes by women during menses and pregnancy, the thymocentric traits discerned by a certain observer in a study of American murderers about to be electrocuted—all show, like the proverbial straw, which way the wind is blowing in the Theory of Disease. That thyroid-fed pregnant females should produce thymo-centric foetuses in experiments, cannot all be freaks. That the daughters of mothers who menstruated early will also menstruate early, cannot be a mere accident. The method of science is crude and awkward compared to the delicate experiment which Nature herself is conducting in what is called "the struggle for existence" or "the

survival of the fittest". No less than the origin of the species seems to be her objective. If brown or dark eyes will outstrip the blue and gray-ones, if dark and curly hair will beat the light and straight one into the shade, if the dark skin or light one will be preserved for the world, if the nervous temperament of the war-weary world will endure, or if it would lapse into the 'phlegmatic frillosity' of the middle ages, or in one word if the recessive and the dominant in the Mendelian unit-factors will at last become like putty in the hands of the Eugenist, I can only repeat in the words of Kipling that

"These are matters of grave concern." and stop.

The Role of Quinine as an Anti-Malarial Measure

By R. K. THIRUPAD, M.B., B.S., Narakundra, Valparai P.O.

OF the various anti-malarial measures that are not dependent on a direct attack on the mosquito, the use of Quinine is perhaps the most important. Obviously, a campaign against the Anopheline would be the most rational procedure; but this entails a thorough knowledge of the breeding habits of all the species. The prevailing species of anopheles in a particular locality have to be identified, and their special breeding habits studied; and such measures have to be adopted as are suited for each variety. The importance of such study becomes evident when we learn that different varieties of anopheles have different breeding habits. *A. Maculatus* breeds in running water; *A. Culicifacies* is essentially a swamp breeder and in a place where the former is the prevailing species, one would only make the malaria worse by draining all the swamps.

The daily use of Quinine as a means of malaria control has to be chiefly depended on in the plantations where other measures are inadmissible or impossible. Many of the tea and coffee plantations of S. India are admittedly the hotbeds of malaria and

these have never had the advantage of a mosquito malaria survey. The average medical men over the gardens are not possessed of the necessary knowledge to undertake such surveys or to identify the several varieties of mosquitoes prevalent in their gardens. Under such circumstances and until better measures are planned out, the administration of Quinine is to be the sheet anchor in the control of malaria over the gardens.

The daily use of Quinine by the entire population in a malarious locality has two distinct advantages:—It prevents, to a large extent, persons developing an actual attack of fever, and it also does away with the carriers who are often responsible for the seasonal epidemic outbreaks in an endemic locality. These two uses of Quinine will be considered at some length.

By the preventive use of Quinine is meant its administration in small doses to the entire population of a locality, with a view to destroy the parasites at the earliest stage of their development. The mosquito might infect the persons with a dose of sporozoites along with their blood meal; but the Quinine destroys them at once; or, at any rate, prevents them from attaining to such numbers as to produce the clinical manifestations of 'fever.' It is however, possible for such persons to show a few parasites in their blood; but they seldom suffer from an actual attack of malaria, and certainly always enjoy a comparative immunity from all its debilitating sequelae.

'Quinine prophylaxis' has however been discredited by many; some have testified to its failure as a prophylactic agent; a few even condemn the measure as dangerous. It is claimed that persons taking prophylactic Quinine soon become habituated to it, and fail to respond to the drug when it is used later on for treatment. Apparently, the parasites are rendered Quinine fast. However, much of the disrepute into which Quinine has fallen, is altogether undeserved. On the contrary, inefficient prophylaxis, insufficient control, improper treatment—any of these may have been the cause of failure, rather than the drug itself. Where Quinine is given to the entire population, a thorough and

systematic supervision is also imperative. I was convinced of this necessity only when I found many of the labourers of my garden preferring the forfeiture of a day's wages to the taking of the 'bitter stuff.'

The second use of Quinine in malaria control is perhaps more important than the above, as its aim is to sterilise the blood of all carriers of the parasite, and to render them unable to infect the mosquito. Its use is specially indicated where malaria is endemic, outwardly manifested by a high splenic index among children. In almost all estates where the spleen rate is high, it is usual for malaria to assume epidemic proportions during the hot months when the mosquitoes return after hibernation. Themselves free from the disease, the anopheles receive a large number of gametocytes from the carriers who harbour them, and later on infect the non-immune of the locality. This is the starting point of an epidemic. If therefore all cases of enlarged spleen are treated with daily doses of Quinine during the off-season, when the mosquito is in hibernation, the blood of all carriers is sterilised of parasites and she becomes unable either to be infected herself or to infect others. The treatment of carriers is one of the most important of anti-malarial measures. It may be argued that Quinine is unable to kill all the gametocytes in a carrier as these forms are the most resistant to the drug; but when it is known that it requires at least 12 gametocytes per c. mm. of blood for the mosquito to receive infection, the importance of Quinine therapy would become evident.

The above facts about Quinine were amply illustrated in the case of the garden over which I am the medical officer. For a long time this was admittedly the worst in the district, so much so that it was dubbed with the ill-reputed name of 'Yama Kundu,' 'Marana Kundu,' etc. Beyond the treatment of actual cases of 'fever' no anti-malarial measures were taken in this garden till 1925. In that year a spleen index was taken which reached such a high level as 75. Three months before the usual fever months all cases of enlarged spleen were given

6 gr. of Cinchona Febrifuge daily, together with a dose of iron and arsenic. During the fever months this treatment was extended to the whole of the labour force. The result of such treatment was very satisfactory indeed. The number of admission in the hospital for malaria was far below that of the previous year, and the daily out-turn for work was greater than ever before. The fever months of April, May and June which were looked upon with dread by the labourers, were passed through without any anxiety, much to the satisfaction of all around. Incidentally, I may add that I have found Cinchona Febrifuge as efficacious as Quinine, and from an economic stand point it is always better to use the former drug as its cost is only a little over one-third that of Quinine.

Blood Transfusion.

By D. K. SABESAN, L.R.C.P. & S., (Asst. to Third Surgeon.)

Blood transfusion has been in recent years more often resorted to in various bloodless states than it has been in the past, as the risks of intra-vascular clotting and haemolysis, and the introduction of other infections from the donor to the recipient have been eliminated by preliminary group tests for agglutination and haemolysis, and specific tests and examinations for other infectious diseases in the donor.

Transfusion is indicated in all conditions of acute secondary anaemias due to severe haemorrhage where the blood pressure remains low, as it not only raises the blood pressure but also maintains it in the raised state. As a preliminary to, or during, a major operation, upon an anaemic patient, it is very often of very great service as it not only diminishes the subsequent degree of shock but also lessens the degree of haemorrhage which is otherwise likely. In conditions of haemophilia and the haemorrhagic diseases of the newborn, it is the most certain means of averting haemorrhage. In pernicious anaemia blood transfusion improves the condition very much, but remissions are common and necessitate repeated transfusions. In the severe

degrees of chronic secondary anæmias attendant upon chronic infectious diseases like chronic malarial cachexia and ankylostomiasis etc., repeated transfusions ought to be of great benefit as the introduction of healthy R. B. Cs. would appear to stimulate the bone marrow in its blood forming functions.

About 10 to 20 ounces of blood are usually sufficient in cases of recent haemorrhage, while much less quantities would be enough in chronic forms of anaemia.

Dangers of Transfusion.

1. Incompatibility.
2. Introduction of other infections like syphilis, malaria etc.
3. Sepsis.
4. Air embolism.
5. Too rapid transfusion causing acute dilatation of the heart.

Nothing special need be mentioned here about the last three items, as the strict observance of the usual technique for intravenous saline infusion would prevent these dangers; as regards the second, in doubtful cases it would be necessary to do a preliminary Wasserman test to exclude syphilis, and malaria could be usually eliminated by a careful examination of the donor and his previous history. The most serious danger, however, lies in giving incompatible blood, and therefore in every case a careful preliminary test for compatibility should be carried out, though in very urgent cases with patients "*In Extremis*", even this may have to be omitted. While there are elaborate tests for Agglutination and Hæmolysis, in practice, it is, however, enough to ascertain whether the (patient's) recipient's Serum agglutinates the donor's corpuscles.

Methods of Transfusion.

There are different methods of transfusion which may be briefly summarised as follows:—

1. Transfusion of whole or unmodified blood.
2. Do. blood rendered non-coagulant.
3. Do. of de-fibrinated blood.

1. Whole blood may be given either (a) by direct transfusion, that is, by allowing the blood from the radial artery of the donor to flow into the recipient's median basilic vein, either by an arrangement of a simple cannula, or suturing them together. This method is unsuitable for general practice.

(b). Indirect transfusion, that is, by collecting the blood from the donor by means of syringes, or in a paraffin coated glass cylinder, and subsequently injecting it into the recipient's vein, either by syringes or by a simple Horrock's saline infusion apparatus. The syringe method is very easy and simple to carry out, provided, a sufficient number of syringes are available to be used in strict rotation.

2. Transfusion of blood rendered non-coagulant. 3.8% Sodium citrate is the drug most suitable for rendering the blood non-coagulant; it has the advantage that it can be carried out anywhere, and no special apparatus is necessary; but it has this disadvantage, that there is more often a re-action in the form of a chill or rise of temperature than with transfusion of whole blood.

3. Transfusion of di-fibrinated blood is being given up in favour of the previous methods which have been very much simplified of late.

Blood transfusion was done in three cases during the past three months in S-III wards, and citrated blood was used in all the three cases. I shall briefly describe here the procedure which I adopted.

1. About one or two c.cs. of blood are withdrawn from the recipient's vein by a syringe, collected in a test tube, centrifugalized, and the serum allowed to separate.

2. A drop of blood is collected on a slide from each of the volunteers for the donorship. (As almost all the volunteers for the donorship in our series were robust young medicoes in whom I was confident there was no likelihood of the existence of any specific infections, no preliminary tests were carried out for the same), and each slide is marked distinctly.

3. A drop of the recipient's serum is added to the drop of blood on each of the above slides and gently mixed, taking care to rinse every time in saline or distilled water.

4. After an interval of ten minutes the slides are examined under the 1/6th lens of an ordinary microscope.

The slides in which marked clumping of R.B.Cs. have occurred indicate that the bloods taken on them are in-compatible with the recipient's blood; as agglutination is only the pre-cursor of hæmolytic. (I have been in the habit of pitching upon that volunteer for donorship whose blood is most suitable amongst the select).

5. Four ounces of 3.8% solution of sodium citrate, that is 68 grains in 4 ounces, are prepared and sterilised and distributed between 2 sterilised cups or gally-pots, 2 ounces in the one and 2 ounces in the other. The first one is used for citrating the donor's blood as it is withdrawn, and the other for rinsing all apparatus like needles, cannulas, etc., used in the operation, which are likely to come into contact with the blood. A sterilised pound measure glass is used as a receptacle for the donor's blood; and to begin with, about $\frac{1}{2}$ an ounce of the citrate solution kept separately in No. 1 gally pot, is put into it.

With everything ready for the transfusion, the operation is commenced first on the recipient whose median-basilic vein at the bend of the elbow is exposed by a small incision, and into the proximal end the needle-cannula attached to an ordinary intravenous apparatus is passed, through which normal saline is allowed to flow *very slowly*.

A constricting bandage is now applied to the donor's arm, the veins of the end of the elbow rendered prominent, and the skin at the site purified by cleansing first with ether, and then with rectified spirits, and subsequently by washing the area with sodium citrate solution contained in gally pot No. 2. The median-basilic vein is now exposed by a small incision, the

proximal end ligatured, and into the distal end is passed a needle-cannula with a short rubber tubing attached, the end of the tubing being kept immersed in the citrate solution in the pound-measure glass, when the blood flows freely, and about 10 to 12 ounces could be obtained in the space of about ten minutes. Frequent cleansing of the wound in the elbow with citrate solution (2) is done to prevent clotting. The blood in the measure-glass is kept gently stirred by an assistant as it is being collected. As an alternative, the blood may be withdrawn from the donor's vein by means of an ordinary 20 c.c. syringe, and squirted into the citrate solution in the measure glass, but there must be a change of syringe every time, as a once-used syringe must be thoroughly rinsed with citrate solution or normal saline before it is being used again. This method which was tried in the second case quoted below was found to be rather inconvenient, as the blood began to clot in the needle after about 5 ounces or so, necessitating a second and a third prick of the donor with a stout needle.

As the requisite quantity of blood is being received into the measure-glass, more and more of the balance of the citrate solution contained in gally pot No. 1, is being added to it, until the proportion of one ounce of citrate solution to 10 ounces of blood, is made up. (N.B.—A careful watch is kept over the donor's pulse as the blood is being withdrawn, to note the effect of loss of blood on him. An assistant now takes charge of the donor and ligates the distal end of the vein and sutures the skin wound.)

As soon as the requisite quantity of the blood is withdrawn, it is poured into the cylinder of the saline apparatus now in use for the recipient, replacing the saline; and the citrated blood is allowed to flow in slowly, (keeping a careful look-out on the recipient's pulse and respiration, and watching for any other signs of distress as the sudden increase in pulse or change in rhythm, and dyspnoea are signs of incompatibility of blood.) towards the end about one or two ounces of saline are allowed to run in and the operation is concluded as an ordinary saline

infusion. The donor is asked to rest for a few hours before he goes home, and is advised not to exert himself for 48 hours.

There is usually a reaction in the form of a chill or a rigor, commencing either towards the end of the transfusion or within an hour thereof, which usually passes off in 12 hours; but in one of our cases, the second in our series, a case of gastric ulcer, there was a high rise of temperature which lasted for two days, at the end of which period he had frequent motions containing tarry blood, the bleeding apparently being due to increased blood pressure causing fresh hæmorrhage from the ulcer.

Case No. 1, Kassan Sahib; Age 25; Muhammadan—Male— was received as a transfer from M₄ wards on 23rd July 1925 with a huge cystic swelling in connection with the spleen, which reached 2 finger's breadth below the navel and an inch to the right of the middle line. A laparotomy was performed the same day, and a huge cyst in connection with the spleen, which was spread over the left side of the cyst, was discovered. The stomach and the intestines were displaced upwards and downwards respectively, and there were a few adhesions to the adjacent viscera in front, and many behind. These were separated between ligatures, and the cyst brought out of the abdominal wound. During this manœuvre the cyst wall gave way and a large quantity of dirty brown fluid (grumous, about 4 pints) escaped, and the cyst together with the portion of splenic tissue stretched over it, removed, after suturing the stump underneath, and the abdomen closed by through and through sutures. The condition at the end of the operation was critical, the patient being practically pulseless. Intravenous saline infusion was started immediately, that is, about noon, and as the patient's condition did not improve by 1 p.m., Dr. S. Rangachary ordered blood transfusion as a last resort. The blood of 5 different persons (all house surgeons) were tested for compatibility, two being distinctly incompatible, one slightly so, and two compatible. Of the two, Doctor G. S. Venkitesan, M.B.B.S., H.S., was selected, his blood being the most suitable of the two, and immediate arrangements were made for the requisite

citrate solution and transfusion apparatus to be got ready. Transfusion was commenced at 3-30 P.M.; at the commencement, the patient's pulse improved in volume and rate, but after about 10 ounces of blood had flown in, the patient evinced signs of distress, and complained of severe abdominal pain and discomfort, and was restless. The transfusion was immediately stopped. The patient steadily got worse and finally died at 10-30 p.m. In this case it would appear that the transfusion, while it improved the patient's condition for a short time, by increasing the blood pressure caused a fresh intra-peritoneal hæmorrhage from the stomach, the patient succumbing to the subsequent hæmorrhage.

Case No. 2. Viswanathan, age 22, was admitted on 12-8-25 with the following history. He was run over by a cart on his chest six months back. 10 days later he vomited blood and felt faint. He was taken to the Tiruvannamalai Hospital where he underwent medical treatment. During the stay in hospital he also passed blood in his stools. After a month's stay he was discharged, a little relieved. But once in ten or fifteen days he has suddenly a peculiar twisting pain in the epi-gastrium, feels faint, sweats profusely and vomits some fresh blood, after which he feels slightly relieved. For about 5 days after each attack he is laid up in bed, after which he gradually gets up again. He has had two such attacks prior to his admission here. During the intervals he has no pain in the stomach. His appetite is good, bowels occasionally constipated. He is extremely anaemic. On 27-8-25 about 9 ounces of citrated blood was given by transfusion at 4-30 p.m. The donor was a third year medical student, Mr. L. V. Srinivasan (this time the blood of about 15 persons had to be examined before a suitable one could be found). Two hours after the transfusion the patient got a rigor followed by a rise of temperature to 103.6. This came down gradually to normal at the end of 48 hours, at the end of which period the patient got repeated attacks of melaena for three days, which ultimately stopped. On 10-9-25 a laparotomy was performed, when the omentum was found adherent to the gall bladder and the first part of duodenum. No ulcer could be seen on the anterior sur-

face of the duodenum; apparently there must have been one on the posterior aspect of the duodenum which could not be seen, and for fear of giving rise to fresh haemorrhage from too much handling, no further efforts were made to locate the ulcer. A large posterior Gastro-jejunostomy was done without the use of any clamps, and the operation concluded in the usual way. During his convalescence which was uneventful excepting for the complaint of pain in both the lower limbs, the patient was given half dram doses of soda bicarb, and liquid paraffin at night.

The patient was discharged cured on 23-9-25, and on discharge, was taking self-diet (rice and curry).

Case No. 3.—Narayana Rao, Age 22, admitted on 3rd October 1925, for Cancerum—Oris. The history was that the patient was treated for remittent fever of six weeks duration, presumably diagnosed as kala-azar, with Urea-stibamine injections by a private practitioner at Nellore. The present complaint commenced a week back and in spite of local treatment, got steadily worse and assumed its present state, namely, a big sloughing ulcer-cheek which had perforated through the cheek. His general condition was very bad. Pulse on admission very small and thready and 140 per minute. The patient was extremely emaciated and very anaemic. On admission he was immediately taken on to the table, and all the sloughs were excised and the parts purified with pure carbolic acid and irrigated with warm saline, without any anaesthetic, as the patient's condition was exceedingly bad. At the end of the operation the radial pulse was barely perceptible and could not be counted. Saline was given per rectum continuously, and blood transfusion was done at 4 p.m. The donor this time was a third year student, Mr. S. T. Achar (7 persons were examined for compatibility of which two were blood-relations, one the father and one an aunt but both were incompatible). The patient rallied nicely after the transfusion, his pulse increasing in volume and about 124 per minute. He had a slight chill after the transfusion, but there was no other reaction. The local condition, however, did not show much progress. Three days later, the patient developed

diffuse cellulitis of the scalp and orbit. Even though the cheek condition cleared up a little, the patient died on 10-10-25. In this case the transfusion tided over the condition of shock subsequent to the operation of excising the sloughs.

These three cases have been reported by the kind permission of Dr. S. Rangachary M.B.C.M., Third Surgen, General Hospital.

Simplified method of Transfusion of Blood.

By K. VASUDEVA RAO, M.D., (*Asst., to Second Surgeon.*)

Transfusion of blood has become a thing of every day occurrence, and hence it is essential that we should have an easy method of doing it. During the last two months we have been endeavouring to do some blood transfusions, and it can be said that if the blood grouping is correct, the transfusion is bound to be a success.

Very often, people are satisfied if in one sitting the agglutination reaction under the Microscope is negative: this is well and good in many cases, but in some you get what is called a delayed reaction, which causes the fatal result. The chances of this delayed reaction are less if the agglutination is negative cross-wise—that is, if the blood of A is to be transfused to the blood of B the Corpuscles of A should not be agglutinated by the serum of B, and the corpuscles of B should not be agglutinated by the serum of A.

Two cases of blood transfusion were done in the Second Surgeon's wards and only in one was the reaction cross wise, and we are happy to say that in both the result has been encouraging.

The method adopted has been as follows. The apparatus and things required are a few ozs of sod. citrate solution 4%, 2 needles of fairly large bore, often used in intravenous injections, 2 pieces of rubber tubing about 8 to 10 inches long, and two graduated beakers, one funnel, and 2 ozs of sterilised olive oil. All these articles are sterilised. The two needles are attached to the

two pieces of rubber tubing, and to the other end of one rubber tube the funnel is attached. The two beakers and the funnel as well as the rubber tubing are rinsed with the sod. citrate solution and with olive oil and the needle which is tied to a rubber tubing that does not have the funnel, is put into the vein, in the bend of the elbow of the donor, the vein being made prominent by a tight bandage above the elbow. The blood that flows out of the vein is collected into a beaker which contains 50 c.c. of sod. citrate solution. Now, an assistant gets the recipient ready in the same way, the needle attached to the rubber tubing having the funnel, is put into the vein of the recipient, the two people being made to lie down side by side to facilitate the work.

As soon as sufficient blood, say 200 c.c., is collected from the donor, the same is transferred to the assistant who gives it to the recipient through the funnel. Before the blood is ready, 4% sod citrate solution will be flowing through it.

As soon as sufficient blood has been transfused, the needles are taken out and the puncture in the veins are sealed with collodion.

Two cases were done on these lines and both of them have been successful.

Two Anatomical Anomalies

(By U. V. NAYAK, M.B., & B.S., Asst. to the Professor of Anatomy.)

In this article I wish to bring up the accounts of two interesting anatomical abnormalities which have been recorded for the first time in the abnormality register of the Madras Medical College this year. These appeared particularly interesting to me and I hope will interest most of the readers of this journal for more than one reason. In the first place they are so rare. A reference to the standard text-books on Anatomy and Embryology showed that they have not been hitherto recorded. In the second place the physician or the Surgeon

does not usually expect to find such curious abnormalities in connection with such important organs as the Parotid gland and the liver. In the following lines will be found a description of these abnormalities:—

1. Absence of both Parotid Glands on the sides of the face :—This was seen in the body of a middle-aged male while the students were dissecting the side of the face. The skin over the region of the Parotid was entire and showed no marks of any operation or injury. Attention was first drawn towards this, by the absence of the Stenson's ducts which usually take a horizontal course across the side of the face a finger's breadth below the Zygoma, with the transverse facial artery above it and the lower zygomatic division of the facial nerve below it. A few lymphatic glands were seen in the superficial fascia over the region. When the deep fascia was removed the 'Parotid space' was seen to contain no gland at all. A similar dissection on the opposite side of the face showed the same defect. On either side, the space was filled with fatty areolar tissue through which passed the various structures which usually traverse the substance of the Parotid. The facial nerve passed horizontally from the stylomastoid foramen towards the middle of the posterior border of the ramus of the mandible where it divided into its various branches. These entered the face and the superficial temporal region by simply winding over the posterior border of the ramus and the Zygomatic arch. The Posterior facial vein was seen just behind it, descending vertically downwards towards the angle of the mandible where it divided as usual to form the common facial and external jugular veins. The external carotid artery was seen behind and medial to the vein, ascending behind the posterior border of the ramus and in front of the styloid process and its muscles, and divided as usual close to the neck of the mandible into its terminal divisions—Internal maxillary and Superficial temporal arteries. I have described the course and relations of these structures through the Parotid space to show that the absence of the glands was not the result of any surgical operation but that it was a congenital defect. A dissection of

the sub-maxillary region showed that there was no hypertrophy of the other large salivary glands, viz., the sub-maxillary and the sublingual, on either side of the neck. I showed the dissection to Dr. S. Swaminathan, Professor of Anatomy, and he was also very much interested by it, being the first case in his wide experience.

2. Accessory liver:—Before describing this condition I would like to point out that there is a common variation in the form of the liver called Reidel's lobe, for which this condition may be mistaken by the reader at first sight. Reidel's lobe is a tongue-like process projecting from the margin of the right lobe of the liver, under the tenth costal cartilage, and clinically mistaken for a floating kidney or an abdominal tumour. In the body in which the above named abnormality was first observed by Dr. A. Ananthanarayanan, the liver was of the proper size and form and occupied the right hypochondriac and epigastric regions of the abdominal cavity. The accessory nodule of liver tissue was seen about an inch below the Porta Hepatis, connected by a small fold of peritoneum to the anterior layer of the lesser omentum. It was of the size of an almond and entirely surrounded by peritoneum except along the line of attachment of its fold. A small branch of the hepatic artery and portal vein entered it, and a small duct came out of it and joined the main hepatic duct. These passed between the two layers of the fold of peritoneum.

In conclusion, I have to thank Dr. S. Swaminathan, L.R.C.P. and S., Professor of Anatomy, Medical College for his kind permission for the publication of the above notes.

To a Nursing Sister.

As shadows close o'er Nature's sheen,
Daily a slender form is seen,
Silent and chaste she steals along,
Far from the world's gay, busy throng,
With gentle, yet prevailing force,
Intent upon her destined course,
Graceful and useful, all, she does,
Blessing and blest wher'er she goes;
Beams from her eyes mysterious,
A sympathy all glorious,
Half-shy behind their azure hue
Peeps her great soul of love to view,
Which spends itself without a word
In acts of service, unreserved!

MEDICO.

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No 3.

Editorial.

The year 1925 has gone by, and a new year is now born. Every one is joyous and greets each other with cordial wishes for a New Year. Today the journal enters upon the 6th year of its existence and we rejoice at the vigour and promise of our common offspring. Like your little son who greets you in the morning with a vigorous "Happy New Year," the Journal tenders to all patrons in and out the College its fervent New Year Greetings, and hopes that it will continue to receive in future the same measure of unstinted support which it has always received at their hands, and thus be enabled to still further enlarge its sphere of usefulness to the young and old of our profession in the Presidency.

* * * * *

The Journal exists for the College, and should be a mirror of the life that we lead in the College. There were difficulties in the beginning of our enterprise to get the younger men to realise this fact, and this resulted in an undue burden being placed on the Senior students as well as on the teaching Staff, not only as regards the financial up-keep, but also in the matter of literary supplies to the Journal. It is gratifying to note that this state of affairs no longer holds true; the Journal is assured of a permanent and adequate financial position, thanks to the commendable public spirit of all classes of students in the College. A steady stream of literary output is pouring into our editorial offices. We have no grounds to complain of the paucity of material for publication at present, and hope that whatever may happen, in spite of approaching examinations, our

young heroes would not allow their literary faculties to undergo a process of atrophy from disuse. And with the increasing interest evinced by students and post graduates in the well-being of the magazine, there is no gainsaying the fact that there is a noteworthy improvement in the quality and tone of the magazine. Thus we are slowly but surely beginning to realise the ideal with which the magazine was started in 1921, viz. that it should provide a true picture of the intellectual, social and athletic activities of the rising generation.

* * * * *

It is true that we are now assured of financial stability, but we feel that the time is come for the amendment of the existing rules which allow option as regards subscription to the Journal from the students of the 1st Year and 2nd Year classes. I am sure that the latter feel that the magazine is theirs as much as it is that of the higher classes, and we hope that they would not wait for further persuasion in the matter, but would promptly press their claims to be considered on an equal footing with others in the College, and would demand the removal of an option which is far from being to their advantage, but merely helps to separate them from the common fold.

* * * * *

The greatest event of the past year as regards Medical Education in general was the abolition of the L.M.&S. The controversy which raged round this subject was keen and prolonged, but those that are responsible for our destinies and guide our professional footsteps have decided that the L.M.&S. should go. Let us therefore take it as a settled fact, and warn the young men who may knock at the doors of the Madras Medical College for admission, that they will enter on one condition only—that they focus their attention on the M.B.&B.S. Degree. The University offers no other alternative for entry into the ranks of the profession, and the new rules will come into force from July next.

* * * * *

It is with deep regret that we have to record the death in England, of Major General Sir G. G. Giffard, who was connected with the Medical Department of this Presidency for more than

a generation, and who retired in the year 1923 from his place as Surgeon General with the Government of Madras. A sketch of his official career from the pen of our General Editor was published in this Magazine in July 1923. At the time of retirement he appeared so full of vigour and strength that all his old pupils had fervently hoped that a long and happy period of well-earned rest would be vouchsafed to him. His sudden death a few weeks ago, came as a shock to all. To a man of his capacity and energy, life in retirement must have been depressing in the extreme, and we had information that he had proposed to devote the remaining years of his life to the betterment of the medical profession in India, and of Madras in particular. Our profession in this Presidency is still in the making. There are many dangers and pitfalls ahead, and we have constant need for help and guidance of courageous and clear-sighted men of the type of Sir G. G. Giffard. To his bereaved family, we offer heartfelt condolences.

* * * * *

We had recently the unique pleasure of seeing in our midst that veteran medical man, Lt. Col. Browning, now more than 70 years old, who was a Superintendent in the General Hospital about 20 years ago. In spite of his three score and ten, and his grey hairs, he looked remarkably young in energy. Perhaps, to the great majority in the College, his name is only a matter of history, but to some of us, he was in the position of a *Guru*, in the earlier years of our professional studies. It gave us intense and genuine pleasure to see him again, and I am sure it gave him no less pleasure to see some at least of his old pupils. The occasion was unique in that, ordinarily, a retiring Superintendent or a Surgeon General leaving India on pension never hopes to, and perhaps wishes to, re-visit the scene of his lifelong labours. If only we could induce the retiring stars of our profession to spend the evening of their lives in our midst, in the same way as they spend the morning and the noon—if only they would make this country their home, how much richer and happier should we be!

K G. PANDALAI.

CLINICAL LECTURE

Wasting Diseases of Children

By Dr. M. R. GURUSAMY MUDALIAR, B.A., M.D., C.M.

Case Notes.

A Christian boy, Sagaraj, aged 1 year, was admitted on 2nd November 1925 in the General Hospital under the care of the Fourth Physician, for malnutrition.

Physical signs and Condition on admission.

Small boy, one year old, weak, anæmic, emaciated; appearance like that of a chronically wasted old man. Child is peevish and irritable, cries in a hoarse voice; skin dry and soft; scabies present on legs and hands.

Conjunctivæ.—No inflammation; but a condition of dryness verging on to a state of Xerosis. No phlyctenular changes.

Mouth. Incisors are cut; no ulceration of the gums.

Anus. Sphincter gives normal reflex grip. No condylomata.

Bones. The epiphyseal ends of long bones show no thickening; no enlargement of costochondral junctions; no tenderness along the shafts of long bones.

Frontal bones prominent; the anterior fontanelle not yet closed up—posterior fontanelle closed.

Abdomen. Tense and bloated—going on to a condition of pot-belly.

Liver and spleen not palpable.

Thorax. Shows great emaciation—ribs prominent.

Heart and lung conditions normal.

Motions. (on admission) Pale, not very offensive, acid, containing a lot of undigested milk.

Weight of the patient— $9\frac{1}{2}$ pounds.

Treatment adopted.

In addition to the rest, warmth and efficient hygiene of the G.H., the child was put on small doses of Gray powder for a few days.

Hydrarg. cum. Creta gr. I
Soda bicarb. gr. V
Fiat pulvis two—One b.d.

Stools were examined every day for regulating the diet. Milk was found to disagree. Castor Oil emulsion, $\frac{1}{2}$ oz t.d., was ordered. No other drugs. Peptonised milk, 2 oz every two hours was substituted for ordinary milk. This was continued for a number of days. Conditions gradually improved; the motions assumed the normal consistency and colour. Diluted milk was then started.

The child began to put on weight and was ultimately discharged cured.

The Lecture.

The following is the Summary of the clinics given in connection with this case.

Marasmus is a condition in children not very uncommonly met with in this country, characterised by wasting and emaciation.

The following varieties of wasting in children may be recognised:—

1. The so-called *primary or idiopathic wasting or Marasmus*.

The essential pathology of this condition has for long been problematical. Most probably it is an apparently *causeless* wasting in children perhaps due to a congenital or acquired inability on the part of the tissue cells to assimilate nutriment. On many occasions we can elicit a history of these marasmic infants possessing multiparous mothers whose reproductive powers are progressively on the wane, perhaps due to the strain and stress of repeated child-births. More careful study may also disclose the fact that a large majority of these children have been brought up under bad hygienic environment.

2. *Starvation Wasting.* Starvation may be either in the direction of under-feeding, of improper feeding, or of inability to suck. Insufficient feeding is indeed a potent factor. The latter might be due to (a) inability on the part of the woman to nurse her own child, (b) to the poor biological value of the mother's milk (c) it might be attributed to the poverty of the woman, which necessitates the parturient and nursing mother going out to work. Though the condition is very deplorable the fact still remains that a good number of these wasted infants have their mothers going out to earn their daily bread.

Another condition deserving notice is inability on the part of the child to suck. This inability may be due to congenital malformations such as hare-lip and cleft-palate. Mouth breathing infants whose nasal passages are completely or partially blocked up may be the victims of wasting because they cannot breathe and suck synchronously. Local conditions such as chronic inflammation of the mouth, ulceration of the gums etc. may also induce chronic wasting.

Referring to improper feeding, many children waste severely, especially those of the luxurious and the rich. The over-enthusiasm of the mother outwits her discretion and the result is reflected in the child. The child is overfed and overloaded, and if Nature's safety-valve of obstinacy interposes, the child is forcibly stuffed with large amounts of casein, fats and carbohydrates. These nutriments are too strong for its digestive organs, the result being colic, vomiting and diarrhoea, persistent dyspepsia and progressive wasting.

3. The third important variety of wasting is due to *defective metabolism.*

This is especially seen in premature infants. The metabolism in these unfortunate children is generally poor, the absorption property of the intestinal mucous membrane is deficient and the assimilative faculty of the tissue cells, and especially of the liver is low.

4. The last prominent variety of wasting is that due to infective and other conditions.

Particular reference may be made to tuberculosis; congenital syphilis, chronic broncho-pneumonia, chronic empyema, congenital heart disease—etc. The existence of such organic affections must never be overlooked in investigating a case of progressive wasting in children.

Symptomatology. Progressive loss of weight and emaciation are the chief symptoms. Snail-like or serpegenous ulcerations in the mouth and gums may be found. Enteritis with disordered digestion is almost always present. Cyclic vomiting is a well-recognised phenomenon. Body temperature is either normal or subnormal, and hyperpyrexia has been observed as a terminal event—or at best, it is regarded as a sign of very ominous import. If the wasting is due to one of the infective conditions mentioned above the characteristic symptoms may be present in addition.

Special symptoms :—

1. *Pyococcal invasion.* The resistance power of the victim being far below par, one is not surprised to see that many of these children are afflicted with scabies, boils, pyaemic abscesses etc.

2. *Tuberculosis.* These unfortunate children are specially liable to tuberculous infection. Tuberculous enteritis, T. peritonitis, tabes mesenterica, T. Adenitis are all not uncommon.

3. *Invasion with B. Coli.* This may produce a train of symptoms. B. Coli is a normal inhabitant of the intestinal tract where it leads a life of symbiosis. But it may produce severe pathological affections (especially in such run down infants) as :—

{ Severe enteritis Enterocolitis Dysentery (a typical B. Coli)	{ Bacilluria Pyelitis Pyelonephritis Perinephric abscess Cystitis
{ Cholecystitis Suppurative cholangitis	

B. Coli septicaemia simulating typhoid fever, with marked emaciation.

Arthritis, Suppurative periostitis and Osteomyelitis.

4. *Broncho-Pneumonia* of a chronic type and consequent interstitial pneumonia (so-called cirrhosis of lung) and all its effects.

5. *Acidosis*. This is a much dreaded condition and is always associated with cyclic vomiting.

6. *Oedema*. Oedema of the face and ankles accompanied, may be by, slight hydro-peritoneum may be present. Such infants are as a rule very anaemic.

7. *Dèhydration*. Dry nature of the skin and dryness of the cornea are common.

Prognosis. The prognosis in these cases is always doubtful. The idea was prevalent, and it is even now stoutly persisted in by an important school of thought, that most of these cases progress downhill and die in spite of any treatment. Opinion is however still divided. At best, that may be said of the so-called idiopathic cases. In any case the outlook is better after teething. Acidosis, cyclic vomiting and bad enteritis may indicate a bad augury.

Treatment. It is abundantly clear from the case mentioned that the success of treatment depends not upon 'drugging' but much upon nursing and attention to general hygiene. Of course the discovery of any organic disease directs treatment along special lines. Particular attention is required for the first six months of life, i.e., until they are able to digest starchy foods. Every care must be taken to conserve the body-heat, for the child is very liable to catarrhal respiratory affections and nephritis. What is required is actual mothering of the child. Better that the child is always carried about by the mother or nurse. Suffice it to say that drugs are not of any value unless they are urgently called for by some serious complication. The child should not be overfed. Breast-feeding should always be encouraged, for the children certainly do better on human milk. The practise of washing out the intestines with castor oil emulsion before every change of diet is always beneficial.

CASE REPORTS.

Kink of the Inf-Vena-Cava & Thrombosis of Femoral Veins from the M₄ Wards.

(Reported by a Final Year Student)

Perumal, 13 years, Hindu, Male, Occupation nil.

Complaint: Dyspnœa, Pain in the side, Enlargement of Liver and spleen of 4 month's duration.

Since the condition of the patient was precarious at the time of admission, it was thought desirable not to elicit any history of the case.

Physical Examination revealed the following:— Pt. was a weak individual, alopecia marked, not anaemic, tongue slightly coated, teeth clean; The Pt. was admitted with marked dyspnœa. He was lying on his left side and would not be disturbed from that position—it probably being the least distressing.

Circulatory System: Apex beat visible and palpable about $\frac{1}{2}$ " internal to the right nipple. The right border was $\frac{1}{2}$ " internal to right nipple line, and the left border $\frac{1}{2}$ " external to the left border of the sternum. Heart sounds were rapid but normal in quality.

Respiratory System: Obliteration of the intercostal spaces of the left side. Vocal Fremitus absent on the same side. Practically the whole of the left side (both front and behind) was dull on percussion, and auscultation revealed a complete absence of breath sounds over the same area. No audible adventitious sounds.

Abdominal System: Liver and spleen were palpable and very tender—especially the latter. A diagnosis of pleurisy with effusion on the left side + K. A. was made. The effusion had resulted in an enormous cardiac displacement. Grocco's

Triangle was demonstrated to the clinic. It was advised that the effusion be immediately tapped so as to relieve the tension on the heart. A needle introduced into the Pleural cavity drew out a clear straw colored serous fluid—64 ozs. were aspirated and by next day the dyspnoea was greatly relieved, but the pain was still there. The pt. was running a temperature, Gel was + in $\frac{1}{2}$ hour, but a blood count was not in favour of K. A. He was put on a mixture containing

Rg.	Mag Sulph.	drm iii.	
	Pot Iodide	grs 15.	
	Sod. Salicylas	grs. 30.	
	Pot citras	grs. 30.	
	Spts. am. arom.	drm i.	
	Tr. Strop	m 9.	
	Vin Ipecac	m. 30.	
	Liq arsenicales	m. 6.	
	Glucose	drm iv.	
	Aqua. ad.	oz iii.	oz i and t.d. s.

This prescription was being slightly varied as was found necessary.

It was found on the 11th and 12th December that dyspnoea was increasing and that percussion yielded a progressively duller note and that the vocal fremitus and breath sounds were totally absent. The subsequent condition of the pt. necessitated a second tapping on the 15th December, when 36 ozs. of fluid were removed from the same side. The heart did not recede even after this second tapping, and it was argued that the fixture of the heart in the abnormal situation was most probably due to adhesions binding the heart to its new place. However it might be, this abnormal position of the heart would result in a kinking of the Inf-Vena-Cava esp. close to its entry into the Right Heart. This kinking would necessarily cause an obstruction to the Venous return and hence it was prognosed that Venous thrombosis was a certain factor to reckon with. The 'progress' of the case in the next few days demonstrated the wonderful

accuracy of the chain of reasoning very remarkably. On the 17th the patient complained of acute pain in the region of the left iliac fossa. A slight but persistent cough also contributed to worrying the patient. The cough was treated Cipecac wine and when very troublesome and interfering with sleep, Linctus morphia et ipecac was administered. Relief from the iliac pain followed the application of Turpentine stupes. On the 18th morning the left leg was swollen and there was tenderness along the course of the left femoral vein and in the left iliac fossa. The limb was wrapped in the cotton wool, rolled up in a flannel bandage and kept at rest. Absolute confinement to bed was enjoined, a mixture containing Pot. Citras was prescribed and written instructions left that no stimulants should be administered lest emboli should form. The circumference of the legs 1" above the lateral malleolus was taken.

19/12. Left leg $7\frac{1}{2}$ " Right leg $6\frac{1}{2}$ ".

On the 21st December the pt. had pain also in the Right leg which was visibly swollen on the 22nd. The left side of the chest was again filling up. On the 24th, the Right leg measured 8" and the left $7\frac{1}{2}$ " over the same site. The Right leg also was kept at rest and wrapped in cotton wool, bandages etc. Fluid which had been gradually accumulating on the left side had to be tapped and 46 ozs. of blood stained fluid were withdrawn on the 28th December. On the 30th, left leg measured $7\frac{3}{8}$ " and the Right leg $8\frac{3}{8}$ ". Oxygen inhalations for dyspnoea, hot water bags to front and back of abdomen and Radiant heat were given for the pain. Meanwhile the Right side of the chest had been gradually filling up and on the 31st December, fluid was $1\frac{1}{2}$ to 2" below the clavicle. This Right sided Effusion slowly undid the ravages of the old one. The heart was pushed by degrees from its novel to its normal situation, the kinking of the terminal portion of the Inferior Vena Cava was necessarily set right and the circulation resumed something like normal. Superficial veins on the abdomen were prominent indicating that collateral circulation was being established. The active process of Thrombus formation was at a stop and the existing

clot became partly absorbed and partly organised with the result that the pain and swelling of the legs disappeared, and the dyspnoea vanished, and the general condition of the pt. improved considerably. The Right sided effusion was tapped on 1-1-26 and 20 ozs. of slightly bloodstained fluid withdrawn. Since then there had been no accumulation of the fluid and the patient is improving. He had been developing a few abscesses which were opened and pus let out. He is now being treated C̄ tonics-Arsenic, Iron etc. for anæmia.

A. The temperature chart shows a daily rise but was not suggestive of K. A. The temp. was normal throughout the second week of his stay in the Hospital. His pulse had been high all through.

B. *Blood.* No parasite, Leucopenia, Polymorph 62%
R. B. C. = 3,150,000 } Mononuclear 8%
W. B. C. = 7812 } Lymphocytes 25%
R. B. C. : W. B. C. = 1 : 403 } Eosinophils 5%

C. *Motions* A few ankylostome ova.

From M₁ Wards.

From P. Gopalachari, M.B., B.S., House Physician, General Hospital. to the Secretary, Medical College Association.

Sir.—I am giving you a case report of amoebic abscess of left lung in M₁ Wards, as it is rarely that one meets with such a condition on the left side of the chest. The lung lesion is a result of an amoebic abscess of left lobe of the liver bursting into the lung as shown by adhesions in X-Ray examination.

Mr. M, Age 36, Planter by occupation, who has stayed in East Africa for over two years, was admitted in M₁ Wards for cough and haemoptysis on 9th December 1925.

Previous History.—Had diarrhoea attended with pain, in February 1924 which stopped with emetine injections; had malaria at frequent intervals in 1925. During July 1925 had malarial fever with a tender liver—it improved under emetine. Had Asthma in 1923 and 1924.

Supplement to Case Report from M4 Wards.

Since the above article was sent for publication, matters have taken a decided turn that it becomes necessary to add this note :

Fluid had been filling upon both sides again, and the patient got gradually worse till on the 2nd February the amount of fluid and the resulting dyspnoea necessitated a tapping and about 10 ozs of bloodstained fluid were removed from the right side. Later in the day, the patient died of respiratory distress and a P.M. was performed on the 3rd morning. The special features of the case were :—

There were 26 ozs of clear serous fluid in the left pleural cavity and 16 ozs of bloodstained fluid on the right side. Both the lungs were completely collapsed. The venous Thrombus idea did not find much favour in the P.M. Room. It required some time and great perseverance before dissection revealed an extensive adherent thrombus, extending from below the level of the lower border of the 2nd Lumbar spine downwards into the Right Femoral Vein via the Iliac. (Only the Right Side was dissected). The Veins were enormously thickened and the Right Femoral vein felt almost like a large nerve. The arteries in comparison were soft and compressible.

The findings of the P.M. room established the accuracy of the bedside diagnosis—rather Prediction in this case—and one hopes to be excused for the temptation to slightly alter Tennyson and write.

"For he dipped into the Future, far as human eye could see.
Saw the vision of THIS CASE and all the wonder that
would be".

[A Final year student.]

Present History.—About 3 months back had an attack of pain on his left shoulder and left side of chest. The chest pain is greatest on the back when lying on the back, and below the arm pit when lying on his sides. With the chest pain he had a wheezy cough; a few days later he noticed streaks of blood in his sputum. Gradually he expectorated sputum intermixed with blood. The amount expectorated is at its maximum when he lies on the left side of the chest.

Physical Condition on Examination.—A very well built man of about 35. No P.A. No liver and spleen enlargements. Tongue slightly coated.

Respiratory System.—*Inspection* nothing abnormal.

Palpation.—No Vocal Fremitus on the left base at the back.

Percussion.—Dull on percussion.

Auscultation.—No breath sounds or adventitious sounds at the left base. A few rales over upper lobe of same lung. Otherwise normal.

Sputum.—Rusty, copious, not foetid, no cellular elements. No T.B. on repeated examination.

Radiography.—on 16th December.

A patch of opacity involving left base, left dome of diaphragm pulled up; on the right lung, the faint opacities near hilum as in normal lungs.

Circulatory system.—Nothing abnormal.

Wasserman Reaction.—Negative, and no clinical evidence of syphilis.

Diagnosis & Treatment.—The nature of the physical examination puts out hydro-thorax, pleurisy with effusion, bronchiectasis, pneumonia, syphiloma of lung, pneumokoniosis. The possibilities that could be considered were tuberculosis, bronchospirochaetosis, abscess of lung, hydatid disease of the lung, malignant disease of the lung.

Tuberculosis.—negatived because of absence of T.B. and temperature; and the basal involvement.

Bronchospirochaetosis and Hydatid disease. Absence of spirochaetes and ecchinococcus.

Malignant disease.—Absence of cellular elements.

Empyema.—Absence of history of pneumonia and in sputum no pneumococcal organism. Possibly due to amoebic infection as suggested from the history.

The patient was forthwith put on emetine injection of one grain a day for ten days with considerable improvement day by day. The cough which was troublesome and so distressing as to prevent sleep was allayed. The expectoration diminished gradually, lung signs cleared up as found out radiographically and by physical examination.

Malignant Tumour of the Thyroid.

Malignant tumours of the thyroid are rarely seen in this Hospital. An interesting case of a growth in the neck was admitted into the second surgeon's wards on 18-9-1925.

This history is that about 5 years ago he first noticed a swelling on the right half of the neck in front about its middle thrombosis and the swelling increased in size until it occupied the whole of the front of the neck, on either side. A year later the tumour ulcerated and since then, it has been discharging a foul smelling yellow fluid and blood. Three years after this main growth, smaller growths began to be noticed on the right side of the neck which gradually increased both in numbers and in size.

On admission he had the look of a multiple cyst, on either side of the neck, on the right side he had (3) and on the left side he had 4, in front he had an ulcerating growth—the first to start, which was moving during the act of deglutition. These growths—had a cystic fluid, fluctuation was present, freely moveable on the bases and the skin was not attached to them. They varied in size from that of a small lime to that of a fairly big sized orange. They extended from the sternal end of the clavicle below to the lobes of the ears behind.

The temperature and pulse were normal. No other signs of deficiency of thyroid secretion were noticed. A small portion of the ulcerating growth was excised under chloride for pathological examination and the report was that it was a capillary ulcerating on the surface.

On the 29th September the cysts on either side of the neck were removed under general anaesthetic. They were found to contain a tartaric fluid. The bleeding during the operation was very profuse. Specimen was again sent for pathological examination and the report was that it was a malignant tumour of the thyroid. The vascularity of the tumour was so great that the edge of the ulcerating surface under microscope gave the appearance of a capillary angioma.

The interesting points of the case are (1) the pathological report that it rose from one of the cystic space in the thyroid gland. (2) The extreme rarity of the malignant front of the thyroid. (3) The great difficulty in diagnosis in the early stages when removal is possible. (4) The utter futility of large doses of Xrays in arresting the growth once it has burst through the skin.

From S₂ Wards.

A Case of Stricture of Oesophagus.

Within the course of the last few months, there have been four cases of Oesophageal stricture admitted into the second Surgeon's wards in the General Hospital, and of these, one case is of outstanding interest.

A young man of 22 years, Ninachary by name, carpenter by profession, was admitted to the Second Surgeon's wards complaining of difficulty in swallowing any food, either solid or liquid.

His previous history has been that he had an attack of cholera about a year back, and he was under the treatment of a native doctor for this disease. During the course of this treatment he was given plenty of hot water to drink, and that, while

taking some of this hot water on one occasion, he got a spasm with immediate difficulty in swallowing; and from that day onwards, he has been experiencing this difficulty. Soon after, he sought admission into this Hospital, and by palliative treatment he was relieved to a slight extent.

On examination it was found that he could not take in even liquids in large quantities, and a stomach tube could not be passed beyond 8" from the teeth. An Xray was taken after a Bismuth meal but it was of very little help in deciding the nature of the stricture, its extent or situation.

The patient was growing weaker day by day and on the 31st August Oesophagoscopy examination was carried out, under chloroform. It was found that there was a tough stricture 11" from the teeth. It could not admit the finest Bougie. No growth was visible. A gastrotomy was performed through the left rectus on the same day.

The rest in bed and the gastrotomy appeared to have given him some relief as far as his stricture was concerned, and he was able to swallow small quantities of solid food for about a week following the operation. But he was fed principally through the gastrostomy opening. Another attempt was made to dilate the stricture by sounds, but none of the available sounds could be passed through the stricture.

Not satisfied with the progress of the patient, dilatation by means of a silk thread was resorted to. The patient was given a nice silk (No. 1), 2 yards in length to swallow; and in 2 days time he had swallowed about 1½ yards. An attempt was made to hook up the lower end of the thread through the gastrostomy opening. An ordinary crochet hook was used, and after several attempts the end was fished out by the patient himself, whose co-operation was a remarkable feature of this case throughout. As soon as the lower end of the piece of silk was secured, a thicker piece of silk was fastened to the upper end and drawn out through gastrotomy opening without much difficulty.

On the 2nd of September, a rubber catheter of No. 6 size was fastened to the upper end of the silk, and by gentle traction on the end of the string coming out through the gastrostomy opening, the catheter could be felt passing through the tough stricture. The principle of continuous dilatation, as employed in the cases of stricture of urethra, was remembered, and the rubber catheter was left in the stricture for 2 days. The patient could now swallow liquid with some difficulty. On the 3rd day, this catheter was removed and No. 8 was put in, in the same way. It was kept in the stricture for 2 days, and again on the 3rd day No. 12 catheter was passed through and tied in. After this, the smallest olive-headed oesophageal bougie could be passed through the stricture with a little force. At this stage the oesophagus was able to admit the passage of the largest oesophageal bougie available in the Hospital.

The patient, just before discharge from the Hospital was being fed by the mouth, and he was able to swallow solid food quite easily. The gastrostomy wound closed and the patient rapidly put on weight.

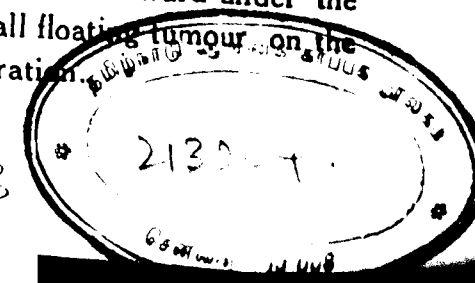
The remarkable features of this case are (1) the multiplicity of the strictures, the bougie passing two constrictions before it passed freely through (2) the alleged cause of the stricture—swallowing hot water employed in the treatment of an attack of cholera; (3) the method of dilatation employed; which is but seldom used in this country; (4) the willing co-operation of the patient.

My thanks are due to Major K. G. Pandalai, F.R.C.S., I.M.S., for giving me permission to publish this case.

K. VASUDEVA RAO.

1. A Case of Wandering Spleen

On December 15th of last year an Anglo-Indian lady, Mrs. L., aged 50 years, was admitted in Wenlock ward under the Second Surgeon complaining of a small floating tumour on the left side of the abdomen of 26 years duration.



History of the case—Gave a history of the presence of a wandering swelling on the left half of the abdomen for the last 26 years, with slight disturbance of digestion and slight recurring pain in the left hypochondrium. Subsequent to her first discovery of the tumour she began to bear children, which, according to her, stopped all her small complaints. Now for the last some months she is having recurring attacks of indigestion, pain in the epigastrium and left hypochondrium, constipation and occasional pressure symptoms of the pelvic organs. She gives no history of any crisis. It had been diagnosed outside as floating kidney.

On examination the swelling presented no features of a kidney tumour. It had a definite sharp margin, and the splenic area was resonant. Diagnosis was made as wandering spleen. The patient had been wearing a truss for a right femoral hernia, but one could not be made out at the time of the examination.

Urine:—Acid; S.G. 1010; albumin—nil; sugar—nil deposit—nil.

Unfortunately, an absolute count was not taken before the operation to study the effect of splenectomy on that tissue.

Treatment: Splenectomy was done on 17-12-1925 by means of a five-inch left para-rectal incision. On opening the peritoneum the tumour was easily delivered outside the abdomen as it had a long pedicle and was of a normal size. It was recognised to be spleen. The capsule was wrinkled and the colour bluish-black. The pedicle was long and large as already mentioned. The pedicle was transfixed and ligated with strong silk sutures close to its base and the spleen excised. The transfixion was reinforced by a number of ligatures, thus taking every precaution to prevent the stump from bleeding. There was an accessory spleen also present about the size of a small lime. This was also excised. The cavity was mopped out and the wound closed. Haemoplastic serum and other coagulants were administered as a safety measure and a careful watch kept on the pulse.

On the 25th following, the evening temperature shot up, and this rise kept on till the 8th, after which the temperature curve was flat with but little variation. An abscess was suspected. Absolute count showed about 21,000 white cells. A painful tender tumour could be felt on the left hypochondrium. Through a 1" incision just below the left costal margin in the mid-axillary line a collection of well-localized thick whitish pus, about three ounces in quantity, was evacuated and a drainage tube put in. Fourth-hourly fomentations were ordered over this area.

Now the wound has almost closed up and the patient is in a fit condition to be discharged except for her weakness.

Whether it was a case of congenital elongation of the pedicle or acquired attenuation of the ligaments is a doubtful question. The former is said to be very rare. There was no general visceroptosis present.

2. A case of Chronic Osteomyelitis of Tarsal bones cured by Periarterial Sympathectomy (S₂ wards.)

Palayam—70 years

Admitted—28 8 25 for extensive swelling of the left foot with sinuses.

Duration—Some months

Discharged—16-11-25.

History of the case: A thorn penetrated the sole of the foot which resulted in infection and cellulitis with ulceration.

Local condition:—Extensive cellulitis of the foot with sinuses leading to the tarsal bones causing severe pain all over the limb. He could not extend his knee and hence could not walk.

General condition: Not very bad.

Urine S.G. 1014; acid in reaction; no albumin; no sugar; nothing in the deposit.

Treatment: Fomentations and antiseptic applications were tried for some days with little success. Considering the age of the

patient and his general condition, with a feeble circulation and a dark unduly cold feeling of the foot and leg the operation of amputating the foot was put off, and it was decided to try sympathectomy as an experiment.

Femoral artery in the Hunter's canal was exposed after retracting the Sartorius muscle inwards. Branches of the artery for a distance of 6" were tied. The wall of the artery was dissected, separating the tunica adventitia mostly in one layer from the inner layers. This decortication was done for a length of 4". A few vasa vasorum bled and were tied, and the wound was closed in layers.

Within twentyfour hours of the operation the condition of the foot showed marked improvement. It felt warmer and was of a lighter colour. The improvement was steady. The swelling and pain disappeared in less than a month. All wounds and sinuses rapidly healed and the patient was able to walk about without crutches soon after. The operation wound also healed up nicely in a few days by first intention and the patient was discharged with a sound limb.

It is claimed that Raynaud's disease, chronic ulcers of the foot, gangrene of the foot etc, can be cured by this operation. The result aimed at by this procedure is to destroy the vaso-constrictors of that part of the vessel distal to the decorticated section, thus producing a vaso-dilatation. The effect of this is more or less similar to that of induced passive hyperaemia.

Dr. G. PANDALAI,
House Surgeon, S₂ Wards.

CORRESPONDENCE

Random Notes

In Dr. S. Rangachariar who has just retired on invalid pension, we have lost a most inspiring Surgeon and Professor. Essentially a 'man of action' his remarkably active work inspired us all with a fresh energy and sense of duty. We wish him speedy recovery of his old health and vigour and a long, long life.

* * * * *

We understand that the fine for not returning a book to the Library on the same day of its issue has recently been reduced to one anna per day. This is, 'to our mind' a very doubtful blessing in as much as one can remove from the Library a precious text-book of which there is perhaps only a single copy, depriving others of its use for days, and atone for it by merely paying an incommensurable fraction of its cost. We suggest that the penalty for taking away home text books which are daily in demand should be as heavy as the defaulters' losing the Library privileges, while *other books* which are not in constant need *should be lent home to Students*. As it is, we do not have the time during Library hours to read the large number of "extra books" which accumulate dirt, quite 'untouched by hand,' all the year round. It will be so convenient, and such good use made of them, if they are lent home—as in other Colleges.

* * * * *

The election of the Secretary of the M.M.C.A. for the next year will come off early in March. We learn that Messrs Chettur, Govinda Reddi, Mathias, and Sanjivi of the IV year, and Mr. Hanumanta Rao of the III year, have already announced their candidature. Our election is assuming grand proportions—canvassing starting two months before polling day, and that, in one case at least, by a printed manifesto! We were however, pained to hear that many students had promised their votes to this or that candidate simply because he 'asked them first.' We should have thought that a constituency, so enlightened as ours, would have insisted on knowing the names and claims of *all* the candidates before promising to the first comer. In fact, we believe that a voter is not to promise his vote to any one but consider the suitability of each candidate till polling day when he shall vote for the best man none else knowing whom he voted for. We shall certainly look forward with interest to learn who wins this well contested race.

The Madras Medical College Association

Report of the Meeting held on 12-1-'26.

Lt. Col. Diwan Ganpat Rai I.M.S., addressed the Association at 4-30 p. m. on Tuesday, 12th January, '26, on "The Future of the Medical Profession in Madras". There was a large gathering of students, including two lady-students. Captain Sankara Sastri I.M.S. was also present.

Col. Rai, amidst loud cheers, commenced by saying that the subject he had selected was one that concerned everyone that was assembled there—but that it concerned the students and young doctors much more than people like the speaker himself who were nearing the end of their professional lives. Continuing, Col. Rai said that the Future of the Medical Profession in this Presidency was a very big question, affecting the whole of our future lives, and which, therefore, ought to demand very serious consideration. "You have selected," he said, "the *noblest profession in the world (Cheers)*; and the nobility of your profession lies, not in making money, but in relieving the sick. There is no profession that relieves suffering and pain like the one you have chosen."

"A great many things are now going to affect the future of this profession—in this Presidency particularly. I will ask you to consider this question from two aspects:—First, the medical profession in the past, and the Government who have been mainly responsible for its advancement—secondly, the people for whom the profession is mainly intended. Now I must tell you that hereafter the future of our Profession must rest entirely in our hands—in our ability to please the public and earn their good-will. So far we have depended upon the Government. That is no longer to be.

"The point is, the public of the present day is not the public of a few-years back. I am speaking of this Presidency particularly. They are more enlightened—they can distinguish between a good doctor and a bad doctor—between an L. M. P. and a graduate."

Col. Rai then proceeded to say how men of no qualifications could in olden days, successfully dupe the public with their quackery, and illustrated this point by reciting a funny experience of his own. But the present day average citizen knew much better. "The object of my coming to you," he continued, "is not, however, to dishearten you, but to encourage you and cheer you. The future of this profession in this Presidency is going to be infinitely better than what it has been in the past. The Government patronage will certainly be less. The pay of the Government doctors will have to be reduced; and they may not be allowed to have any private practice. The development of the independent medical profession will be much easier then—and that is the brilliant and bright future I want you to look forward to. But then some new features will arise; for example, people will ask for professional work from those who are specialists in the line. The general-practitioner will not be, in future, so much wanted, except probably in the mofussil where he will have to be content to be in the back-rows of the profession. It is on the ability, resourcefulness and zeal of the specialists that the reputation of our profession is going to depend. The future will be independent of all government patronage, and entirely dependent on your own exertions."

Col. Rai then drew attention to the fact that some of the Local Boards now-a-days preferred to employ Ayurvedic physicians in preference to "Allopathic doctors;" and this fact was not a creditable feature for us, since it showed that "Allopathic doctors" did not completely satisfy the public. This ought to act as an incentive to modern men to be careful about what they do and how to do; and was therefore another important reason why specialisation was necessary.

Col. Rai proceeded to say that the existence of low-grade qualifications like the L. M. P. was an impediment to the progress of the profession ; but that a very good beginning had been made in the right direction by the abolition of the L. M. S. degree and the Apothecary class.

Continuing, Col. Rai said a subject of great importance was the relation of the Doctor with the Vakil, the Police, and the Court. The public had been depending entirely on the Government doctors in all medico-legal cases. This arrangement was awkward both for the government and their medical servants—and much more awkward for the magistrate who is bound by oath to administer justice impartially. The Defence had hitherto been in the hands of the government doctors as also the Prosecution, in Criminal cases, inasmuch as medical evidence had to be given by government doctors only on both sides. His own opinion was that Justice would be better administered when Government ceased to employ their own servants for such purposes. The independent medical practitioner must be allowed to give expert evidence. “The private practitioner,” said Col. Rai, “is not at present allowed to hold post-mortems. This should not be. The government medical officer may tell lies, and nothing but lies—but he is privileged to tell lies (*laughter*) as there may be no one to contradict him but another government doctor, who may find it awkward to do so.”

“This is going to open to you another vista which must be considered a noble part of the profession. There are people who have devoted whole of their lives to the study of Medical Jurisprudence and Toxicology. They fare infinitely better than the best physicians and surgeons in the world, as they are taken from one part of the world to another to give expert opinion. You have the future before you, and it will be worth your while to begin the study of Medical jurisprudence earnestly. (*laughter*) I am not saying this simply because I am the Professor of Medical Jurisprudence.”

Continuing, Col. Rai said there had been a talk in some quarters that some of the Medical Schools and Colleges ought to be closed, because the number of candidates seeking admission was growing less and less. The question of erecting a larger and better-equipped Medical College in Madras was considered by some as an unnecessary step for the same reason. “But I,” said Col. Rai, “hold a different view ; and I have the peculiar habit of expressing myself emphatically when I hold different views from others. My opinion is that we ought to bring our institutions to a level with those in other countries. Unless we do this we have no right to expect an equal treatment from the people of other countries. When we can get higher qualifications, why not have them ? Why should we be satisfied with the lowest qualifications such as the L.M.P. ?”

“I have come here to tell you that your future is in reality brilliant ; there is no room for despondency. You will have to be ready for competition ; and for this you must be liberal-minded, and have an exemplary character. You may have to compete with foreigners with their higher qualifications, and you must welcome them, because, after all, we are all servants of the whole human race. Let them come here and settle down, and show us what they can do. The competition will be healthy. Those who know more than us should be welcomed, but not those who know less, whether in government service or private practice.

Col. Rai then referred to doctors in other countries who gave their services free to Public Hospitals, but were able to earn a lot of money because they followed the principle of charging heavily the people who could afford to pay, and treating the poor free.

Col. Rai then went on to say how our medical education could be very much improved by doing away with some of the useless institutions which only turned out men with the lowest qualifications and spending that money in equipping up-to-date laboratories for the higher medical institutions, in short, by “improving the quality and diminishing the quantity.”

Col. Rai referred to the funny method of some examiners who tried to find out what the students *did not* know. "The man who gets 39%," in an examination said Col. Rai "is not necessarily going to be less efficient doctors in practice than the one who gets 40% and may infact, turn out to be a better practitioner. " Everything depended on the efficiency in practise—and not on the exact number of marks got, at the examinations.

Col. Rai concluded his interesting lecture with these words:—

" I have nothing more to say today except that I hope that when you go out of this college fully qualified, you will carry these ideas with you, and be true to your profession, to your country and to God." (*Cheers.*)

A Condolence Motion

On behalf of the Association, the following resolutions were moved by the secretary :—

(i) This meeting of the M.M.C.A. places on record its sense of deep regret at the sudden and sad demise of Sir Gerald Giffard, a former Patron of the Association and Principal of the College.

(ii) The above resolution be communicated to Lady Giffard.

Col. Rai made a short speech about Sir Giffard whom he called his "late, lamented friend and boss."

The motion was carried unanimously.

The meeting dispersed with a hearty vote of thanks to Col. Rai.

[I am indebted to Mr. L. Seshadrinatham of the III M.B. class for a verbatim short-hand report of Col. Rai's address. In order to economise space, I had to make precis of portions of the address :—[*Secretary.*]

IN LIGHTER VEIN.

Surgeon's Role

By PAPAROW, L.M.P.M.C.P.S.D. VET. SC Registered Medical Practitioner. Vizianagram.

1. Purpose high,
With scalpel running advance to eye and brain,
Without sigh,
Reaping juicy fruits of unknown lands of vine. 4.
2. Maker's mischief,
With trickish hands of correction at resurrection,
Surgeon's relief,
With marks of raising dead ever to creation. 8.
3. Left as dead,
Without hope but to dust ever engrossing lust,
Surgeon's deed.
Ever a living reed but never to die under lust. 12.
4. Tyre indeed,
Needs but chiseling and polishing under old hearts,
Ever in need
Timely help and hand to save from hasty new hearts. 16.
5. Physician's foil,
Ever an advanced step to the theatre line,
Surgeon's toil,
With aseptic hand and knife ever a merrier line. 20.
6. Surgeon in time,
Saves many a lost neglected dying hand,
Scaplel to rhyme,
Without breach of peace even to a dying hand. 24.
7. Surgeon as architect,
Mimicking not nature's tact but feeling ugly rends,
Divine as architect,
Sagacious to protect with knife in all the lands. 28.
8. Mahamad with sword,
And Koran in either hand brought infidel to light,
Surgeon with sword,
Brought many a cripple to luscious luck and delight. 32.
9. Surgeon in God,
Wakes many a sufferer to a dreamy faith healing,
Surgeon as God
Heals many a faith follower to rebirth without wailing. 36

10. Surgeon's rule,
Ever a martial law without gun in the theatre,
With brain cool,
As high armourer to knotty leaks in the theatre. 40.
11. High compassion,
But exterior shy covering inner emotions in grave cases,
Passion no ration,
To surgeon's motions under the rule of knife in
surgical cases. 44.
12. Post-surgical cases,
Misses never his dazzling sight to correct wrongs
oversight,
But pitiless care,
Marks the ruling epoch of marching events for
oversight. 48
13. Physician's triumph,
Over medical cases waves the flag of ruling peace,
Surgeon's knife,
Reaches polar heights knowing unknown—scalpel's
victorious peace. 52.

Resolutions.

(By the author of "INAUGURAL STRUTTINGS" etc.,)

I am of opinion that such a confession as what follows, appearing in a well known Medical Journal like this, will set intelligent minds thinking about the already much experimented on, though none the less confusing, science of Psychology—the trend a man's train of thoughts can take. I myself have worked myself into a headache trying to scratch off a solution from my bristled hair, but as yet my attempts have been futile, except for the production of a partial alopecia.

Resolutions:—are they made only to drive a fellow to a terminal fit in which he resolves, somewhat like this:—"Resolved not to resolve any more"? The result of such resolutions is just the reverse of the thing resolved upon. Take for instance this one. A couple of days ago, I resolved to have a clean shave as

far as insufficient light, a blunt knife, and a bad temper would permit; but here I am as I write this piece, cursing the "facial fungus" which throws a blurring silhouette upon my paper—I mean my whiskers and beard which seem to grow and multiply faster than fission-fungi.

Again, in the year of the Lord Nineteen Hundred and Twenty five, I was a hard smoker. About the middle of December last, on the receipt of a mediocre calendar, cheap and concise, accompanied by somebody's compliments—I forget now whose—I pondered over the prospect of my impending legacy of 365 days—fresh, new twenty four-hourers. And that led me to think about the deteriorating morality of the world in general, of which, I penitently mused, mine was much the best example; a typical case, as you will call it.

Then it was that I resolved not to smoke anymore: and instantly—attention ye psychologists:—the weak one in me was up and grumbling "No more shall the curls of smoke from the Virginian foliage ascend, phosgene-fashion, (or is it arsene?) up to the sooty ceiling! No more the perpetual thrill of an expected fire! No more hope of crying out "Fire!" in the Phone! No more jokes with youngsters, for neither can one promise smoke from the eyes, nor can one burn their expectant frame; No more the soothing sensation as the smoke surges out of one's half open lips (and nose), no more throwing the live stubs on good old Tiger slumbering in peace at one's feet! No more....."

But my better half prevailed, (I mean the half that is good in me), and I administered unto myself the solemn oath with becoming slowness and respectful awe:

"Robert H. Gashkarbban, medico, thou shalt not smoke, during 1926, nor ever after, on pain of etc. etc."

I noticed some one sneezed—once only; though I waited a good while expecting a second one to cancel the evil sign of the

pharyngeal reflex, which when it occurs, either solitary or in odd numbers, is of ominous portent.

Even then I had a vague doubt that I would get my legs pulled beneath me, though, in sane moments, when I am not intoxicated by the odorous herbage, I have surveyed the various advantages to be had, if,—there is much virtue in 'it,' they say—I could stick to my resolution: The shopman's bill will no longer haunt parental slumbers: my religious neighbours will not look askance at me as I start out to college; my friend's won't remark: "how awfully you stink!" and such other petty evils, many more of which, I am sure my friends can detail to you.

As I told you before, this prudent resolve was about the middle of December. And during the succeeding fortnight, I indulged my craving for the cerebral sedative, (some say it is a stimulant, don't they?) to an alarming degree, so much so my room-mate remarked I could no longer hold my pen steady in my hands.

I promptly laid hold of a pencil that was near at hand, and put out my paw.

"Oh! Dash." I cried, as I saw my fingers quiver like the bowstring of an archer keen, after the discharge of a well aimed bolt.

"Fine tremors old bean!" reminds my friend, "are a sign of nervous degeneration. In fact, I remember having heard M₂ say they precede a break down—a perfect collapse of ganglion cells, Nissl's granules, nucleus, axons, dendrons and all."

Thereupon I entered into a thesis upon physics and muscular power, with an occasional hint at fifty stimuli per minute, and how their objects mesmerise the mind, and acting as it were through the encephalon, produce a pathological tremble not unlike the tremors heralding paralysis partial or total.

In conclusive proof thereof I whipped out the ruler from my drawer, used by us as an article of stationery as well as a weapon

both offensive and defensive, and held it out at arm's length for a short time. There were no more tremors: but I dropped it soon, as the thing was getting on my nerves, and then continued my explanation, with a fresh cigarette in my mouth.

Perhaps it was the smoke, which he calls foul, or I don't know why my friend left before half my demonstrative conclusions were finished.

I continued my conclusions, addressing as it were the glowing tip of a glorious Virginia blend, and stumbled down to dinner.

A few days later a new idea occurred to me: why not try a pipe, before you left off the show for good? I thought.

Now a pipe has its own advantages. There is no more the expensive though (I do not deny it) the polite habit of offering your neighbour one, and our library is a crowded hole, especially at the post-prandial period when one's soul craves most for a whiff of the drug. Again one needn't throw away the half finished pipe, if an unthought of class interferes with the peaceful enjoyment; but a fellow who preserves the posterior bits of unfinished fags—he is the butt of the college ridicule in less time than I can exhaust a pack—and I am pretty quick too, having won, now and then, sundry bets with friends over smoking feats:—"two at a time," "one at a whiff" etc. etc.

So it was that I became a votary of the stem and the bowl, instead of the 'paper pencils' as I used to call the cigarettes, when young and anxious not to reveal my secret habit so immaturely contracted. This was only for a fortnight, mind you.

The days wore on, and the smoke-blackened pictures on the walls of my study grew blacker still and I went on smoking my pipe.

I had not forgotten my promise all this while; but I was secretly arguing within myself "cannot a fellow be born in this crowded world, smoke a pipe or two in comfort and pass away peacefully, when so ordained? Why should they bring false

accusations against this heavenly herb, that it affects a healthy health? I am as healthy as a bull though my tobacco astonishingly long; I have no neuritis, though my anxious f would have it in me. Fain would he find a patient but the pri of elders of the profession counts; so perhaps he wants m be his case! Funny patient I would make his first and only patient. Not a paying patient though, thanks to medical etiquett.etc.

Or again, thus: "cannot a man surround himself with an aromatic envelop of encircling smoke in rotten dens like our cinema palaces, which resemble more a tiger cage, foul smelling and dusty, than a palace, and not be questioned about the propriety, the advisability, and the utility of such an act? Meddlesome world! Can't you folks mind your own jobs? You would, if you had a pipe etc."

Till at last I was rudely awakened from such similar trains of thought one morning thus:—while searching for a match, I stumbled on the complimentary calendar which I had quite forgotten. My pipe lighted, I proceeded to hang up the thing, and mechanically I ran over January reckoning out the date: The day I was doing it—I looked it up: and there clear against it was marked the date III.....

I had broken the resolve, before I had begun to keep it.

After all, there is nothing like a good cool pull at a weed when a chap's mind is troubled with thoughts of things that might have been, reproachful neighbours, and, broken resolutions.

A pipe for my nerves, that is my recipe; though, certainly I would put you on—guess!—Bromides!

Inter-class Tournaments

By R. K. CHETTUR.

Our inter-class Tournaments having been such an unqualified success last year, and the same, if not greater, enthusiasm prevailing amongst the students, it was unanimously decided to hold the various tournaments again this year. Whether the excitement caused by the unexpected finish of the Presidency cricket match, or whether the eagerness on the part of the students to emulate the great C. K. Naidu of Bombay Fame, had anything to do with the decision of the Committee to hold the cricket Tournament first, we cannot with any authority say.

Cricket

The fixtures having been drawn up, the first match between the IInd and IIIrd years was played one evening, the game commencing at 3 p.m. sharp. The IIIrd years batted first faring very badly at the start, but with the advent of Bhandari, however, the game took on a more lively turn, his contribution proving to be the lion's share of the total, having scored no less than a well-played 33, with Srinivasan and Condillac each contributing 11 and 16 runs respectively, and with each of the others doing their "little bit," the IIIrd years succeeded in raising their score to 87; all the bowling talent of the IInd years was exhausted before their opponents could be dismissed, no less than six bowlers being tried, and of these Dharmalingam was the most successful, capturing six wickets for 38 runs.

With a comparatively tall score to hit up, the IInd years commenced their batting with great hopes, making a much better start than their opponents, the first wicket falling for 5 runs. Much was expected of Dharmalingam, but, unfortunately, before he could "open out his shoulders," to use his own expression, he was run out. With his untimely dismissal, commenced the rapid decline and fall of the remaining batsmen,

and in a shorter time than it takes to write, the whole side was out for a meagre total of 21 runs, leaving the IIIrd years the winners of the day by a clean margin of 66 runs. Needless to add, Bhandari was the most successful bowler working havoc with the ball, being responsible for 5 wickets for 8 runs!

Final Year vs. IV Year.

This match was looked forward to with great interest by the competing teams, the Final years because they wanted to beat their unlucky opponents by a terrible margin, and the IV years because they were determined to beat the final years or at least be creditably beaten, neither of which, however, the IV years succeeded in accomplishing, with more than five of the regular college Eleven in their class team, and having won the tournament the previous year, the final year players were justified, perhaps, in boasting as they unfortunately did, but had it not been for luck favouring them and for the fact that the others had such absolutely raw material at their disposal, the final year team might even have been beaten on that day.

The final year team winning the toss, elected to bat, and commenced their winnings with commendable caution and steadiness nevertheless, soon after the first decade was telegraphed, Venkoba Rao was clean bowled by Raghavachari, the retiring batsman having scored 4 runs. The good fielding and bowling of the IV years, was responsible for the dismissal of the best wickets of the final year's for less than fifty runs, and within sixty or sixty five the others also should have been out, but cricket being ever a game of chances, the tail end, which wagged very vigorously indeed, carried on the score to 92, Sundaresan contributing an invaluable 16.

With a huge score before them, with a paucity of respectable batsmen that only the IV years knew too well, the prospects looked gloomy indeed. When the opening batsmen went up to the wicket, gracefully stood there, took the centre, leg and middle, etc., looked round to see where the fieldsmen were

placed and promptly retired soon after the delivery of the ball the prospects looked gloomier still. Even those who knew a little of the game failed to come up to expectations. Masters was the top scorer with 6 runs to his credit, and the total which came to 25, included seven lucky byes. Thus the IVth years, who started out with such great hopes, came back, as Napoleon did from Moscow, crest-fallen and heart-broken, having been beaten by a miserable margin of 67 runs.

Final Year vs. First Year.

This match which was the next one to be played was also productive of great excitement. The first years batted first and by careful play, brought the score to 71, towards which total Shunker contributed 20, and Bhaskara Rao, our old stagers, a well-played 28. Regarding the batting of the final year team they fared in the same manner as they did with the IV year team, the best wickets falling for 41 runs. White and Chandrasekarayya, taking advantage of the loose bowling and the indifferent fielding of the Juniors at this stage raised the score to 72, having scored 18 and 17 runs respectively, neither of them being out. Thus the final year team won by 5 wickets.

Final Year vs. Third Year.

Finals.

A large number of students turned out to witness the finals of the cricket Tournament, between the above teams, and never had they witnessed such an exciting match, for even as the much maligned Madras cricket players beat the mighty all Bombay team, consisting of the pick and choice of their whole Presidency so also the modest players of the IIIrd year beat the all too confident final year team.

The final year men batted first, and started off splendidly, the first wicket falling for 33 runs. Incredible as it may seem, the whole side was out for 48 runs! The fielding and bowling of the IIIrd years was exceedingly good, Bhandari and Thayu-

manaswami being in excellent form, bagging 6 wickets, 13 runs, and 3 wickets for 10 runs respectively.

Matters looked very hopeful indeed for the IIIrd years, only a total of 48 before them, but with the ignominious s they made, with as many as six wickets falling for a meagre 13 runs, all their hopes were dashed to the ground and it looked as if the final years would yet carry off the day. But Bhandari, as usual, came to the rescue of his side and matters were slightly improving, but the bowlers taking advantage of the fact that the batsmen who partnered Bhandari at the opposite end were none too reliable, tried to put them out. Seshadri, who was given special instructions just to keep his end up and not to indulge in any wild hitting, kept blocking each ball as it came along, his effort being in a great measure responsible for the victory of the third years. Every time Seshadri faced the bowler his supporters were afraid that he would be bowled or caught; but he pluckily stuck on, while Bhandari did the hitting. When the Score of 48 was passed and they were on the safe side, great was the excitement and jubilation of the third year students, whose team ultimately won by 2 wickets.

Foot-ball.

The foot-ball interclass tournament was, we are inclined to think, competed for more keenly than the others, the chief reasons being that it was not held last year and that all the classes fielded fairly good teams with nothing much to choose between them.

The first match between the IV and I years would have ended on the first day in a victory for the latter, but happily for the fourth years, heavy rain came down, necessitating a postponement. When the match was replayed the teams were much better represented, and naturally, there were not so many infringements of the rules as in the first match. The first year

scored the only goal of the evening in spite of the valiant defence of Abraham, who was one of the few who could play really good football for the fourth years.

Equally interesting was the match between the Final and Third years but skill and superior team-play left the latter decidedly victorious. Many of the players were evidently not in touch with the game, not having played since the days of their youth, and these wanting in skill, had to rely on energy and the adoption of strange tactics.

The match between the IIInd and Ist years had to be fixed up, for want of time, for a Sunday morning, and the latter failing to turn up the match was decided in favour of the former.

A very keen contest being anticipated in the finals between the IIInd and IIIrd years, a large number of the supporters of both sides were present to witness the final struggle. Both teams were rather handicapped by injuries which their players had sustained in the match the previous day in the Wilson-Cup finals, but in spite of it the game was interesting. The final score is in no way to be taken as an indication of the run of the game because both teams were fairly well-balanced, and the IIInd years were very lucky indeed in having scored two goals. The IIIrd years tried their best to pull off the match, but, unfortunately, every effort of theirs was destined to end in failure.

Hockey.

As was anticipated even from the very beginning, the First year team won the Interclass Hockey Tournament. The Fourth years, we have authentic information, had some hopes of winning but they were speedily undeceived by the Third years who beat them in the first round by two goals to nil. The manner in which some of the players went about hitting both ball and man with equal impartiality, and even men on their

ownside, was really amusing. The next match between the teams representing the Final and Second years was played on the College ground ended in a draw but the match was decided in favour of the later in the extra time allowed; another match between the third and First years was played on the same evening on the Y.M.C A. ground and, by a curious coincidence, this match also had to be decided in the extension allowed. The First years had the better team, and Saldanha, after an individual effort scored the winning goal.

The second and first years having thus qualified for the Finals, the last match was played off on the College ground on Friday, the 5th of February. The standard of the game was very poor, there being a great deal of wild hitting, many infringements of the rules; and little or no finish about the play of the two sides; the junior team worked more together, possessing three valuable men in Ghanni, Shunker and Saldanha, while their opponents could boast only of Azariah and Peter. Nevertheless, the second years were unlucky in not having been able to fare better and though they tried their best they were unable even to draw level with their opponents who were thus left the winners of the Tournament

R. K. CHETTUR.

