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ON THE HISTO-PATHOLOGY OF RHINOPHYMA.

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The patient was a European Male, aged 84 years. He was a retired Army Pensioner and a man who had seen hard life. He had protuberant masses of tumour attached to the tip of the nose which were stated to be of 1½ years duration. The tumour was lobulated, the largest being about the size of a wall-nut attached to the tip of the nose. There were smaller masses to the right and left of this central mass and both sides of the nose were covered with pimples. The growths were firm and freely moveable. The skin was adherent to the masses, reddened in colour and greasy to the feel. The dilated orifices of the sebaceous glands were distinctly seen on the surface. The central mass of the tumour had a small superficial ulcer on its inferior surface. While wiping his face some days ago, the ulcer bled profusely and this terrified him and made him seek relief in the hospital. The growths were removed and sent to the Pathology laboratory for examination.

Macroscopically the growths were firm and nodular with the skin stretched over them. The crypts of the dilated sebaceous glands were prominent giving the skin the appearance of an orange peel. On section the tumour was of a general whitish colour containing numerous small spaces filled with an inspissated yellow secretion ranging from the size of a pin's head to a lime pip. (Refer coloured painting).

Microscopically the epidermis is diminished in extent and consists of only a few layers. The papillae are mostly flattened out and not prominent. Dilated capillaries containing red blood corpuscles are seen immediately below the Rete Malpighii. The Corium is increased in extent and infiltrated by round cells all through but especially marked around the sebaceous glands which are distended with secretion. The vessels of the corium are numerous and dilated. Numerous hypertrophic sebaceous glands are seen. Many of them are converted or are being converted into circular and irregular cystic spaces containing a yellowish degenerate structureless and vacuolated secretion. In some cysts the secretion is scaly and stains dark. In the much distended cysts the epithelium is only a few-layered and the cells are flattened out, whereas in the smaller cysts the epithelium is many cells deep (Refer Microphotographs). The appearances are those of Rhinophyma.

By Rhinophyma we mean a *hypertrophy-ing seborrhoeic rosacea*. Hebra first described as Rhinophyma the fibromatous growth which results after long standing simple rosacea and the coincident hypertrophy of the sebaceous glands. From its histological appearances according as the fibrous overgrowth or gland hypertrophy or both predominate Unna describes three different forms. In the first or fibrous variety of rhinophyma there is an excessive increase of fibrous tissue, but the coil glands and the sebaceous glands remain and show no hypertrophy. In the second or glandular variety the glandular hypertrophy is so prominent as to give to the skin clinically the appearance of an orange peel, being dotted over with transparent areas by the presence of the fatty cysts of the hairless follicles on the surface. In the third or mixed type we see a mixture of both the processes and this is the most common of all.

The successive pathological stages which go to produce rhinophyma are best described by Sir Malcolm Morris as follows:—

"First of all there is a chronic congestion of the face, set up by reflex circulatory disturbances. The skin of the middle third of the face becomes permanently reddened, the point of maximum intensity being in most cases the nose. Subsequently there is almost always considerable dilatation of the superficial vessels. Hypersecretion and retention of the sebaceous matter occur, followed in some instances by inflammation. The affected area is then studded with pimples marking the obstructed ducts. The disease sometimes passes into a further stage, the chronic inflammatory process giving rise to hypertrophic thickening with lobulation of the skin of the nose, known as rhinophyma. The hypertrophy occasionally takes the form

of pendulous masses. Pathologically the condition is a vasomotor neurosis called into action by reflex irritation and followed by inflammation in and around the sebaceous glands with permanent dilatation of the superficial blood vessels, and occasionally by overgrowth of connective tissue round them."

We thus see to begin with a stage of chronic passive congestion, by whatever means brought about, resulting in a hyperactivity of the sebaceous glands, whose secretion blocks the ducts and so leads to accumulation, distention of the glandular acini and formation of cysts of irregular sizes as a secondary consequence. The pent-up secretion acting as a foreign body sets up chronic inflammatory changes and so leads to the great increase of fibrous tissue and round cell proliferation. The different elements of the glandular hypertrophy and the chronic inflammatory cell proliferation go to make up the tumour.

Rhinophyma is said to be common in habitual spirit drinkers who are much exposed to the weather, especially in cabmen.

I have to thank Major H. Kirkpatrick, I.M.S., for his kind permission to make use of this specimen for the purposes of this short article. My thanks are also due to Mr. Muhd Zakir, the College Artist, for having drawn me a coloured painting of the specimen.

REFERENCES.—1. The Histo-pathology of the Diseases of the Skin—Unna, Translated by Norman Walker.

2. Diseases of the Skin—Sir Malcolm Morris.

RHINOPHYMA.

A Epidermis. B Atrophic papillae. C Portion of epithelium dipping into the dermis. D Hypertrophic sebaceous glands. E Lining epithelium of the sebaceous cysts. F Degenerate structureless secretion. G Insipissated structureless vacuolated secretion. H Dermis infiltrated by round cells. K Sebaceous cyst in the process of formation. L Hypertrophic sebaceous glands around the cyst. M Round cell infiltration between the sebaceous glands.



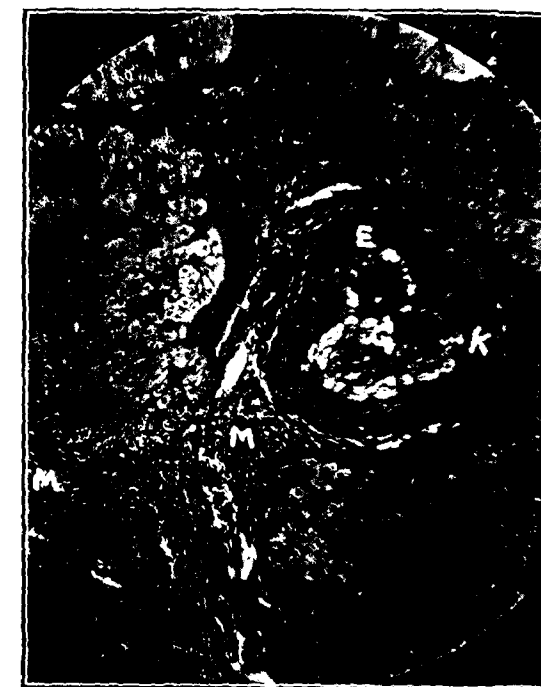
A. (LOW POWER.)



B. (LOW POWER.)



C. (HIGH POWER.)



D. (HIGH POWER.)

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**MEDICAL INSPECTION
OF SCHOOL-CHILDREN IN INDIA.**

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The medical inspection of School-children should form an essential part of the duties of all Medical Officers of Health, on account of its importance as a valuable asset to the national health and wealth of a country.

This has now been made compulsory in England (Education Act, 1907, and Circular by the Board of Education, 1908,) and other European countries. The system there has been, and is working very satisfactorily, due, no doubt, to a great extent to the co-operation of the parents and the general public with the Educational Authorities.

The system of having school medical officers ought to be started in India, now that the Government of India have found it opportune and necessary to promote the advancement of Elementary Education and Sanitation—two new epochs in the history of British India—by providing ample grants of money for both purposes, recurrent and initial.

Should the system be introduced in this country, in toto or in part? There are two points at issue :—

- (1) Finance.
- (2) Initial obstacles.

With regard to the question of the sinews of war, such a scheme would not entail much expense, as in India nearly every big city and District Town have District Medical Officers and a couple or more of Medical Subordinates (Assistant Surgeons and

Sub-Assistant Surgeons.) Some cities and towns have Medical Officers of Health in addition, and more are to be appointed in accordance with the recent Government of India Order. The Sub-Assistant Surgeons can manage the duty fairly well under proper supervision.

There cannot be much difficulty in Urban Districts; Rural Districts may be left out for the present.

A good beginning might be made with European and Anglo-Indian Schools in India, and in a select number of Indian Elementary Schools of the larger cities. If the results are sufficiently encouraging as, no doubt, they will be in course of time and under careful management, the system may then be extended to all India, at the discretion of the several local Governments, and to suit different local conditions and environments.

There would be little or no opposition from the European and Anglo-Indian Schools. Nearly all such institutions have an auxiliary Boarding Section with a medical attendant (honorary or paid) and a small monthly fee is levied from each intern pupil for medicine, attendance and drugs. As a rule, only its sick children come in contact with the doctor and there the latter's duty ends. The other scholars are left alone.

As to Indian Schools the opposition would not be great either, judging by the way public Hospitals and Dispensaries and the services of qualified medical men are patronised by all communities at the present day, especially so in the larger towns and cities. Even with regard to sanitation a decided change for the better can be noticed in India. Old ways and superstitions are gradually drifting before the steady march of sanitary progress and education.

An experimental scheme, on a small and moderate scale, and on the lines similar to those adopted by the Educational authorities in England, should be started as early as possible.

At present, school-children, particularly in Indian Elementary Schools, are congregated together under all sorts of conditions and often to overcrowding in buildings which are far from sanitary.

In many cases no precautions whatever, are taken during outbreaks of infectious and contagious diseases. This condition of affairs is seldom, if ever, noticed by the Educational Inspectors. Further, there is no provision for giving such children lessons in simple hygiene.

The European Schools generally keep up to a very fair standard.

The method of examination may be detailed as follows in a *tabular* form:—The examination may be conducted twice a year east.

MEDICAL REPORT.

INSTITUTION.

Name of pupil Age.....
Standard or Class.....
Caste, Religion or {
Nationality. { Height..... Weight.....

DETAILS:—

1. General appearance.
2. Eyes—vision in particular,—granular lids.
3. Ear, nose and throat.
4. Teeth.
5. Speech.
6. Mental condition.
7. Heart and Circulation.

8. Lungs—any Tubercular diathesis, etc.
9. Deformities, due to Rickets, etc.
10. Skin.
11. Family History.
12. Personal History.

GENERAL OBSERVATIONS—May be summed up as (a) Good health (b) average health (c) bad health.

REMARKS BY TEACHER—As to attendance and application at school, inclination towards sports and athletics.

DIRECTIONS TO PARENTS OR GUARDIANS.

(Sd.).....

Date

Medical Officer.

In this way any defects, etc., are brought directly to the notice of the parents with proper advice as to treatment, etc., and the desirability and utility of the continuance of studies of such children, or, otherwise.

Such a medical examination need not necessarily be the regular clinical examination of hospital routine. It would only be an observation of any defective conditions, that are likely to be present, and a suggestion of the precautions necessary to remedy them. Further, the object is not to aim at a perfect standard of health but to help the children to attain and keep the best health possible at school and in after-life.

The above remarks formed one of the subjects discussed at the second All India Sanitary Conference held in November 1912 at Madras. A resolution was passed at that time that the medical inspection of school-children should receive early attention. The recently published circular on Education by the Government of India also alludes to this question. Committees have been formed in certain places to suggest methods and means.

Side by side with this is another matter of equal or perhaps of more importance, namely, the Education of the Teachers themselves in simple practical Hygiene. The quality of teaching material in most of of the Indian Elementary and Secondary Schools is not what it should be, due to several causes, the principal one being insufficient emoluments. A system of school clinics should be instituted in the several educational centres where schoolmasters could take up a short course in Hygiene. Popular lectures with the aid of lantern slides on prevalent diseases, general as well as those peculiar to children, should be given showing the necessity of instilling into young minds the importance and value of Hygienic habits. As the saying goes that "the child is father to man," habits acquired in young age at school take a firm root and influence to a great extent the development of the several qualities in later life.

To organise medical inspection of school-children on a proper working basis a separate staff of medical men would be required. In England and Western countries full time and part time school medical officers are employed for economical and other reasons. The same could be well followed in this country. A staff of intelligent Sub-Assistant Surgeons under a medical graduate ought to be able to conduct such examinations satisfactorily. Hospitals and dispensaries are fairly adequately provided for in most districts of India. Municipal and District Board Medical Officers and Health Officers could co-operate with the educational authorities and organise efficient schemes. Of course the accruing results can only be gauged after some time. It was only as recently as 1907 that medical

inspection of school-children was established on a firm working footing in Great Britain. Within this short period the results have been excellent and the opposition which was aroused at first has quite died out. The practice has become a regular routine in Great Britain, Europe, America and Australia. Several cases of undiscovered ailments are thus being brought to light in early life and are dealt with promptly by suitable remedial and preventive measures. A few of such maladies and defects may be mentioned *eg.*, tuberculosis, adenoids, Defects in vision particularly, ear troubles, certain various conditions like epilepsy, hysteria, etc., and congenital malformations such as orthopædic defects, hernia.

In this country with the vast amount of ignorance, superstition and fatalism pervading the great majority of people such conditions named above (*i.e.*, preceding paragraph) pass unnoticed to the detriment of the younger generation. It is therefore high time that medical inspection of school-children should be one of the chief items in the present day educational programme of this country. The Third All India Sanitary Conference at its recent sittings (Jan. 19th 1913.) has again had this subject for discussion and it is gratifying to note that the Government of India will very shortly have schemes organised.

To conclude, the following extracts are quoted from the memorandum by the Board of Education in England (Nov. 22nd 1907.) on the Medical Inspection of children in Public Elementary Schools. "For some years past evidence has been accumulating that there exists in certain classes of English people a somewhat high degree of physical unfitness, which calls for amelioration and

as far as possible, prevention. A consideration of the gravity of the need led to the conclusion that medical inspection of school-children is not only reasonable but necessary as a first practical step towards remedy. Without such inspection, we not only lack data but we fail to begin at the beginning in any measure of reform. *The reasonableness of such inspection, if it is conducted on sensible lines, leading to an improvement of the surroundings and physical life of the children, must become evident both to the parents and to the nation as a whole.*

* * * *

Its justification is not to be measured in terms of money, but in the decrease of sickness and incapacity among children, and in the ultimate decrease of inefficiency and poverty in after-life arising from physical disabilities. The words so eloquently expressed speak for themselves and no comment is necessary.

THE District Boards of Godavari, Kurnool and Vizagapatam having each agreed to bear the maintenance charges of an itinerating dispensary, the Government have sanctioned a grant of Rs. 1,000 to each of those Boards towards the initial charges of the dispensary. The proposal to start such dispensaries in the districts of Ganjam and Cuddapah will be dropped as those District Boards are unable to provide for their maintenance. The presidents of the Godavari, Kurnool and Vizagapatam District Boards have been requested to start the dispensaries as soon as possible and to do all in their power to make the experiment a success. In their capacities as Collectors, they should instruct the Revenue authorities to give villages timely notice of the visits of the dispensaries and to direct village headmen to render every assistance to the Sub-Assistant Surgeons in charge. A report of the results achieved should be submitted through the Surgeon-General so as to reach Government not later than the 1st April 1915.

At the recent elections thirty members of the Medical profession gained seats in the Italian chamber of deputies.

TUBERCULOSIS.

SOME ECONOMIC ASPECTS.

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Tuberculosis forms the most important problem in Socio-Medical Legislation at the present day. The apathy with which it had been regarded for a long time has given it such a grip on the community that it will require a long and strenuous campaign against it before its ravages could be checked, and enable us to relegate it to the category of those diseases which had before pre-sanitary days been the scourge of the civilized mankind. For it must be admitted that with syphilis, Tuberculosis also remain one of the diseases of modern civilization. Tuberculosis is absent among the savage nomad tribes who had not come in contact with the civilized man. Only after such an intercourse does this disease begin to levy its toll on them. The ravages of this disease amongst the Kalmuks of the steppes of Russia and the Red Indians of America form a very striking example of this.

But it must be said that Tuberculosis and consumption, the form in which it most frequently occurs, is only a disease of semi-civilization. It is mainly a disease of big cities, and is most rampant within the area of the concomitant evil, the slums; though, it occurs from reasons to be mentioned hereafter also among the other grades of society. For with the perfect civilized state we are aiming at, with the eradication of slums and overcrowded cities, with improved sanitary arrangements and social legislation we will be able to eliminate all these preventable diseases and medical science will mainly be employed in preventive measures.

Consumption has been a dreaded disease, it was very rarely that cases of cure were seen; mainly the patients gradually declined till death released them from their sufferings. It was rarely that one house at a time did not contribute a victim. This despair and the contempt bred of familiarity has contributed to the neglect, whilst such infectious diseases as Plague, Cholera, Small-pox—which do not come to the same level as Tuberculosis in mortality results—have had more attention paid to them. It must be admitted that whilst these acute diseases levy a heavy death toll they do not produce the same death rate as Tuberculosis and besides their victims form potential dangers for only a short period of time whilst a case of chronic Pulmonary Tuberculosis forms an incubator and distributor of virulent Tubercle bacilli for a very long period and over a wider area.

Now comparing the mortality returns of England and Wales as given in the returns of the Registrar-General in 1904 we find the following:—

Infectious diseases vs Tuberculosis.

Diarrhoea and Dysentery.	29,674
Measles & German Measles.	12,341
Whooping Cough	11,909
Diphtheria	5,763
Scarlet Fever	3,770
Typhoid Fever	3,153
Small-Pox	507
Typhus Fever	37

Total ... 67,154

Pulmonary Phthisis	41,851
Other forms of Tuberculosis.	18,354

Total ... 60,205

Thus out of a total of 1,27,359 deaths 60,205 have been due to Tuberculosis whilst 67,154 have been caused by all these other infectious diseases combined: thus these results show that for every 67 deaths caused by these infectious diseases 60 has been caused by Tuberculosis.

Comparing phthisis mortality with the other infectious diseases it is found that phthisis creates far greater havoc than those, whilst the importance with which they are regarded seem to be far greater than the results warrant.

Compare phthisis mortality with other infectious diseases:—

Influenza.	5,694	Highest 13,756 (1890)
Puerperal Fever.	1,654	
Erysipelas	1,206	
Syphilis etc.	1,871	
Tetanus.	257	
Malaria.	106	
Anthrax.	20	
Glanders.	4	
Hydrophobia.	...	

Total. 10,812

Tuberculosis. 60,205

Thus for every 5 deaths from Tuberculosis 1 death has been caused by these infectious diseases, whilst much larger sums have been spent in the prevention and treatment of these than for tuberculosis.

The statistics of the Registrar-General for the decennium 1891-1900 report mortality of Tubercular diseases as 11% of deaths from other causes. Of these 69% is caused by Phthisis, 11% by Tubercular meningitis, 11% by Tubercular peritonitis, and 9% by other forms of Tuberculosis. The great prevalence of phthisis and mortality is thus evident

notwithstanding a steady decline in the prevalence of the disease; thus in 1909 the number of deaths due to it was only 38639.

These tables clearly show the havoc caused by Tuberculosis, and makes us give to it the importance it deserves and take measures for its prevention and treatment. Whilst taking India into notice the amount spent in combating one single disease, 'Plague' and the commissions appointed to conduct investigations on it, in the establishment and upkeep of institutes for the treatment of Hydrophobia and such like have run to a considerable amount, there is hardly any state sanatorium for Tuberculosis nor is a tithe of the above amount spent in combating this disease.

Now the question arises 'how far these statistics relating to Tuberculosis are reliable? The factors which contribute towards the accuracy of these reports are:—

1. Registration of births and deaths—The act regarding this was passed only in 1837 and that relating to completeness of certificates of death by medical men, in 1875. Thus the statistics before 1875 are of no value for comparison with the later returns.

2. Correctness of diagnosis in certificates—Whilst mainly this is reliable, some exceptions have to be made, as in the case of children where bronchopneumonia often conceals acute tuberculosis. Coates in his researches in the Great Ormond St. Children's Hospital states that 50% of all deaths in 1877 were due to Tuberculosis, and considers that we may safely affirm that of the total deaths under 10 years of age among the masses of people one-third is due to Tuberculosis. In Paris Landouzy in his presidential address at the International Tubercle Congress (1888) mentions

that $\frac{1}{3}$ of the deaths under 2 years are due to the same cause.

TABLE III.

Proportional mortality from $\frac{1}{3}$ according to age.	In proportion to 100 deaths from $\frac{1}{3}$ at all ages.		In proportion to 100 deaths from all causes		Age
	Males.	Females.	Males.	Females.	
	3.1	3.4	0.7	0.7	0
	1.1	2.0	4.2	5.7	5
	1.4	4.3	9.5	20.6	10
	5.6	9.7	26.1	35.4	15
	10.8	11.9	38.5	36.7	20
	23.1	25.3	37.0	32.3	25
	22.8	20.3	28.1	21.2	35
	18.9	13.0	18.2	11.2	45
	10.1	6.9	7.7	4.4	55
	3.1	3.2	1.4	0.8	65+
	100	100	8.5	6.0	all ages.

The discrepancy between these figures and those of Landouzy and Coates is because these latter are hospital statistics and secondly have included in them Tuberculosis following other acute infections whereas in the Registrar-General's returns only the primary disease will be quoted.

Inaccurate diagnosis in old age.—Glover Lyons has expressed that 'if all the deaths from Senile phthisis were properly registered the regular mortality would increase right up to the end of life, as in New York.' The diminution in mortality from consumption after 60, he thinks, is due to erroneous certification. Lister has shown the clinical difficulty of diagnosing consumption from senile emphysema and bronchitis.

Inaccurate diagnosis at all ages.—Confusion between consumption and other respiratory diseases and deaths returned under bronchitis and pneumonia have contributed to this

error. But there is no evidence to show by comparison with statistics of early and later years any change by the transfer of deaths from one to the other.

So that, so far then as confusion with other diseases is concerned it does not appear likely that the phthisis statistics of recent years are to any serious extent incomparable with those of earlier years. Phthisis, when a fatal disease, is early recognised and official figures within a limited margin may be regarded as approximately true.

In these matter of fact days, nothing comes in so forcible as values expressed in £.S.D., and we shall see the economic loss to the community caused by Tuberculosis. To ensure this it is necessary to see the age distribution of Tuberculosis mortality and also its relation with other diseases at those periods. The following tables clearly illustrate this. Of every 100 deaths,

TABLE IV.

Age.	10	10-20	20-45	45-60	65 +
Measles ...	99.1	0.5	0.3	0.1	...
Whooping Cough ...	99.9	0.1	...	...	...
Diarrhoea ...	93.5	0.2	0.7	1.6	4.0
Phthisis ...	4.8	10.1	56.5	25.3	3.3

Thus it is seen that during the working years 20-65, 82% of the deaths were due to consumption.

Of respiratory diseases Pneumonia caused 43,372 deaths, Bronchitis 42,188 and others 8,059. This does not include Phthisis which caused 60,205 deaths. Most of these if not all the respiratory diseases are caused by infection and many not recognised as such are due to Tubercular infection.

With regard to the sexual differentiation in the mortality figures, in regard to age see table 5.

TABLE V.

Death rate from Phthisis per 1,00,000.

Age.	Males.	Females.	Both sexes.
0	39	31	35
5	15	20	17
10	19	44	32
15	80	102	91
20	161	125	143
25	213	158	184
35	270	170	218
45	310	148	226
55	255	117	182
65	126	65	92
All ages.	146	103	124

Thus in England and Wales phthisis mortality was 1.46 per 1,000 in men and 1.03 in females. The death rate varies greatly in different ages as seen from previous tables.

The age distribution may be stated in 3 ways:

1. Death rate may be given per 1,000 or 10,000 living at each period of life.

2. Deaths in proportion to total deaths from same disease at all ages.

3. Deaths in proportion to total deaths from all causes at same age-period.

The first is the only method which can be employed in comparing the incidence of the Disease in different population. The second and third methods are useful for special purposes. To ascertain the proportional incidence of deaths from Phthisis at different ages and the importance in proportion to other causes of death at each period.

Comparing fig 6 and 7 it will be noted that the highest male death-rates from phthisis occur between 45-55, next 35-45, and then 55-65. The highest proportion of total male deaths from phthisis occurs between 25-35 and 35-45; Phthisis bears the highest proportion to deaths from all causes at ages 20-25 and 25-35. In the female sex the highest death rate from phthisis occurs at ages 35-45, next 25-35, whilst the highest proportion to deaths from phthisis at all ages occur at 25-35 age-period and to deaths from all causes at 20-25.

Of all the total deaths from phthisis 91·3% in males and 87·1% in females occur at ages 15-65, the working years of life.

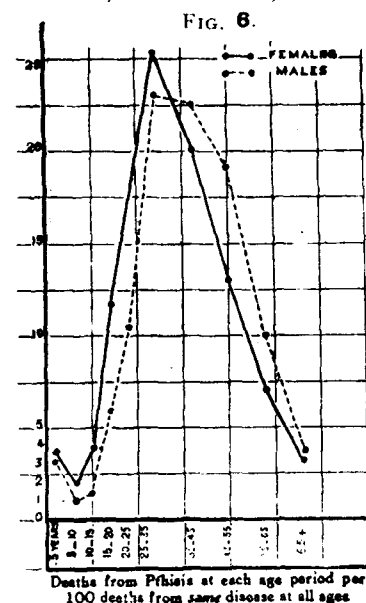


FIG. 6.

Thus the mortality from Tuberculosis other than the pulmonary form is 54 per 1,00,000 persons, 59 per 1,00,000 males and 50 per 1,00,000 females, the corresponding figures for all forms of Tuberculosis being 178, 205 and 153 respectively. Thus Phthisis is responsible for 69·5% of total deaths.

These figures give an idea of the serious economic drain on a country by this disease.

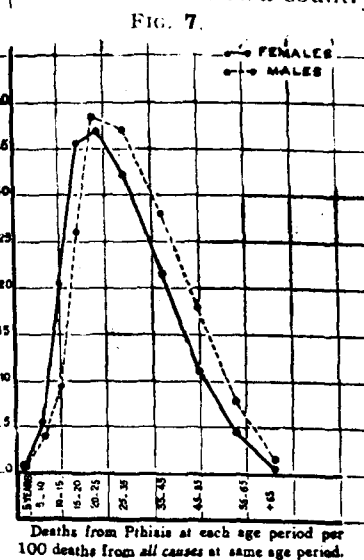


FIG. 7.

The time, money, effort spent on a child till he is able to earn his livelihood is so much capital spent on him and represents a large sum. It is exceptional for the earnings between age 15-20, to more than balance the

TABLE VIII.

Death rates from other forms of Tuberculosis:—

	Males.	Females.	Total.
Phthisis ...	23,850	18,001	41,851
T. Meningitis ...	3,359	3,030	6,389
T. Peritonitis ...	1,994	1,921	3,915
T. Mesenterica ...	1,064	834	1,898
Lupus ...	28	38	66
T. of other organs.	957	705	1,662
General T u b e r			
culosis ...	2,253	2,062	4,315
Scrofula ...	47	62	109
Total ...	33,552	26,653	60,205

personal expenditure; if this is so, all deaths before 20 must be regarded as dead loss of capital. After age 20 it is more complicated; for during the next five years a large number marry and bring fresh obligations. It is during the age 25-65 that the worker can hope to pay back the debt by (1) personal savings (2) investing capital in the formation of home and upbringing of family. The ideal, then, is for him to work and support the family till the children are able to earn their own livelihood and later on to have enough savings to lean back on for self and wife in the old age; thus becoming independent of any state or private charity. This can only be done when the worker is

not cut down by illness or accident. Hence the significance of the fact 'that among men 9 out of 10 deaths from phthisis is between 15-65 years of age.'

Elimination of phthisis and duration of life:—

The following table summarises Dr. Hayward's results on the calculations on the life-table method on the would-be-effect of completely removing phthisis from death-returns of the decade 1891-1900.

TABLE IX.

Age.	No. of Survivors at each age of 100,000 born.		Future expectation of life.		Per cent. increase in expectation.
	Based on mortality from all cases.	Based on mortality excluding Phthisis.	Based on mortality from all cases.	Based on mortality excluding Phthisis.	
0	100,000	100,000	44·1	46·3	5·0
5	75,093	75,256	53·4	56·2	5·3
15	72,592	72,897	45·1	47·9	6·3
25	69,446	70,654	36·9	39·2	6·3
35	64,716	67,676	29·2	30·8	5·3
45	57,655	62,138	22·2	23·0	3·9
55	47,424	52,742	15·8	16·2	2·3
75	15,813	18,303	6·1	6·2	...
85	3,121	362	...	...	...

This table shows that the elimination of phthisis does not materially affect the number of survivors up to age 15 but after that steadily increase. Thus at age 55 the survivors would be 11% more than under actual conditions and mean expectation of life be increased by 2·3%.

The above table also gives an idea of the great gain to the community by eliminating phthisis. The decade results of 1891-1900 show an increase of expectation of life of every male aged 15 years 2·8 years and at 25 years by 2·3 years. Taking the average increase of expectation of life of 3,080,166 males between 15-25 years at the census

1901 to be 2·5 years it follows that these men who in 1901 were at or near the beginning of their working life, would but for phthisis live in aggregate 7,700,315 years more than under present conditions. If the average earnings be assumed to be 20/ a week a possible gain of £ 400,000,000 might be obtained on the above lives or £ 10 millions annually. These statistics do not make any allowance for loss by protracted illness or from premature death of women by the same cause.

The national association for the prevention of Tuberculosis (Gt. Britain) estimates that 1/4th of the cost incurred in the relief of pauperism in England and Wales is caused by phthisis. The total expenditure on poor law administration in 1907 was £ 14,035,888 and on this basis over a million sterling is annually spent on paupers who were made as such by phthisis.

The Brighton workhouse infirmary statistics also bear this out. Of a total population of 1,02,000 at Brighton in the 8 years 1897-1905, 372 consumptives were treated in the infirmary, with an average stay for each patient of 221 days. On a small basis of 14/ a week this means a total cost of £8221 or over £ 1,000 a year for cost of maintenance and treatment. If the same cost is calculated for indoor relief in other parts of the country an annual sum of £3,31,000 is spent; this does not include relief given to relatives of consumptives or out-door relief and if these are added it will exceed the sum of one million sterling and would confirm the estimate of the N.A.P.T.

Watson's (1901) researches into the returns of the two great Friendly Societies in England 'The Oddfellows and the Foresters' also bear this out. The Oddfellows had 8,19,716 members between

1893-87. representing 2,995,724 years to risk of sickness and 3,180,378 years to risk of death. The average annual death was 12.3. The Foresters' returns for the period 1897-1901 with a membership of 5,80,405 equivalent to 2,721,822 years of life summarises the total number of deaths and the deaths due to phthisis. The Foresters' and Oddfellows' experience of general death-rate are similar and it may be regarded that phthisis rates too are the same and that in both Societies 25 per cent. at least of all deaths are due to consumption. The Foresters' death returns of their benefit members and their 2,24,374 wives and widows are given in the following table.

Death-rates from all causes and consumption 1897-1901 :—

TABLE X.

	DEATH RATE PER 100.			
	Benefit Members.		Wives & Widows.	
	All causes.	Phthisis.	All causes.	Phthisis.
England ...	13.2	1.8	12.1	1.5
Ireland ...	12.1	2.7	12.0	3.3
Scotland ...	9.6	2.6	10.1	1.8
Males ...	12.7	1.8	12.8	1.7
Un: Kingdom.	12.9	1.9	11.9	1.5

Turning back to fig. 6 and tables it is seen that the proportion of consumption to total deaths is greatest between 20-45, when it is $\frac{1}{4}$ of the total number and at age 55-65 it has declined to $\frac{1}{12}$ of deaths from all causes. In the Foresters the proportion is $\frac{1}{7}$ and must be higher in the working years 15-65 and further consumption is chronic and thus a large amount of total sickness is

caused. Assuming it causes $\frac{1}{3}$ of total disablement the effect on 8,19,716 Manchester Oddfellows during 1893-1897 was 4,707,680 weeks of sickness of which 9,41,575 must be attributed to phthisis. The Oddfellows have to pay for sick relief during this period at least £ 500,000 and the loss of wages to the men is at least double this amount.

Hoffmann (1901) relating the experiences of the Prudential Assurance Company of America shows that "at the ages of most importance for industrial assurance purposes almost half of the entire mortality is due to phthisis. The annual cost from Tuberculosis to the Prudential Insurance Co. is approximately the sum of \$ 8,00,000, based on 3 years experience. Over 6,000 deaths are annually due to it. Whilst these paid \$ 24 on an average, we returned to the beneficiaries over \$ 134, a net loss of \$ 110 in every case or more than half-a-million dollars during the year. Of course there is a great difference as to the losses at different age periods and as age increases the amount of insurance premia paid also increases and tends more to approach the amounts paid out but on the whole we lose about \$ 110 on every death from phthisis which occurs in our experience."

Dr. Herman Briggs (1903) after a careful estimate places the expense of Tuberculosis to the people of the United States of America at £ 66,000,000, the loss to New York alone being £ 4,600,000. The annual expenditure towards the care of tubercular patients in New York is not over £ 100,000, thus a sum less than 2 per cent. of the loss is spent to fight against it. "If this annual expenditure is doubled or trebled it would mean the saving of several thousand lives annually to say nothing of the enormous saving of suffering."

ASYSTOLE OF THE LEFT HEART.

H. VAQUEZ, M.D.

PARIS.

Side by side with the asystole complex in which failure of both sides of the heart supervenes simultaneously we must not lose sight of the fact that we may meet with isolated asystole involving in a preponderating or elective manner, one of the cavities of the heart.

The right cavities, no doubt by reason of their anatomical structure and their physiological function, are peculiarly predisposed to asystole but under certain conditions the left heart may be the first to yield and its asystole may dominate the scene.

Francois FRANCK indeed made it plain that, from a physiological point of view, the synergy of the right and left ventricular contractions may be disturbed, the systoles, while maintaining their synchronism, being reversed in respect of their power. At the autopsy we may meet with isolated dilatation of the left heart which, for that matter, we are now enabled to observe *in vivo*.

Radioscopy, this new and invaluable method of investigating cardiac pathology, enables us daily to become better acquainted with partial affections of the myocardium by rendering it possible to establish exactly the share that belongs to each of the cavities in the total deformations of the heart revealed to us by clinical observation

Left asystole may supervene suddenly but, before yielding, the heart as a rule seeks to overcome the fresh resistences with which it finds itself confronted. For quite a long time radioscopy may afford the only evidence of a deformation which affects the left heart

Beilfeldts' report of the Imperial German Insurance Office gives a much higher value.

These figures clearly show the magnitude of the problem to be confronted with and clearly suggest that no amount of money spent against it could be considered a loss from a business stand-point apart from the humanitarian aspect of the question.

DR. MANN in the *Herald of Health* says that diabetes and cancer are to a large extent due to the 'Suicidal habit of panchewing. The piperine in the leaf is said to have a paralysing effect on the nerves of the stomach and heart and the aricadine a similar effect on the eyes.' The moistened lime "eats up the flesh and bones of the body." There is a long list of diseases that are said to result usually on account of that habit. Tobacco and catechu increases the ill-effects.

THE French Government has conferred the honour of the Grade and Diploma of Officer de l'Instruction Publique in the Academy of France upon Sir Ronald Ross, F.R.S.

At a public meeting held at BOMBAY in honour of the Ottoman Red Crescent delegates, Messrs. Andan and Kamal Bey expressed the heartfelt gratitude of the Turkish nation to the Anjumania Ul Islam for all that Moslem India did in the darkest hour of Turkey and highly praised the work of the Indian Medical Mission.

THE President of the Bombay Medical Union, has been informed by the Honorary Secretary to the National Association for providing female medical aid in India, that the Central Committee have decided that Lady Doctors possessing L. M. and S. Degree of the Indian Universities should be allowed admittance into Women's Medical Service for India and rules connected with the Service have been accordingly altered.

In pursuance of the decision arrived at sometime ago to recognise the Women's Christian College at Ludhiana as a Provincial Medical School for women, the Punjab Government has decided to make an annual grant for three years in the first instance of eighty four thousand rupees to the College funds and special grant of Rs. 25,000 to building fund.

electively showing that somewhere in the systemic circulation there is a fresh obstacle. Only latter on does left asystole gradually set in.

When the left heart yields gradually the patient complains of dyspnoic and distressing sensations which call for detailed description.

We get, to begin with, effort dyspnoea, attacks of oppression while walking which clear up with rest, and breathlessness when lying down.

As time goes by, the dyspnoea assumes a more persistent character. During the night the feeling of oppression may come on suddenly in a very acute form along with rending pains in the chest, radiating into both shoulders and even into the arms, accompanied by cold sweats, lividity of the face and menace of imminent death. These disturbances pass off but leave behind them even more tenacious respiratory troubles.

This pain is due to distension in every respect comparable with the pain of aortic distension. It is the outcry of an organ in pain which is beginning to give way, such as we meet with throughout the whole domain of pathology, whether it be the pain of distension of the bladder, that of tarsalgia, scoliosis, etc. Later on, the contrary, when the organ, overcome, has yielded, the pain subsides and ultimately disappears altogether.

We must distinguish quite clearly between distension and dilatation. At the onset the heart still possesses a certain elasticity which allows it to pull itself together as soon as the resistance which has strained it has ceased to act. Later on, the dilated heart ceases to cause pain. It is therefore early in the case, at the period of commencing distension, that anginal pain attains its maximum intensity.

Cardiac asthma constitutes another aspect of the syndrome of left ventricular insufficiency and is characterised by sudden fugitive attacks of dyspnoea with fixation of the thorax and the lungs in inspiration. Much more frequent however is the occurrence of acute pulmonary oedema, in the pathogenesis of which it behoves us to bear in mind the circulatory trouble determined by acute dilatation of the left ventricle. The sudden pulmonary stasis thus provoked determines the vaso-motor reflex of oedema which may also be conducted to by concomitant chloruræmia.

Independently of any pathogenic consideration, whether pulmonary oedema be consequent upon dilatation of the left ventricle or whether both be under the mutual dependence of a common cause such as hypertension, one thing is certain *viz* that pulmonary oedema frequently occurs in presence of left ventricular insufficiency.

Indirectly, dilatation of the left heart reacts on the systemic circulation with which the cavity is in direct communication but as it is at some spot in this systemic circulation that, in most instances, the lesion which is the primary cause of the dilatation of the left heart is situated, we must endeavour to detect the variations brought about by this dilatation from previously observed signs, rather than base our conclusions on the absolute character of these signs.

It is especially by the character of the pulse, the degree of tension, and the amount of urine, that these modifications reveal themselves. The pulse becomes smaller, irregular and uneven, the blood pressure falls and the urinary secretion diminishes. There may be actual hypotension and oliguria though this is more often the case when the myocardium is first to be attacked

but in presence of a peripheral lesion, renal or vascular, somewhere in the systemic circulation, the hypotension and oliguria consequent upon yielding of the left heart are merely relative. By these means it is possible to establish a striking parallelism between the functional signs of left ventricular insufficiency, the dilatation of the cavities seen on the screen and the lowering of the blood pressure. This parallelism is maintained even after the functional manifestations have subsided, after the pressure has gone up, the urine become more abundant and the diameters of the heart have approximately returned to normal.

The negative signs are not less instructive. In contrast with these manifestations in connection with the systemic circulation we get little or no disturbance of the return circulation. The signs of insufficiency on the part of the right cavities are wanting or remain insignificant. At most we meet with slight stasis in the lower limbs and at the base of the lungs, there is no pulsation or distension of the jugulars, little or no increase of size of the liver and no tricuspid murmur.

Physical examination of the heart itself will complete the data afforded by the investigation of the functional signs and the peripheral physical signs.

It has been shown that at the onset, even before there is any functional disturbance, it is possible to make out the elective deformations of the left heart on the screen.

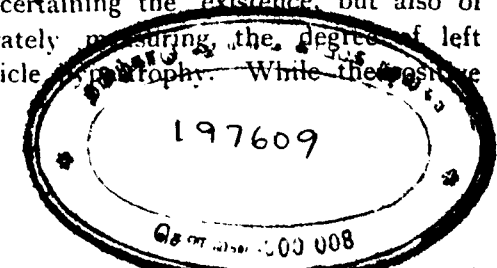
These deformations are perfectly characteristic indeed they are parallel with those revealed by percussion but the orthodiagram has a precision and reveals details which baffle the ordinary means of investigation.

In opposition to what we see in dilatation

of the right cavities, the heart's apex is very little displaced to the left, on the contrary it is strikingly lowered, entering almost perpendicularly into the diaphragm even during deep inspiration, in fact it gives the sensation of a heart erect instead of the lying down heart of right dilatation.

Investigation of the actual outline of the heart gives us an even closer view of the preponderating deformation of the left ventricle, the line limiting the left margin of the heart being more convex than normal, the apex is rounded and globular and measurements show that this left margin is much increased. Inasmuch as it is possible on the screen to define exactly what part of this left border belongs to the ventricle and to the auricle respectively, whereas percussion and radiography only give us the total volume, we are able to make sure that it is at the expense of the ventricle alone that this elongation of the left margin has taken place.

Lastly, it is still possible to explore the left ventricle with the greatest precision if we supplement examination from the front by one in the oblique position. Under ordinary circumstances when the subject places both shoulders against the screen the cardiac shadow is cut in two by the spinal column. If the left shoulder be moved from the plane of the screen, the right remaining in contact therewith, that half of the heart corresponding to the apex progressively diminishes and soon the apex disappears at an angle of 25° behind the spinal column. It is easy to understand that in hypertrophy of the left ventricle the apex disappears later and at a wider angle. This then is a means not only of ascertaining the existence, but also of accurately measuring the degree of left ventricle hypertrophy. While the positive



signs are well marked in respect of the left cavities it is easy to show that in the pure forms of left asystole the right cavities do not present tangible deformation as we had already been led to suppose by percussion, the right margin of the heart never passing beyond the sternal edge.

On auscultation nothing abnormal is audible, to begin with, over the left ventricle, not even a mitral murmur. Later on, the failure of the heart is revealed by the existence of left sided galloping rhythm. Whatever be the intimate mechanism ascribed to this pathological rhythm it remains an unquestionable sign of threatening breakdown of the myocardium. The galloping rhythm is often one of the first signs of left asystole and it may be met with before the supervention of grave accidents such as cardiac asthma or pulmonary oedema. When the acute symptoms occur, when the anginal pain of dilatation and the dyspnoea become very pronounced, it is possible on the screen to demonstrate the close relationship of these manifestations with dilatation of the heart.

The orthodiagraphic tracing indeed shows an extremely dilated heart in which the deformation bears exclusively on the left side. During the next few days while the symptoms improve under rest and treatment and the tension is again rising, a fresh tracing shows that the heart has, at any rate in part, returned to its original size.

At a more advanced stage of dilatation of the heart functional mitral insufficiency may come into play.

By the time functional mitral insufficiency manifests itself the dilatation of the left heart is particularly well marked, the apex is displaced into the sixth or seventh interspace, though the displacement is not transverse, the apex remaining in the nipple line.

The apex beat is spread out, the galloping rhythm disappears and its place is taken by a murmur.

This is a mitral regurgitant murmur which it is important to distinguish from cardio-pulmonary murmurs. Like organic regurgitant murmurs these functional murmurs are most audible at the apex and they are transmitted in a given direction, they are holo-systolic or at any rate proto-systolic. These characters are in contrast with cardio-pulmonary murmurs which may be most audible outside the apex, which are less regularly transmitted in any particular direction and are often meso-systolic. These are classical characters much easier to enumerate than to demonstrate in practice. Let us discuss such part of them as deserves to be retained.

The exact localisation of a murmur at the apex assuredly constitutes an excellent sign of mitral insufficiency but it is often difficult in respect of some of these murmurs to determine the exact spot where they attain their maximum loudness.

The study of asystole of the left heart raises the vexed question of functional insufficiency and anorganic murmurs.

As a matter of fact, under ordinary conditions, it is the right cavities which give way, dilatation of the left heart requiring anatomical lesions bearing heavily on the systemic circulation and the left heart.

POTAIN'S researches raised a doubt as to the existence of functional mitral insufficiency. "We have been able, says POTAIN, to raise the pressure in the left ventricle sufficiently to rupture the tendons, lacerate the valves and tear the ventricular wall, without the mitral becoming insufficient."

But POTAIN was operating on the cadaver and under these conditions one essential physiological property of the myocardium

escaped him viz tonus. To obviate this objection experiments were carried out on the living animal. FRANCOIS FRANCK and LIAN in their recent works showed that it was possible to obtain a mitral systolic reflux without any valvular lesion by mere dilatation of the left cavities.

To bring about dilatation of the left ventricle we must, at the same time, introduce peripheral resistance and determine a diminution of tonicity on the part of the myocardium. Asphyxia admirably fulfils these conditions. At the onset indeed it greatly raises arterial tension, acts on the pneumogastric which slows the heart and exerts upon it its depressive antitonic influence while a blood poor in oxygen provides imperfectly for the nutrition of the myocardium. Mitral insufficiency obtained in these conditions is verified by means of forceps placed on the left auricle showing the existence of a systolic reflux and by hearing a loud murmur at the apex.

It should be noted that there is no need to wait for an advanced degree of disorganisation of the myocardium in order to determine this insufficiency. We have merely to suspend the asphyxia indeed for it to disappear and for the heart to recover its tonus. These observers were able in the same animal, at a few days' interval, to determine a fresh dilatation of the heart with return to its normal dimensions during the intermediate period.

To comprehend the intimate mechanism of functional insufficiency it may not be unimportant to recall the physiological purpose of the auriculo-ventricular orifices.

The valves are not everything in determining perfect occlusion of the mitral orifice since even when they do not present any structural change the auricular contraction and the mitral ring must be in a perfect state in order to prevent any systolic reflux.

Auricular contraction, raising the pressure in the ventricle, enables the blood to progressively lift the valve segments which, at the end of diastole, thus come almost into contact. Contraction of the mitral ring, which constitutes a genuine sphincter, in great measure provides for occlusion of the orifice in systole. There remains however a lapsus to be remedied viz the part played by the floating part of the valves.

Consequent upon ventricular dilatation the surface of the valves may fail to close the orifice and the retracted pillars dragging on the valve segments may hinder their approximation. In point of fact however these conditions only obtain under very exceptional circumstances of considerable dilatation. Even when the valve come into contact, should the mitral ring have lost its tonus, thus failing to contribute its part towards the closure of the orifice during systole, a reflux is possible.

Isolated asystole of the left heart is therefore proved by both clinical and experimental observation. Without asserting that this is of such common occurrence that we are at liberty to invoke it in explanation of certain fugitive murmurs in the region of the apex, we can assert its existence. POTAIN himself during the concluding years of his teaching showed himself more inclined to admit the existence of functional insufficiency.

We must bear this insufficiency of the left heart in mind. It may be associated with right insufficiency but it may also supervene as an isolated phenomenon and it calls for special treatment. The latter often yields un hoped-for results: rest, bleeding, wet cupping, purgatives, water diet and digitalis bring about virtual resurrections especially when dealing with a first attack at a time when the heart is only beginning to yield to the causes of distension.—*Le Monde Medical*.

RADIUM AND CANCER.

SIR RONALD ROSS AND DR. H. C. ROSS.

As soon as any new chemical or physical agent is discovered, its trial for the treatment of cancer is one of the first applications suggested whether there is any reasonable basis for the idea or not; and the application of radium for this purpose is no exception to the rule. Cancer is a disease which attacks so many of us, and the death-rate from it is so great, that any possible "cure" is welcomed. Most of these suggested treatments however, have been of no avail; but in the use of radium there undoubtedly is some foundation for the belief that in some cases it can prolong life. In the "Times" of January 5th, and subsequently in other newspapers, an account of the work of Dr. Lazarus-Barlow, Director of the Middlesex Hospital Cancer Research Laboratories, was published, and it was pointed out that the treatment of cancerous tumors by radium rays has resulted in the apparent arrest of the disease, in some cases with a diminution or even disappearance of the growth. In the same publication, Dr. Barlow makes an appeal for more radium to continue his researches, an appeal which he has made before, and which every medical man hopes will receive material consideration. Dr. Barlow and his colleagues in this country, and Bumm in Germany, have made a distinct step recently by experimenting with large quantities of radium embedded deep in the cancerous issue. Sir Alfred Pearce Gould in the "British Medical Journal" of January 3rd, described the results of a series of cases treated in this manner, and some of the results look very promising. But Dr. Barlow and the surgeons at the Middlesex Hospital are

careful to point out that, while radium treatment is most hopeful in cases which are beyond the aid of operation it is too early to say definitely whether even the disappearance of a growth means that the patient remains permanently cured. Much research has yet to be done, and that can only be accomplished with the use of large quantities of this precious substance.

The treatment of cancer by means of light rays is not new; ever since Rontgen's great discovery, several devices have been tried for subjecting malignant growths to the X-rays: in many instances, especially in tumors near the skin, with considerable success. Radium has recently been substituted for the X-rays in some cases, because it is more readily applied; the X-rays require elaborate electrical machinery, whereas radium can be put in tubes which may be carried in a waist coat pocket, and so can be placed in actual contact with, or even inserted into the malignant tissue. But it is probable that the immediate effect on the tissue is identical in both cases. The *gamma* rays are believed to be the ones responsible for the action on cancer.

The action of the rays on animal tissues is remarkable. When they were first tried, they caused great benefit in certain skin diseases; but after a while it was realized that the effect of the rays can accumulate in the tissues, and that an initial overdose can cause disastrous results. The patients who had only a limited exposure to the rays were gradually cured, even of some forms of cancer; but the unfortunate doctors, who were continuously exposing themselves to the rays, actually developed cancer in their hands, and several died of the very disease they were trying to cure. In certain dosage, the X-rays will heal some forms of cancer; but in greater dosage, they will cause it—or rather, they

will give rise to the thickening and ulceration, which are prone to become cancerous. Happily, these accidents are now things of the past, because methods have been discovered by which the dosage can be accurately measured and the danger limit not exceeded; but these facts, instead of helping to solve the problem of the cause of cancer, only seem to make it more involved.

How the rays cause a malignant growth in some cases and cause a malignant growth in other cases to become smaller, is not yet known with certainty. It is doubtful if this will be cleared up until the cause of cancer is known, and that is still a mystery—or, rather the proof that it has been discovered is still wanting. Cancer is a disease which differs materially from any other; and from the fact that it essentially consists of a growth or tumor, composed of living tissue cells which have multiplied too rapidly, it appears probable that the huge problem of the cause of the reproduction of life will have to be at least partially solved before all the questions relating to the cause of cancer can be answered. Some say that the excessive cell-proliferation is brought about by the agency of some form of parasite; others say that it is not. As yet there is no proof one way or the other; but it is practically certain that forms of chronic injury in some tissues, such as the burns caused by the excessive radiation in the skin, renders that tissue very liable to the onset of cancer. And yet the rays in smaller doses tend to stop the progress of cancer.

There is a theory that the rays in small doses stop cell-multiplication, and so tend to reduce tumor; but in large doses, they increase cell-multiplication, and so give rise to the prolific cells which are liable to become

cancerous. There is another theory that 1914 rays in small doses destroy "young" "embryonic" cells, of which cancer is supposed to be composed. There is a link site: theory that the *alpha* rays cause cancer of the the *gamma* rays cure it. It is possible of new it is a matter of degree; a small decution of rays will cause injury sufficient to pass to the normal healing only, while a greater sufficient may cause such destruction as to, as well excessive and unhealthy cell-proliferation of which is liable to be invaded by the cancer process. One thing is clear, however, that the rays do not have a specific action on cancer; they will reduce other tumors (such as benign ones) as well, and seem to effect in different ways many forms of cell-proliferation.

But even supposing that radium is ultimately proved to "cure" some cases permanently without recurrence, although such a result would be magnificent, it will not, unfortunately, solve the cancer problem. Many growths are inaccessible to local treatment, and the disease sometimes rapidly becomes general. As Dr. Bashford, of the Imperial Cancer Research Fund, has recently said, the real problem is to find the cause of cancer and to attack that. This alone can prevent the enormous ravages of the disease. No "cure" has ever stamped out a disease yet, and, although individuals are crying out for one, the discovery of a wholesale prevention will be of much greater benefit to humanity.

With the radium treatment, all that can be done at present is to await the results of further trials. Cancer is an insidious disease, sometimes going on for years, and therefore it may be a long time before any definite conclusion can be arrived at. In the meantime, operation offers the best hope in most

— We are not yet justified in replacing
which is of known benefit—by any other
agent which is still in the experimental
stage.
The public cannot be too strongly
urged to seek advice about any lump or
SIR RONALD ROSS matter how small, at the earliest
possible moment, because research is daily showing the
importance of early treatment. As soon as it is
ascertained that the cause of all forms of cell
dysplasia is infection in the tissues is a predisposing
factor of cancer. *cancer.*—*The Nation.*
Suggested by

HIS EXCELLENCY LORD PENTLAND paid a visit to the Ayurvedic College at Thambu Chetty Street, Georgetown. On arrival His Excellency was received at the entrance by Pandit Vaidyarathna Gopala Chariar, Principal of the College, Dewan Bahadur P. Rajarathna Mudaliar, Dewan Bahadur K. Krishnasawmy Rao, Pandit M. Doraisawmy Iyengar, Dr. Subramania Iyer, M.B.C.M. and Dr. Venugopal Naidu and after the formal introductions and exchange of greetings, Lord Pentland was conducted round the various classes, while at work by the principal. The medicine chamber, library, dispensary, and museum attached to the College were inspected. His Excellency took a keen interest in knowing something of the old manuscripts that are being preserved in this College for the use of the students now undergoing training. His Excellency was told that at present there were 25 students from different Provinces and they were grouped in four classes, seven professors teaching these four classes in different sections of medicine and surgery in Ayurvedic principles. His Excellency, was pleased to learn during the course of his inspection that the Directors took over as the first step in their operations, the management of an Ayurvedic College, which had been successively maintained by the Sree Kanyakaparameswari Devasthanam Committee and Sreeman Pandit Gopalachariu. The Principal handed over to it with the College, its library, laboratory, furniture, etc., which were all his own property. For affording practical instruction to the students of the College, a free dispensary was also established. Students from Rajaputana, Guzerat, Lahore, the Central Provinces, Bengal, Hyderabad (Deccan), Mysore, Travancore and the other distant places are now being admitted in this College, for instruction in the Ayurvedic system of medicine both theoretical and practical.

HIS EXCELLENCY regretted to learn that the Managers of the said Kannikaparameswari Charities recently ceased to maintain the College, but was glad to know that Pandit Gopalacharlu, with whom its successful working was a labour of love during their management, was keeping it up with his private resources. The Pandit had contributed till now in various shapes a sum of Rs. 40,000, towards the maintenance of the College.

His EXCELLENCY spent nearly an hour in inspection, and before leaving the premises was garlanded. LORD PENTLAND expressed his high appreciation to the working of the College in the following words :—“ It has been a great pleasure to me to have the privilege of visiting this College, and so to see something at first hand of the system of teaching which are practised here. The students come from all parts of India, to undergo the careful training which they receive in the course of four years. I have been much interested in all that I have seen and offer my good wishes to the College staff and students.”

The following is a copy of the application dated 14th instant submitted to the Principal by the students of the Lahore Medical College who had gone on strike :—

Sir,—We the students of your College respectfully beg to submit that we have been labouring under a number of grievances in the Medical College, which we beg to lay before you in the following few lines :—

1. The first and the foremost grievance from which we suffer is the treatment accorded to us by yourself and some other members of the teaching staff. The Indian student has never been found lacking and due respect to his teachers and the students of your College have never failed in their duty towards their Professors. There is moreover a standing regulation in the College to the effect, "that every student shall salute the Professors and the Teachers by raising the right hand to the forehead." This regulation is strictly obeyed though the Professors with some noble exceptions, do not show us the common courtesy of acknowledging our salutes. The students of your College have never deviated from the path of duty and have always shown the greatest respect to their teachers. Still, however, the members of the staff have had nothing but the greatest contempt for the students. It is an ordinary thing for them to address us by such insulting names, as bloody fools, donkeys, asses, and slaves as if the

students were the vilest worms and not respectable youngmen of high University education. We have borne these insults as best as we could, but the treatment has now become intolerable and has compelled us to make a practical protest against it.

The treatment accorded to us by the Head of the Institution has lowered us in the eyes of the clerks, nursing staff and even the menials of the Hospital. We are not desirous of any special concessions at your hands, all that we want is, that we should atleast be shown the same consideration as the students of the Arts Colleges are shown by their Principals and Professors.

2. Our second grievance is with respect to the disabilities from which we are suffering in the prosecution of our professional studies, so far as the practical work is concerned. Although the practical examinations are becoming stiffer and stiffer, our opportunities of doing practical work are growing rarer every day. We are neither allowed sufficient use of the surgical apparatus, instruments, models, etc., nor given a fair opportunity to watch surgical operations. There is in fact a strong impression growing up that the staff does not like the idea of Indians attaining any efficiency in the Surgical work.

3. Contrary to the practice in other Colleges the students of the Medical College are not allowed to avail of the Library in the College, as no student is allowed to take out any book for home study on payment of any security whatsoever.

4. The students are always unreservedly suspected of forcing their attention upon the nurses. "The students should on no account talk to the nurses" is the standing order and although every one of us tries honestly to obey this order not only in letter, but in spirit too, yet there are almost daily uncharitable and unwarranted remarks cast against us. Should a student prefer any complaint against a nurse, it is dismissed summarily and the student is never believed whereas immediate action is taken on any report against the students by any Nurse. The contemptuous treatment of the Nurses therefore towards the students never finds any redress.

5. The number and amount of scholarships has been reduced this year although the number of classes will really increase after two years.

6. The system of taking bonds for merit scholarship is peculiar to Medical College alone. A bond does not

entitle the executor to Government service, at completion of the College course, but is only used for bursaries against prosecution of higher studies abroad.

7. We also beg to draw your kind attention to the fact that great difficulties are put in the way of proceeding to England for the prosecution of these. Exorbitant fees are charged before the various subjects are issued. It is after the patience of the applicant that the necessary funds are granted. The students intending to proceed, as well as those who are discouraged and thus cold water is thrown upon their just and noble aspirations.

8. We might have perhaps still put up with the disadvantages from which we have been so long suffering but the climax was reached on Wednesday last. As the proceedings of the London Hospital students were unfair and unwarranted as condemning the whole race of Indian students and as we feared that their example might not be followed by other Institutions, we approached you with the request to preside at a Meeting, we proposed to hold in order to protest against the Resolutions of the English students of the London Hospital. This, as you would see, Sir, was the best course that we could take. We were grieved to learn however that you refused to entertain the application and help us in the matter but added to our chagrin endorsing the opinions of the London Hospital students and in addition insulting us by condemning our own character, making remarks about our behaviour towards the Nursing staff which we beg to say were quite unjustified.

Smarting as we were under the numerous grievances some of which have been referred to above and were represented to you from time to time directly or indirectly, the unsympathetic treatment we met at your hands was the last straw that broke the camel's back. We did not think it consistent with our sense of honour and self respect to continue attending the College unless these remarks were withdrawn and our grievances redressed. We ceased to attend the College with the idea that it was impossible to represent the matters to you while staying in the College, as you refused to consider any such applications. We have detailed these grievances for your kind, sympathetic and best consideration and we will be only too glad to return to the College when we are kindly given an assurance that our grievances will be redressed and no punishment of any sort will be inflicted on any one of us for our staying out of College.

Waiting for a favourable and an early decision.

After the students of the Lahore Medical College had resumed work on the 1st of his Honor, the Lieut-Governor of

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As soon as the certificate of the student of cancer was presented to the

The Suit against Rajah of Ramnad and Another.

SUIT DISMISSED WITH COSTS.

His Honour delivered judgment this noon in the suit brought by Rangasawmy Iyengar, for the recovery of a sum of Rs. 965 from the Rajah, of Ramnad, and his brother-in-law Velusawmy Thevar, being the cost of medicine and visiting charges for the treatment of Velusawmy Thevar for diabetes. His Honour in an elaborate judgment reviewed the whole case and condemned the conduct of the plaintiff in having advertised himself as a specialist. His Honour in the course of his judgment characterised the plaintiff as a man, who has the least regard for truth, and that he was an impostor and he had no business to advertise himself as such, and that his advertising himself as such was a fraud upon the public. As a matter of fact the plaintiff's knowledge of diabetes was so utterly hopeless that in his cross-examination he was forced to admit his utter ignorance of what diabetes, specific gravity urinometer etc., were. His Honor accepting the evidence of Dr. Nanjunda Rao and other Doctors held that there had not been any cure at all effected by the plaintiff. In the end His Honor dismissed the suit with costs.

Mr. P. M. Sivagnana Mudaliar and Mr. V. V. Srinivasa Iyengar who appeared for the defendants applied for compensation as the case was one vexatiously brought against the Rajah. Mr. V. Ramasawmy Iyengar, who represented the plaintiff opposed the application.

After some discussion His Honour awarded a compensation of Rs. 200 to the first defendant (Rajah) and Rs. 150 for the second defendant on the ground that both the defendants were put to great expenses on account of this suit, and the trial was protracted by the action of the plaintiff.—*The Hindu*.

INDIAN MEDICAL SERVICE.

The result of the January examination was announced on January 31st, 1914. There were 33 candidates, the first 20 being admitted as lieutenants on probation with effect from January 31st, 1914.

The names of the successful candidates with the marks obtained by each out of a possible total of 5,100 are given below together with their degrees and medical schools:

Name.	Degrees etc.	Medicl. School	Marks.
G. H. Mahony	M. B., B. Ch., B. A. O. (N.U.I.) B. Sc.	Univ. College Cork	3,656
W. R. Stewart	M.B., Ch. B. Edin.	Edin. Univ. Edinburgh University	3,400
G. Covell	M. B., B. S. Lond.	Guy's Hospital	3,375
J. G. O. Moses	M.B., Ch. B. Edin.	Edinburgh University	3,281
K. V. R. Rao	M. R. C. S. L.R.C.P.	Nat. Med. Col. Charing Cross Hos.	3,241
H. Chand	L.M and S. Punjab M.R. C.S.L.R.C.P.	Lahore Med. Col. Charing Cross Hospita	3,208
J.W. van Reenen	M. B. Ch. B. Edin.	Edinburgh University	3,163
V. Mahadevan	L. R. C. P. and S. Edin. L. F. P. and S. Glasg.	Madras. Med. College Royal College	3,156
A.C.L.O.S. B. Lderbeck	M. B., B. S. Lond., M. R. C.S., L. R. C. P., B.A. Cantab.	Edinburgh University St. Bartholomew's Hos.	3,142
M. J. Roche	M.B., Ch.B., B.A.O.(N.U.I.)	Univ. Col. Cork	3,119
B. F. Beatson	M.R.C.S., L.R.C.P.	St. Mary's Hospital	3,112
N. D. Puri	M.B., B.S. Punjab.	Lah. Med. Col. Chg. Crs. Hos.	3,088
P. C. Roy	M.B. Calcutta	Med. Col. Calcutta, St. Bartholomew's Hos. Charing Cross Hos.	3,044
M. Das	M.B. Calcutta M.R.C.S., L.R.C.P.	Med. College Calcutta, London Hos.	3,009
J. B. Vaidya	L.M and S. Bombay M.R.C.S., L.R.C.P.	Grant Medical Col. Bombay Univ. Col. Hos.	2,983
J.M.R. Hennessy	L.R.C.P. and S. Edin., L.F. P. and S. Glasg.	Mds. Med. Col. Royal College Edinburgh	2,823
W. M. Lupton	M.R.C.S., L.R.C.P., B.A. Cantab.	Edinburgh Camb. Univ. St. Thomas's Hospital	2,815
A. G. Cowper	L.R.C.P. and S. Edin., L.F. P. and S. Glasg.	Grant Med. Col. Bombay Royal Col. Edinburgh	2,808
H. H. Brown	B.C. Cantab., M.R.C.S., L.R.C.P.	Camb. Univ. Leeds University	2,757
C.H.N. Baker	B.A. Cantab L.R.C.P. and S. Edin., L.F. P. and S. Glasg.	Royal College Edin. and St. Bartholomew's Hospital	2,716

REMOVAL OF THE GENERAL HOSPITAL.

AN IMPORTANT G. O.

The following G. O.—No. 240, Public, dated 26th February 1914, has been just placed on the Editors' table:—

The Government have for some time had under their consideration the measures necessary to provide the City of Madras Hospital, the location, construction and equipment of which shall satisfy all the requirements of modern medical treatment. In September 1909, doubts having been expressed regarding the suitability and adequacy of the site on which the General Hospital now stands, and proposals involving considerable expenditure, to improve the existing buildings being then before the Government, they resolved to appoint a Committee to consider and report on the advisability of removing the General Hospital and Medical College from their present site, and of constructing suitable buildings on modern lines on the bed of the Spur Tank. This Committee, which was presided over by the Officiating Surgeon-General (Col. Carruthers), came to the conclusion that the present Hospital buildings should be abandoned and that a new Hospital should be erected on the Spur Tank. The Government, however, were not satisfied that the recommendations made, which involved very large expenditure, were based on an adequate investigation of the subject; and accordingly they issued orders on the 17th November 1909 convoking a second Committee, presided over by Surgeon-General Benson, which was desired to give fuller consideration to the whole matter.

2. This Committee, by a majority of six to two, expressed themselves against the scheme for the construction of a new

hospital and college on the Spur Tank site: They recommended the renovation of the present hospital, the construction of new quarters for the nurses, and the execution of certain improvements and additions to the Medical College. To provide sufficient space for the alterations required, as well as to improve the sanitary condition of the hospital, they proposed that the north arm of the Coom, between the Wallajah and Penitentiary bridges, should be filled in. These recommendations were at the time accepted by the Government and proposals for carrying them into effect were obtained. The original estimate for improvements to the General Hospital amounted to 7.20 lakhs, and that for improvements to the Medical College to 7.33 lakhs, figures which, on a later scrutiny, it was found necessary to raise to 14 and 10.80 lakhs respectively. The cost of filling in the northern arm of the Coom was estimated at 2.18 lakhs. Before however according their final approval to the expenditure of so large a sum, the Government again passed under review the whole question in the light not only of a present circumstances but also of future needs. They felt that an order to proceed with the works included in these estimates would commit them finally to the retention of the present site, notwithstanding its admitted imperfections; they could not disguise from themselves the liability of expert opinion to undergo change; and, finally, it was ascertained that the project of filling up the arm of the Coom, an important feature of the Committee's scheme was open to insuperable objection. For these reasons and notwithstanding the delay in settling the matter that would inevitably be caused, the Government felt compelled to re-open the whole matter and accordingly in May last they appointed a third Committee under

the presidency of the Hon'ble Mr. A. Butterworth, I.C.S., and composed of representatives of all classes, official and un-official, medical and lay. The instructions given to this Committee were to consider how best an adequate General Hospital (with a Medical College) can be provided within the City of Madras, whether on the present site or on any other site. The Committee was to take into consideration not merely whether the hospital should be removed from its present site to Spur Tank, but also was to hold a thorough investigation on of any other possible sites whether at the disposal of Government or not, within the city; and the opinions of all classes interested in the disposal of the matter were to be ascertained and considered.

3. The Government are now in possession of the views of this Committee, and their thanks are due to the President and Members for the care and thoroughness with which the inquiry was held, and for the valuable report in which their conclusions are embodied. These conclusions are summarized in paragraph 19 of the report, and though the Resolutions of the Committee were marked by some divergence of opinion, the views of the majority may be briefly stated as follows:—

(1) that in order to secure a hospital fulfilling modern requirements an entirely new set of buildings must be erected.

(2) that the site on which the General Hospital now stands is open to such strong sanitary objections as to render the hospital to another site highly desirable;

(3) that of the sites likely to be available, preference should be given, in the order named, to

(a) the Ordnance Lines Maidans,

(b) the site of the Penitentiary, to be used as supplementary to the site of the present hospital, and

(c) the Spur Tank site.

4. The Government have given their careful consideration to the recommendations. They observe that while a considerable body of non-official opinion is opposed to the building of the hospital, the medical officers who were consulted were unanimous in holding that only by entire reconstruction will it be possible to obtain a hospital adapted to modern requirements of medical treatment and education. In this view the Government concur. Next, as regards the selection of a site, military considerations preclude the appropriation of the Ordnance Lines Maidans to this purpose; and the occupation of the Penitentiary site, besides involving the removal of the prison, would not in the Government's view, go far to remove the objection on the score of noise and dust to which the hospital is at present exposed—nuisances which are likely rather to increase than to diminish. The third site, that of the spur Tank, has been criticised on the score of remoteness from the more populous centres of the city a member of the Committee, in particular, instancing the Royal Infirmary at Manchester as a case in which removal to the outskirts of the city had injuriously affected the attendance. So far from this being the case, however, the Government learn from the Secretary to the Infirmary (whose letter is among the papers read above) that the transfer of the hospital to its new site was followed by a marked rise in the number of persons treated. Moreover, as Mr. Butterworth shows, this objection is material only in the case of Tondiarpet and Georgetown, and will lose most of its force when the new Royapuram hospital, now under construction, is opened.

in all other respects, in salubrity, and as affording not only ample space for a General Hospital and a Medical College on approved lines, but also room for expansion, the Spur Tank site satisfactorily fulfils the conditions required, and indeed affords the only solution of the problem. The Government have accordingly decided to adopt this site for the construction of the new buildings.

5. The Collector of Madras will be requested to submit to Government at a very early date a draft notification for the acquisition of R. S. Nos. 406 1, 406 2, 451—1 and 465 forming part of the bed of the Spur Tank. The attention of the Collector will be drawn in this connection to the correspondence ending with G.O. No. 2387, Revenue, dated 4th August 1911. A portion of the Spur Tank site will, as decided elsewhere be reserved for an extension to the Madras College for women.

6. The Surgeon-General will be requested to submit for the consideration of Govt. preliminary proposals accompanied with rough plans and estimates for the construction of a General Hospital and Medical College on the Spur Tank.

Indian Students in England.

We referred the other day to the malignant and malevolent resolution of the students of the London Hospital manifesting Indo-phobia of the deepest dye. of the grounds why they object to Indian students to England to study medicine, though couched in of the most insolent, is not without an element of humour. It is that "there is no reason why they come here to study white men's bodies, when all ultimately have to practice among blacks." "lies are ours. We would not have cared much resolutions been confined to a set of irresponsible uncivil youths of which the bulk of the

London Hospital students are app. But as they evidently have the approval, possibly of other responsible authorities, would just ask them one or two questions for a few "black" men to study "white" on the ground that they will eventually have among "blacks", how is it that "white" having studied the bodies of their own country come out to India to practise the same sin? But it only white medical men and women who are flooding this country, but white men in various other capacities are coming in hordes and battalions, into the "black" men's country to take the bread out of the latter's mouths. Surely what is sauce for the "black" gander ought to be sauce for the "white" geese. Let the "white" fortune-hunters effectively forswear everything pertaining to the "blacks" both their country and their money. In that case the "black" also will readily forswear the country as well as the "bodies" of the "white." In fact, they will have no need to go to the country of unsympathetic aliens if they are let alone to enjoy what they have got in their own. This will mean not only that the bone of contention between the "blacks" and "whites" will be gone but what is far more important to us Indians, the cloud of the so-called sedition and anarchy that has arisen between the rulers and the ruled in India will also disappear, for there is little doubt that all this trouble is due to the discontent and bitterness churned out of half-starved stomachs. This is a compromise that will be eminently acceptable to the "blacks," but, are the "whites" prepared to carry their blackphobia to its logical conclusion by accepting it?

The authorities here are very anxious to keep out not only the students but their Professors also, encased in a finely tempered steel, impervious and impregnable to the dart of politics, and to allow them to breathe nought but the ozone of "pure study." But they should just think of the students of their own race and own country who are steeped not only in politics, but, what is far more mischievous, in rank race-hatred. Politics seldom penetrates more than skindeep, whereas race-hatred is much deep-seated,—it taints those who cherish it to their very marrows—aye—to their very souls. And is it seriously thought that the waves of such poisonous sentiments, dashing against the shores of India, will not affect the "pure atmosphere" of the Indian Universities? Indeed, one single resolution of this type is calculated to unsettle the youthful minds of Indian students, and rouse their worst passions far more than if they had all the political agitators of the country at their lecturers and professors. For this is a psychological truth which no Government resolution can suppress that hatred induces hatred and bitterness engenders a responsive bitterness.—A. B. P.

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