before the hot weather brings the flies. The doors should close automatically by means of powerful springs. The ideal state of affairs is to have a passage 10 ft. long with a spring door at each end. This passage serves both as the entrance and exit. This system is adopted in the American houses and hospitals all over the Panama Canal zone, and a special gang of carpenters was sent round periodically to examine the condition of the screening and make any necessary repairs. The extra expense has well repaid the authorities by practically stamping out dysentery amongst the white population. As a second line of defence, even in a fly-screened building, all food on the tables ought to be covered with gauze. This is easily done. All flies which gain an entrance to the building should be immediately destroyed.

6. Supply of Sterile Sand for Cleaning Mess Tins.

This is necessary, as the sand about a camp is very liable to be contaminated and infective. Sand is easily sterilized by roasting or boiling it with water. The sterilized material should be kept in a covered boiler or other metal receptacle.

7. Eating and Drinking in Native Quarters.

Uncooked food, such as salads, vegetables, and ices, also unboiled water and milk, are dangers in all native eastern villages or in the filthy quarters of the larger towns. The milk should always be boiled. As vegetables are often manured with human faeces, they should be thoroughly washed and plunged for a few seconds into boiling water before they are eaten.

8. Recommendations with regard to Hospitals.

Cases of amoebic dysentery should be isolated as much as possible in special wards. Fouled clothing and bed sheets should be placed immediately in antiseptic lotion, so as to prevent flies from alighting on them. The hands must be washed after handling such clothing or the patients themselves, and also after handling bedpans. When bedpans are sent to the laboratory, the report paper should not be secured between the bedpan and its lid, because in this way it becomes soiled. Orderlies must be instructed in these matters and thereafter punished for lack of attention to details. Dysenteric wards should be thoroughly fly-screened, as well as the hospital cook-houses and mess-rooms. In addition, flies should be destroyed in all hospitals by every available device.

9. Early Thorough Emetine Treatment.

All cases of suspected dysentery should receive at once 1 grain of emetine daily at the advanced dressing station, field ambulance, hospital ship, or base hospital. This treatment must not be stopped during the transit towards the base until at least 7 grains have been given. It is bad practice to omit one single dose. The 7 grains should be received in seven days.

10. Microscopic Examination of Faeces before Discharge.

The faeces of every case of amoebic dysentery should be examined microscopically after a full course of emetine in order to determine that they are free from cysts. Patients should not be discharged from a field ambulance for duty, or from any hospital, until they are pronounced free. It should be remembered that the mildest cases may become dangerous cyst carriers.

11. Isolation and Thorough Treatment of Cyst Carriers.

All cyst carriers must be sent to hospital to receive a thorough course of emetine combined with salines. They must not be discharged or allowed to join their unit until quite free from cysts.

12. Examination of all Cooks and Mess-room Orderlies.

No soldier should be employed as a cook or mess-room orderly in a camp or hospital until it has been proved by microscopic examination that he is not a cyst carrier. Particular attention should be paid to this matter where those so employed happen to be natives.

13. Larger Sanitary Staff and Equipment.

There can be no doubt that these sanitary measures are necessary in a country like Egypt. If larger sanitary

squads and equipment could be provided, the measures could be thoroughly carried out, and this disease, with others, would rapidly disappear from our army. The extra expense necessary would be repaid almost immediately, and ultimately save an enormous amount of money and life to the State.

THE CAUSATION AND CURE OF CERTAIN FORMS OF LUNACY.

By RUPERT FARRANT, F.R.C.S., CAPTAIN R.A.M.C.,
LATE HUNTERIAN PROFESSOR, ROYAL COLLEGE OF SURGEONS.

BEFORE going on foreign service for a second year, I wish to publish the following preliminary conclusions and summary of work directed to the causation and cure of lunacy carried on during the last seven years. The work is a continuation of that previously published on the thyroid gland in the elucidation of goitre and exophthalmic goitre.

The work consists of the microscopical examination of sections taken from the pineal, pituitary, thyroid and sexual glands—first, at different ages and periods of life such as puberty, menopause, and childbirth; secondly, the effect induced in these glands by the acute and chronic toxæmias; and thirdly, the changes found in cases of lunacy.

Clinical examinations were carried out of cases exhibiting signs of enlargement and atrophy of these glands and symptoms of excess or diminution of secretion. Similar examinations have been made on all classes of lunacy for the presence of signs and symptoms. Photographs and x-ray examinations have been made to illustrate their occurrence. Mental cases and others have been examined for the presence of toxæmias inducing the alteration in the glands and the consequent induction of symptoms of excess and deficiency. Bacteriological examinations have been made of the faeces of lunatics and the colons examined *post mortem*.

From some 3,000 sections it is found that these glands vary at different ages and periods of life; with advance of life they tend to atrophy.

It is found that the pineal reacts to certain toxæmias, the ultimate result of which is fibrosis. The pituitary reacts in a similar manner, the terminal result of which is fibrosis; intermediate stages of hyperactivity are seen, and the formation of cysts and adenomata. The reaction of the thyroid to certain toxæmias with the induction of hypertrophy, cysts, and adenomata, I have already described in my lectures as Hunterian Professor in 1915. A comparison was made of such specimens with those obtained from cases of lunacy, apart from those in which a definite pathology has already been proved, such as general paralysis of the insane (other syphilis cases), meningitis, head injuries, etc. The effect of age and of the lethal toxæmias was discounted and the state of the glands in cases of lunacy determined.

In primary and secondary amentia atrophy of the pineal, pituitary, and thyroid were found in three main groups of cases. In dementia praecox an alteration was found in the glands which varied with the duration of the case. Alteration and degeneration was also found in other cases of dementia. In some cases of acute confusional mania, melancholia, manic-depressive and other forms of insanity, changes were found in the thyroid, pituitary, and sexual glands. The changes varied from hypertrophy to atrophy.

Clinical examinations were made of some 1,000 cases of insanity, analogous to those from which the pathological sections had been prepared, for signs of enlargement or atrophy, and the presence of excess or deficiency of secretion from these glands.

The thyroid gland was frequently found to be abnormal in children, adolescent and adult lunatics; its size varied from considerable enlargement to complete atrophy, and the general condition from one of hyperthyroidism and exophthalmic goitre to myxoedema and cretinism.

The pituitary gland was found sometimes to have given rise to symptoms of hyperpituitarism to apituitarism, in idiocy, dementia praecox, and other forms of insanity. Enlargement and atrophy of the pituitary were deduced

from x-ray photographs of the sella turcica and clinoid processes.

Signs of alteration in the pineal were found, especially in children and adolescents, with consequent symptoms of hyperpinealism and apinealism.

Alteration was found in the sizes of the testicles associated with ductless gland changes. Testicular atrophy was well seen in cases of apituitarism. From the histories of cases it was deduced that the stimulation of the sexual organs or its sudden cessation was associated with altered mentality varying from mania to exhaustion psychosis; altered mentality was also found in cases of double castration. Hypertrophy of the prostate was often found to be associated with altered mentality, and after complete removal cases were frequently associated with depression or melancholia.

Some 200 cases were examined for obvious signs of chronic toxæmia. Pyorrhœa and carious teeth were found to be a frequent accompaniment of lunacy in adults; in certain cases signs of chronic intestinal stasis and toxæmia were well marked.

Bacteriological examination of the faeces was made in some 100 cases for simple aerobic infections (apart from cases of asylum dysentery). Streptococci were found up to 100 per cent., and *Bacillus coli* was totally absent in some cases of mania. Streptococci were also found from vaginal swabs of puerperal mania.

Colons have been examined *post mortem*, and found to exhibit changes varying from normal to pericolicitis, fibrous thickening of the walls of the gut, and atrophy of the mucous membrane, and in other cases dysenteric ulceration.

It is deduced that many cases of lunacy may be classified according to the toxæmia present and the change that it has induced in the ductless glands.

The effect of the toxæmia varies with the intensity, duration, and the age of the patient; the first effect is stimulation, the final fibrosis. In the fetus and in childhood an acute or chronic toxæmia may induce atrophy of a ductless gland, and consequent maldevelopment and idiocy. Three groups stand out when the pituitary, pineal, or thyroid is atrophied. Cases of dementia præcox exhibit a polyglandular syndrome, and different gland types are to be found, and the appearance of the cases varies whether the gland is hypertrophic or atrophic.

In adults certain toxæmias react on these glands, especially the thyroid and pituitary, and induce stimulation, hypertrophy, and, finally, atrophy. The alteration in the amount of secretion—whether excess, deficiency, or absence—induces an altered mental state, and this, combined with the effect of the toxæmia, renders the patient insane or liable to insanity from slight mental stress.

Alteration in the sexual glands, whether primary or secondary, leads to altered mentality up to insanity.

The lines on which beneficial treatment may be carried out based on the above pathology become obvious; the matter may be summed up by saying that toxæmias, if present, should be removed by medicinal or surgical measures, and the glands allowed to involute if they are hypertrophied, or, if they are degenerated with deficient secretions, these secretions should be supplied. Good results may be expected before cortical brain lesions have taken place.

Careful experimental treatment with control cases is at present being carried out for me at Bethlem Royal Hospital by Dr. Phillips, commencing with the simpler medicinal treatment.

In a work of this nature due credit must be given to those who have so kindly given me pathological material and access to clinical cases. Full acknowledgment will be made when the work is published in detail. Dr. Braxton Hicks has supervised the collection of pathological material during the last year.

M. ÉTIENNE LAMY, perpetual secretary of the Académie Française, has given £20,000 to that body for the foundation of a prize to be applied for the benefit of large families in need of assistance.

JEFFERSON MEDICAL COLLEGE, Philadelphia, was founded in 1826. It has been a chartered university since 1838 and has graduated 13,278 doctors of medicine, of whom 4,678 are in active practice. Efforts are now being made to secure an additional sum of £400,000 for its permanent endowment.

THE TREATMENT OF BACKWARD DISPLACEMENTS OF THE UTERUS.*

BY

FREDERICK J. McCANN, M.D. EDIN., F.R.C.S. ENG.,
SURGEON TO THE SAMARITAN FREE HOSPITAL FOR WOMEN, LONDON.

Introduction.

DISCIPLES of the healing art are not infrequently taunted by the laity because their treatment of common ailments is far from satisfactory.

That this is true to a certain extent cannot be gainsaid, for what is of common and everyday occurrence seems not to stimulate the ardour of the scientific investigator, who looks further afield to discover amidst the rarer morbid processes some fruitful source of inquiry. There is a tendency, too, in clinical work, to spend more time and thought over what are termed "interesting cases," and to treat common ailments on a routine plan. Yet such ailments are all-important to the patients, the more so because of their frequent occurrence.

Backward displacement of the uterus is a common ailment which, from its frequency and importance, demands the closest investigation and study in order to decide what measures of relief may be afforded to the unfortunate sufferer.

Happily the treatment has markedly improved in recent years, owing largely to the advances made in gynaecological surgery and to a better understanding of the causation and sequelae, so that women can now be promised a restoration to health which was not attainable in former years.

When a backward displacement is discovered, it is necessary to determine the cause, for this often affords important guidance to correct treatment.

Congenital Displacement.

The displacement may be congenital, for it has been discovered in the newly born.

I have found undersized retroflexed uteri not infrequently amongst Polish Jewesses of the hospital class, who seek treatment for sterility, and in whom there were no symptoms pointing to any uterine trouble. The association of under-development of the uterus, ante flexion, dysmenorrhœa, and sterility is well known, but I have rarely found small-sized retroflexed uteri amongst British women. Such examples represent the true congenital backward displacement, and, although fully developed uteri displaced backwards may be found in young girls, it is more than probable that the displacement is acquired. In another type met with in the newly born the cervix is much elongated, the uterine body small, and the organ is retroverted; and in yet another type the uterus is retroverted and ante flexed. Needless to say, unless symptoms result no treatment is indicated.

Excessive Uterine Mobility.

Again, excessive mobility of the uterus may be encountered, so that it may at one examination be found displaced backwards and at another occupying an anterior position.

Traumatic Displacement.

The part played by traumatism in the production of backward displacement has been variously estimated from time to time, but from a close study of this subject I have come to the conclusion that in the causation of backward displacements in virgins and nulliparae, and in parous women too, the possibility of traumatism as an etiological factor must constantly be borne in mind.

I have seen backward displacement of the uterus result from accidents in the hunting field, falls on the buttocks, strenuous exercises at school, and recently after strenuous "war work." When the extreme mobility of the normal uterus is remembered it is indeed surprising that this accident does not happen more frequently. Yet it is stated to be very rare, and has even escaped mention by many writers.

The acute displacement is an example of a true intra-peritoneal hernia in which the body of the uterus becomes incarcerated in the pouch of Douglas.

* A paper read before the Harveian Society.