with the discharge of menstrual fluid I again operated, and exposed a cavity lined by pulpy granulations. After separating numerous dense intestinal adhesions I was able to remove the right ovary, tube, and appendix, which had been matted together. The tube and, to a less extent, the ovary proved to have been infiltrated by tubercle, which had caseated. The appendix, although involved in the adhesions, had remained unaffected by the tubercle. The left tube and ovary were buried under adhesions. After this operation a sinus persisted for some months, and discharged blood-stained fluid at the monthly periods; finally it healed. I have seen this patient several times in the interval, as well as quite recently—twelve years after the operation. She has remained in good health, free from abdominal pain, and menstruating regularly.

I have not been able to find a case similar to the first on record. The tubes play some part in menstruation, and changes similar to those occurring in the mucous lining of the uterus have been described. Haematosalpinx, apart from atresia of the cervix uteri or of the vagina, and ectopic gestation, is rare, and is generally ascribed to some infection,¹ but Bazy² did not include a mention of tuberculosis. Macnaughton Jones³ described a case of haematosalpinx from primary tuberculosis limited to the mucous membrane of one tube. In both my cases the invasion of tubercle seems to have been from the peritoneal aspect. An intermittent discharge of bloody fluid from a dilated tube occurred in a case described by Knaggs,⁴ but this happened in a woman about the climacteric who had been exposed possibly to both gonorrhoeal and puerperal infection. Doléris⁵ noted the intermittent escape of large quantities of a thin fluid from a tube affected by papilliferous degeneration of the mucous membrane.

REFERENCES.

- ¹ Thomson, *Cent. f. Gyn.*, 1898, xxii, 1227; Thorn, *Zent. f. Gyn.*, 1904, xxiii, 971. ² Bazy, *Revue de gynécologie et de chirurgie abdominale*, 1910, T. xv, 1. ³ Macnaughton Jones, *Brit. Gyn. Journ.*, 1899-1900, xv, 438. ⁴ Knaggs, R. L., *Trans. of Obstet. Soc. of Lond.*, 1894, xxv, 213. ⁵ Doléris, *Bull. et mèm. de la Soc. Obstet. et Gyn. de Paris*, 1890-1891 p. 12.

THE ADMINISTRATION OF GUAIACOL IN PULMONARY TUBERCULOSIS.

By GEORGE M. MAYBERRY, B.A., L.R.C.P.I.,
L.M. ROTUNDA,

LATE ASSISTANT MEDICAL SUPERINTENDENT, NATIONAL SANATORIUM,
BENEDEN, KENT.

I BELIEVE that guaiacol is not used nearly so much in pulmonary tuberculosis as it might be. It has, no doubt, been used by a considerable number of practitioners, but abandoned as of little use. (1) It was not given in large enough doses; (2) it was not continued for a sufficiently long period; (3) it may not have been possible for the drug to be administered regularly. Even intervals of a few days in the administration have a prejudicial effect.

For eighteen months I gave systematically guaiacol in a fairly large number of cases, mostly of the bronchial type, and though I got no satisfactory results with 5-minim doses three times a day for a couple of months, I found that by gradually increasing the dose up to 12 minims three times a day, and prolonging the period to four months or over, highly satisfactory results were obtained. Many cases of pulmonary tuberculosis no doubt recover when removed from unsuitable to suitable surroundings; and those who claim to have cured cases by tuberculin under such conditions are always open to this criticism, which applies also to guaiacol, but in most of the cases in which good results were obtained the patients had been in the institution for some time, and showed no signs of deriving any benefit from their stay; on being put on guaiacol improvement gradually set in, and became more apparent as time went on. It has been said that guaiacol upsets the digestion; I always gave it before food, and in no case did it cause harm in any way.

The following short details of five cases on which I have taken special notes leaves no doubt in my mind as to the efficacy of the drug:

1. S. C., aged 22. On admission both lungs were affected, and the amount of purulent sputum in the twenty-four hours was 6 oz. The sputum was so fetid that other patients objected to sleeping in the same cubicle, and he had to be removed to a single cubicle. After 175 days he gained 9 lb., the disease was arrested, and the sputum had entirely disappeared. The patient returned to work, and when last heard of was doing well.

2. W. F. H., aged 26. On admission both lungs were extensively affected, and the disease was spreading rapidly. The amount of sputum in twenty-four hours was 2½ oz. After 204

days' treatment he gained 27½ lb., the disease was arrested and the sputum had entirely disappeared.

3. A. R. H., aged 18. On admission both lungs were affected. He was very weak and had had severe hæmoptysis, which had not ceased on his admission. He had a second hæmoptysis seven weeks later. The amount of sputum in the twenty-four hours was 4½ oz. On discharge he had gained 22½ lb., the disease was arrested, and the sputum had entirely disappeared.

4. H. J. W., aged 37. On admission both lungs were affected. He had a severe hacking cough which kept him awake all night and was not relieved by the ordinary sedative mixtures. The sputum in the twenty-four hours measured 5 oz. On discharge, after 175 days' treatment, he had gained 15 lb. in weight, the disease was arrested, cough was very slight, and the sputum had almost entirely disappeared.

5. J. J. B., aged 42, was readmitted after two and a half years with both lungs affected, and in the right was a large cavity. The sputum in the twenty-four hours measured 3 oz. On discharge, after 193 days in the sanatorium, he had gained 13½ lb. in weight, the disease was arrested and the sputum had practically disappeared.

I administer the drug in the following mixture, and as a rule find it practicable to increase the dose of guaiacol by 2 minims each week until a maximum of 12 to 15 minims is given three times a day: Guaiacol 5j, spirit. vini rect. 5j, syrupi limonis 5j, spirit. chloroformi 3ij, aqua ad 3vj. The dose of this is 3ss thrice a day.

I have records of a considerable number of further cases in which marked improvement has ensued on the administration of guaiacol according to the above formula, and feel confident that other practitioners, if they take up this treatment on the lines indicated, will have similar success.

EPIDEMIC CERVICAL ADENITIS.

BY

R. D. RUDOLF, M.D. EDIN., F.R.C.P. LOND.,

PROFESSOR OF THERAPEUTICS, TORONTO UNIVERSITY; SENIOR
ASSISTANT PHYSICIAN, TORONTO GENERAL HOSPITAL.

THE cases so clearly described by Dr. J. Gordon Sharp in the JOURNAL of November 15th, 1913, in which the patients are suddenly seized with fever and soon show great enlargement of the lymphatic glands of the neck, without sufficient cause in the throat or elsewhere to account for the condition, seem to belong to the group first described by Dr. E. Pfeiffer in 1889 under the name of glandular fever—*Drüsenfieber*. A very complete and succinct description of the disease occurs in Allbutt and Rolleston's *System of Medicine* from the pen of Dr. Dawson Williams. Dr. Sharp refers to an article in the JOURNAL of June 14th last, where a correspondent describes an epidemic of the fever which had occurred in an institution, and which he considered "to be a new disease." His cases, too, all fit in with the classical accounts of glandular fever, except that he says that the heart was frequently involved—the title of his communication, indeed, was "An Epidemic characterized by Adenitis, Tonsillitis, and Cardiac Complications." This involvement of the heart does not appear to have been previously noted, and it is just possible that the systolic murmurs—and they were all systolic—that so often occurred were merely "functional" in origin and would disappear when the patients fully convalesced.

Until last spring I do not remember having come across any cases of glandular fever, but then my attention was painfully drawn to the condition by two cases which appeared in my own family. They were, shortly, as follows:

CASE I.

Girl, aged 14 years, previously in perfect health, except for the occurrence of measles several weeks before, came home from school one day feeling out of sorts, and with a temperature of 104° F. Very soon the glands in the left side of the neck became enlarged and very painful, and a few days later the swelling and tenderness shifted to the right side. The throat was slightly congested, but showed nothing to account sufficiently for the adenitis. She remained quite ill for some days, and had several attacks of epistaxis and vomiting, with a good deal of abdominal pain, and then the temperature fell by lysis, and she gradually made a perfect recovery. We learnt that a number of other girls (about eleven) at the school were taken ill at the same time in the same way.

CASE II.

Boy, aged 11 years. Exactly a week after his sister had come home ill he was seized in the same way with high fever and soon, pain in the neck, with greatly enlarged lymphatic glands. The throat was scarcely at all reddened. He had no epistaxis, but persistent vomiting and a good deal of abdominal pain. The swelling at first was on the right side of the neck, but soon the

left became involved, and there was some swelling and tenderness of the axillary and inguinal glands. There was no eruption present in either his case or that of his sister. After about a week of high fever the temperature gradually settled, and he was soon up and about, but the first glands to enlarge (those in the right neck) did not go down, and he remained pale and weak. Nearly a month from the onset these right cervical glands began to further enlarge, but there was no fever, and frequent blood counts showed no leucocytosis—one report was as follows: "Red cells 4,500,000, white cells 7,000, haemoglobin 88 per cent.; differential count shows no abnormal cells, polymorphonuclears 60 per cent." Tuberculosis was feared, although there was no other indication or likelihood of this. The local condition suggested suppuration, but as this is said never to occur in glandular fever we waited for a few days, but at last pointing left no doubt about the presence of pus, and my colleague, Dr. Primrose, opened the abscess under a general anaesthetic, and put in a deep drain. The white cells numbered only 7,200 just before the operation, but mounted to double that number for a few days after it. The wound healed completely in two weeks, and after that convalescence was uninterrupted. The pus showed a pure culture of streptococci.

In neither of these cases did nephritis occur, nor did it seem to be present in any of your two correspondents' cases, although all writers refer to its frequency.

The bacteriology of this very infectious disease is as yet unknown. In our second case, as mentioned, streptococci were found in the pus. They may have been there as a secondary infection, but in one of the cases described by your correspondent in the June letter streptococci were obtained from the blood.

The disease appears to be a rare one, but a number of epidemics have been described. Such a one, I am informed, occurred in a hospital in London, Ontario, some years ago, and necessitated the closure of the building for a short time.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ANOTHER SIMPLE METHOD FOR DIMINISHING CHLOROFORM AND ETHER SICKNESS.

I HAVE read Dr. J. Crawford Renton's method with considerable interest.

Several years ago I came to the conclusion that post-operative vomiting was mainly due to the nauseating smell of the anaesthetic (particularly ether), which often hangs about the nasal cavities for days. To obviate this I apply eau de Cologne on a mask immediately on ceasing the anaesthetic, and instruct the nurse to continue to do so for half an hour after the patient is back in bed.

I do not for a moment suppose that eau de Cologne possesses any specific virtue for the purpose, but simply replaces an unpleasant smell with a pleasing one. The results are so satisfactory that I now practise it as a routine.

E. M. BARKER,
Physician to the East Sussex Hospital,
Hastings.

St. Leonards-on-Sea.

IODINE APPLICATIONS IN DIPHTHERIA AND SCARLET FEVER.

SOME months ago it occurred to me that iodine, because of its great bactericidal powers, might be of service in diphtheria if applied locally. I therefore tried it in the form of ung. iodi, known as iodox, which contains 5 per cent. of free iodine and seemed to me to be well adapted for the purpose.

I have now used it in 30 cases of diphtheria and 19 of scarlet fever, and in 10 other cases suspected of diphtheria or of scarlet fever but proved to be septic throats of various origin and degree. The result has been very satisfactory, the iodine ointment being more effective than anything I had previously used. One of its great advantages is that it is not unpleasant to the patient—an important point in treating young children.

I use three cotton-wool mops, two to remove secretions and false membrane and to dry the surface as far as possible; the third, well smeared with the ointment, is thoroughly rubbed on the affected surface and its surrounding area. This is done every three hours, or in very severe cases every two hours, until improvement occurs.

When using other applications I had generally found it necessary for the cases to be dressed every hour in the daytime and every two hours at night.

Under the iodine treatment many cases of diphtheria clear up within a few hours, becoming quite free from false membrane on the second or third day. The septic cases and those due to specific disease also promptly recovered, and the scarlet fever cases were remarkably free from local complications.

-A. HARRISON THOMAS, M.B., B.Sc.Edin.,
Medical Superintendent, Taunton and District Fever Hospital.

IDENTIFICATION OF RAT-FLEAS IN COLOMBO.

IN February, 1912, I commenced a systematic examination of the rats, principally *Mus rattus*, caught by the municipal rat-catchers within the boundaries of the city of Colombo. I paid particular attention to the presence or absence of lesions said to be characteristic of chronic rat plague and rat leprosy. Simultaneously collections were made from live rats, of the *Siphonaptera*, and certain small acarine parasites harboured in the rat fur.

The fleas have been identified by the Hon. N. C. Rothschild as *Xenopsylla astia* (Roths.). This species was first described by Rothschild from specimens caught in Rangoon.¹ The acarina have been identified by my brother, Mr. Stanley Hirst, of the Arachnida Department of the British Museum (Natural History). A description of a new species found among them appears in the latest number of the *Bulletin of Entomological Research*. Thanks to the kindness of Captain Patton, I.M.S., Dr. W. R. MacDonald, Health Officer Corporation of Madras, and Dr. K. Rama Menun, of the Plague Hospital, Madras, I have been able to obtain collections of fleas occurring on *Mus rattus* in Madras for comparison with the Colombo species. I now learn (November, 1913) that the Hon. N. C. Rothschild identifies these also as *X. astia*.

In the seventh report on plague investigations in India, December, 1912, I find it stated that practically the only species found on the rats in Madras City is *X. cheopis*.

I have been successful in breeding numerous fleas from the eggs laid by fleas caught on live Colombo rats.

I have carried out experiments on the readiness with which these fleas bite man on the same lines as Miss H. Chick and C. J. Martin²; unfortunately, however, I am not in a position to utilize *X. cheopis* as a control, as is eminently desirable.

The results hitherto obtained (July to October, 1913) seem to indicate that *X. astia* seldom bites man at temperatures over 80° F. At temperatures between 70° F. and 80° F. the flea exhibits greater activity, bites man more frequently and the control rats with less delay.

Plague is endemic in Rangoon, but not in Southern India or Ceylon. No epidemic of plague, has yet occurred in Colombo. In spite of the susceptibility to plague infection of the Madras rats, no epidemic of any importance has been recorded in the city within recent times.

I venture to suggest that an investigation into the relative geographical distribution of *X. cheopis* and *X. astia* in Southern India and Burma and into the relative infectivity of these fleas as porters of plague, carried out at different temperatures and under various climatic conditions, might throw additional light on the epidemiology of plague.

L. FABIAN HIRST, M.D.Lond., D.P.H.,
Bacteriologist, City of Colombo.

¹ *Novitates Zoologicae*, June, 1911.

² *Journal of Hygiene*, 1911.

AN interesting abstract in the *Tropical Diseases Bulletin* (vol. ii, No. 10) deals with a paper by Surcouf on the transmission of the *Var. macaque* by a mosquito. The author brings forward strong evidence to show that the eggs of the fly, *Dermatobia cyaniventris*, get attached to the thorax and abdomen of a mosquito named the *Janthinosoma lutzi*, and that the larvae which emerge penetrate the skin by way of the puncture wounds made by the mosquito when sucking blood. The exact method of entrance of these larvae has hitherto been unknown, though a suspicion that they were in some way or other connected with mosquitos has been general amongst the laity from time immemorial.