

removed from the right side for examination. She was again seen on January 28, when there was definite ulceration of the right vestibule involving the outer wall, ventricle, and a small area of the adjacent septum. The left inferior turbinal remains practically stationary.

Dr. PEGLER said he hoped Mr. Graham would add the statement that tubercle bacilli had been found in the tissues, and congratulated Mr. Graham on his success.

Mr. GRAHAM replied that the credit of finding the tubercle bacilli was due to Dr. Kettle.

**Tuberculous Ulcer of the Mouth.—H. Buckland Jones.**—W. M.—, a male, aged thirty, came to hospital on December 31 last, complaining of ulceration of the mouth, which he had been troubled with on and off for twelve months. On examination a large ulcer with indurated edges was found in the region of right inferior wisdom tooth admitting the tip of the finger and spreading on the adjoining cheek. Some enlarged glands were found on both sides of the neck in front of the sternomastoid. There was a history of a cough and wasting for twelve months. On examination of the chest there was slight dulness over the right apex with prolonged expiration, some bronchophony, and a few coarse crepitations. There was no history of syphilis. A piece of tissue was examined by Dr. Leatham showing numerous giant cells, but no tubercle bacilli. No sputum has been available for examination.

(Unfortunately this patient died of tuberculous meningitis a few days before the meeting.)

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## Abstracts.

### CEREBRO-SPINAL MENINGITIS.

**Lundie, A., Thomas, D. J., and Fleming, S.—Cerebro-spinal Meningitis: Diagnosis and Prophylaxis.** "British Medical Journal," March 20, 1915, p. 493.

This paper is the outcome of work in the Aldershot command. Cerebro-spinal meningitis is discussed in its three stages: (1) Catarrhal, (2) septicæmic, and (3) meningeal. The first stage is usually detected almost by accident; by examination of all the men sleeping in the room where a case has occurred. The authors use West's swabs, from which they inoculate plates of "nasgar" medium. They find that all carriers have catarrh. Stage 2 is that febrile condition which is undiagnosable, unless it passes on to stage 3. In their conclusions the authors state that the disease is more widespread than is usually recognised; it gives warning of its onset by catarrhal symptoms and often goes no further. In its second stage it may run a long non-malignant course. As an adjunct to spraying and swabbing treatment, an autogenous vaccine is recommended.

*Macleod Yearsley.*

**Arkwright, Joseph.—Cerebro-spinal Meningitis.** "British Medical Journal," March 20, 1915, p. 494.

The author points out that one of the most outstanding features of epidemics is the isolation or want of ascertained contact between the cases of the disease. Two explanations suggested themselves: (1) An infective

material widely distributed outside the body and remaining active some time (contradicted by the sensitiveness of the meningococcus to ordinary air). (2) Carriers. The latter are discussed in some detail. The portal of entry of the disease is undoubtedly the naso-pharynx. The method for investigating carriers is described, and it is suggested that they should be isolated. The total number of persons who harbour the meningococcus should be looked upon as constituting the true epidemic.

*Macleod Yearsley.*

**Host, E. C., Lakin, C. E., Benians, T. H. C.—Epidemic Cerebro-spinal Fever.** "British Medical Journal," March 27, 1915, p. 541.

A preliminary note on the bacteriological study of the disease. This paper is one which scarcely admits of abstraction. It asks the question: Is the meningococcus the primary infective agent? and gives seven points of evidence which supports the affirmative answer. This is followed by: Is the meningococcus merely a phase of the causal organism? It is suggested that at some phase in the life-history of the organism the latter exists in so minute a form in the blood as to be able to pass through the filter bed between the circulatory and cerebro-spinal systems. The author's experiments with filtered urine show this is probable, and that in addition to the detection and isolation of carriers, the urine of patients should be disinfected.

*Macleod Yearsley.*

**Foster, Capt. Michael.—Cerebro-spinal Fever: Diagnosis and Treatment.** "British Medical Journal," March 27, 1915, p. 543.

The author's notes are drawn from his experience at the 1st Eastern General Hospital at Cambridge, and embraces twenty-five cases, with a mortality of 20 per cent. In nineteen the meningococcus was recovered from the cerebro-spinal fluid; in the other six the diagnosis was indisputable clinically. A difficulty is that the micro-organism has to be cultivated from the fluid. Symptoms are discussed under the heads of: (1) Retraction of the head; (2) rash; (3) implication of cranial nerves; (4) mental condition; (5) facial aspect; (6) vomiting; (7) muscular rigidity; (8) condition of the sphincters; (9) pyrexia.

As regards treatment, the excellent results of repeated lumbar puncture are pointed out. Serum treatment gave no better results than lumbar puncture alone.

*Macleod Yearsley.*

**Embelton, D., and Peters, E. A.—Cerebro-spinal Fever and the Sphenoidal Sinus.** "Lancet," May 22, 1915, p. 1078.

The authors publish these cases to show that empyema of the sphenoidal sinus has a relation, and probably a causal relation, to the infection of cerebro-spinal fever. Their conclusions are: (1) Sphenoidal empyema is associated with cerebro-spinal fever in a causal manner. (2) Cerebro-spinal fever is a meningitis due to organisms entering the meninges from the sphenoidal sinus by way of the lymphatics. (3) Adults are less susceptible owing to a diminished tendency to sphenoidal empyema, as they are not prone to excessive swelling of the mucous membrane and so to closure of the ostia, as is seen in adolescents. It may be advisable to open the sphenoidal sinus in all cases of cerebro-spinal fever; it is certainly advisable to treat the naso-pharynx on the lines used in one of the published cases, when the nostrils were painted with umg. hyd. nit. dil. ʒss, menthol gr. 5, ol. olivæ ad. ʒj, and the tonsils swabbed with hydrogen peroxide.

*Macleod Yearsley.*