Operation.—An incision was made in the line of the swelling and the rectus muscle exposed and freed as far as possible. The swelling was found to be in the muscle, which was very hard and of a grey colour. Muscular striation was absent, the appearance being that of a solid tumour. The muscle was incised longitudinally and the same grey solid-looking appearance was found. On deeper incision the knife was felt to enter a cavity in the centre of the muscle. A finger was inserted and there was felt a foreign body. On extraction this proved to be a twig 5½ inches in length and 1/6 inch in diameter, lying in the vertical line of the muscle with its centre just at the level of the umbilicus. There was no sign of pus but the twig had a very foul smell. The cavity had no connection with the abdominal cavity. The twig was recognised to be such as is used in India to produce abortion. The patient at first denied that she had ever been pregnant but on being shown the twig she gave the following history:—Three years previously she had been two months pregnant and abortion had been procured by the insertion of such twigs into the uterus. She had severe pain in the right side of the abdomen but that had cleared up in a month by the use of medicine. Since then she had had no illness at all until the commencement of the present trouble five weeks previously.

In view of the foul smell present and the condition of the muscle it was deemed advisable to leave the wound open and to treat it by hot dressings.

On the second day after operation pus was present and poured from the wound. This cleared up rapidly and the patient was discharged with the wound quite healed twelve days after operation. One presumes that the pus was caused by the presence of an aerobic organism which became active on being exposed to the air. I regret that it was not possible to culture the organism present at the time of operation.

One leaves it to the imagination to work out the course taken by the twig before it came to rest in the rectus muscle.

It is interesting to compare this case with that described in the *Indian Medical Gazette* of May 1926.

THREE CASES OF BRONCHIAL SPIROCHÆTOSIS.

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and
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To the practitioner in the tropics who makes frequent use of the microscope, infection by the spirochæte of Vincent is becoming a problem of increasing interest. This spirochæte, in association with the fusiform bacillus, presents itself in many different conditions involving mucous membranes and raw surfaces. It may supervene as a secondary infection in ulcers and wounds of the skin, and as a sequel to amœbic ulceration in the gut. In the mouth and throat it is responsible for well-defined infections such as Vincent's angina, glossitis and stomatitis. Apparently in most cases Vincent's infection is comparatively mild, but it may give rise to great destruction of tissues as in ulcus tropicum and Naga sore—(Knowles, 1923)—in India. When the bronchi are involved, either as a primary infection as in the three cases recorded here, or as an extension from a focus in the mouth or throat it forms a distinct clinical entity; the disease may run a long course with exacerbations at irregular intervals and it is difficult to eradicate it entirely. From clinical and microscopical findings there are reasons for regarding the three cases recorded below as cases of primary infection of the bronchi with Vincent's spirochæte and the fusiform bacillus and for concluding that the disease may be identical with the bronchial spirochætosis of Castellani (Castellani and Chalmers, 1919). In a case of gangrene of the right lung and extensive cellulitis of the neck and chest wall following sepsis in the mouth which recently came to post-mortem examination large numbers of Vincent's spirochætes and fusiform bacilli were seen in smears from different parts of the gangrenous lung and from the mouth and chest wall.

DESCRIPTION OF CASES.

Case 1.—A Tamil woman, 19 years of age, of normal development and nutrition, complained of cough, severe pain in the sternal region and hæmoptysis which came on suddenly a fortnight previously. When first seen by one of us in consultation with her medical practitioner, her good state of nutrition and the afebrile course of the disease on clinical grounds ruled out pulmonary tuberculosis, which was suspected though no tubercle bacilli were found in her sputum. She was expectorating large amounts of frothy blood-stained glairy sputum in which were floating small whitish flakes of tissue. These flakes resembled the whitish patches which we have seen in Vincent's infection of the throat and in a case of glossitis which recently came for examination. They are like diphtheritic patches with the difference that they are easily swabbed off. Physical examination of the lung revealed nothing except a few wheezing rhonchi as in an asthmatic lung. The gums, mouth and throat presented a normal appearance.

On microscopic examination of the sputum, large numbers of spirochætes and fusiform bacilli were seen under dark-ground illumination and by Fontana's and Giemsa's stains. The spirochætes were of different lengths varying from about 7 μ to 18 μ with loose open spirals 2 to 7 in number. The fusiform bacilli are stated to be non-motile (Chamberlain, 1911) and they were seen to be so in fresh smears in the second and subsequent examinations of the sputum of this patient and the other two cases. In the first examination of the sputum of this patient, however, the fusiform bacilli were seen to be progressing forward with a graceful undulating movement and in directions contrary to the currents in the fluid. This was specially looked for in the subsequent examinations but was not seen again. The fusiform bacilli were of

different lengths and forms. Some were pointed at both ends and slightly incurved; others, especially the long forms, were blunt at one or both ends; a few, especially the young forms, were seen lying end to end. They varied in length from about 5 μ to 20 μ; Giemsa's and Leishman's methods of staining brought out the metachromatic granules well.

After more than four week's treatment with iodides and arsenic by the mouth the patient so far recovered that the cough and hæmoptysis ceased. Bi-weekly examinations of the sputum were made and each time spirochætes and fusiform bacilli were demonstrated, though in rapidly diminishing numbers. The sputum for examination was always obtained after gargling the throat and mouth every five minutes for an hour.

Case 2.—A Tamil labourer of robust constitution was admitted to the District Hospital, Kuala Lumpur with a history similar to that of Case 1. The complaint started ten days previously. Physical examination of the lungs revealed no abnormality. The naked eye appearance of the watery blood-stained glairy sputum was characteristic, and immediately suggested Vincent's infection. He remained in hospital for over a fortnight but during the last four days of his stay no sputum was obtained.

In earlier examinations of the sputum numerous spirochætes and fusiform bacilli were seen.

Case 3.—A Tamil woman, 40 years of age, of rather poor physique, gave a history of cough of four years' duration. The illness at first confined her to bed for a few days, during which time she coughed up blood-stained sputum. The hæmoptysis ceased after a week but the cough never left her entirely. She has since had acute exacerbations two or three times a year but she was not ill enough to be confined to bed, nor was any blood noted in her sputum.

On examination of her chest, a few moist rales were heard. The mouth and throat were normal. A few spirochætes and fusiform bacilli were demonstrated in her sputum on three occasions. It is probable that spirochætes and fusiform bacilli would have been seen in much greater numbers during an exacerbation.

She is little troubled with the cough. She gave a history of having lost some weight since the illness began four years ago and her general health has since then not been good. Repeated examinations of her sputum for tubercle bacilli were made with negative results. This taken together with the afebrile course of the illness and the physical signs in her chest definitely exclude tuberculosis.

These three cases were seen in the course of a month, and there is reason to believe that Vincent's infection of the bronchi is much more common than is generally supposed. If they are looked for, more cases will certainly be recognised than hitherto. A more frequent recourse to examination of the sputum in fresh smears and by Fontana's method is desirable. We are inclined to ascribe the infrequent recognition of the disease in this country to the routine examination of the sputum by Ziehl-Neelsen and Gram's methods of staining only. These methods are satisfactory for demonstrating tubercle bacilli and Gram-positive cocci but do not stain spirochætes well.

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A CASE OF ACUTE PARENCHYMATOUS GLOSSITIS.

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A YOUNG Sikh girl, aged about 14 years, was brought to me on the night of the 3rd June, 1926, with very acute inflammation of the tongue. The history given was that about 8.15 that evening when taking her evening meal, and about to consume the last morsel of it from her hand, she had suddenly felt acute pain in the tongue. Her mother thought that the girl had probably bitten her tongue and advised her to finish her meal and go to bed. She did so immediately but the swelling of the tongue increased and her parents brought her to me the same evening.

I found the whole of the anterior half of the tongue acutely swollen, tense and painful. On my enquiring as to the nature of the evening meal which she had taken I was told that it consisted of *mong ki dâl* (a special grade of pulse), onions and *chupatties*. I was told, further, that the other members of the family had partaken of the same meal and had had no symptoms.

I examined the tongue very carefully but was not able to find any tooth marks or any trace of insect bite. As it was rapidly swelling in size, I painted it with (rectified) tincture of iodine and made two incisions down the dorsum and two on the under surface. The rapid swelling of the tongue now ceased, but it did not revert to its normal size until next morning.

Can any readers of the *Indian Medical Gazette* suggest a diagnosis for a case of such rapid onset?

(*Note.*—Possibly a case of bite from some insect in the food; possibly a case of giant urticaria of sudden onset? *Editor, I. M. G.*)

A CASE OF INFECTION IN AN INFANT WITH *GIARDIA* (LAMBLIA) *INTESTINALIS*.

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ON the 15th July, 1925, S. K. B., a Hindu male baby, one year old, bottle fed from two months of age, in a delicate state of health and a frequent subject to milk indigestion was suddenly taken ill with fever, 103.4° F.; vomiting and diarrhœa. The baby was acutely ill, was restless and slept intermittently. Vomiting was occasional and at first consisted of undigested milk and stopped as soon as the stomach was empty of its contents. The fever ranged between 103° and 104°. The diarrhœa was on the increase. Physical examination revealed a slightly coated tongue and chronically enlarged tonsils. Heart, lungs, liver, spleen, ears—were found normal. The blood showed a total leucocyte count of 14,500 and no malarial parasites could be found in the films.

A diagnosis of acute intestinal indigestion was made and the baby was put on a mixture containing sodii sulphas and sodii bicarbonas.

16th July.—The diarrhœa went on increasing to about 4 or 5 stools per hour and the character of the stools was watery, whitish or glairy, and mixed with thin mucus, and practically inoffensive. The temperature began to come down and at the end of the second day was 101°. The eyes were sunken and signs of great