

along the blade of the knife. A forceps was inserted alongside the latter and the opening was dilated so as to admit a finger, which detected a small collapsed cyst with only a few tablespoonfuls of pus. The cyst was removed and a large rubber drain was inserted into the cavity and another into the depth of the pleural chasm. The child's condition continued most grave for two days but youth, warm nutrient enemata, and strychnine saved the situation and after a sharp attack of purulent pleuritis the patient was discharged cured on Nov. 30th. A year later he was brought back in order to have an abscess opened which had developed in the track of the cicatrix; he left the hospital all right ten days later.

In connexion with hepatic cysts encroaching on the pulmonary area and simulating affection of the latter possibly it may not be out of place if I give the notes of the following case.

CASE 4.—A boy, aged eight years, the brother of the last patient, was taken to England in order to have an operation performed for hydatid tumour of the right lung. On arrival the boy was placed under the care of a hospital surgeon who confirmed the diagnosis and, without resection of the rib, made an opening in the fourth intercostal space and inserted a trocar and drew off a large quantity of clear fluid; a drainage-tube was inserted into something, little or no discharge followed, the tube was soon omitted, and the wound rapidly closed. The surgeon informed the mother that it was safe to take the child back to South America as the cyst would be sure to be absorbed. After a week on board ship the patient again complained of respiratory discomfort and by the end of the voyage (24 days) it was observed that he was losing flesh and had some nocturnal fever with sweating and an occasional sense of chill. He was taken immediately to the camp in the hope that the invigorating air of the pampas would soon establish convalescence. Reference, however, had soon to be made to my friend Dr. Peard who found things in a worse condition than when the patient had left for England, there being marked emaciation, sweating, and occasional rigors. The temperature was 104° F. and the right chest, from the third rib downwards, was immobile, dull, and breathless. Dr. Peard immediately took him to Buenos Ayres and assisted me on the day following his entry to hospital in the operation. Having removed a portion of the fifth rib in the anterior axillary line healthy lung tissue presented. A needle was inserted into the lung but nothing was found. On attempting to feel for the diaphragm the lung was discovered to be densely adherent to the diaphragmatic pleura and on separating some of the adhesions the diaphragm was found bulging considerably upwards. A needle was inserted into the liver and a syringeful of pus was withdrawn. Having attached the parietal to the diaphragmatic pleura by a circular suture of catgut the diaphragm was incised and a white-walled cyst presented which was opened and fully a quart of greenish-yellow pus with a large necrosing endocyst was removed from the liver. A large drain was inserted and a rapid cure followed.

I think this case tends to prove the futility of merely incising the chest wall as a means whereby hydatid cysts may be effectively dealt with.

Buenos Ayres.

## A CASE OF GENERAL INFECTION BY A NEMATODE, ACCOMPANIED BY HYPERTROPHIC GINGIVITIS.

By J. DENCER WHITTLES, B.D.S. BIRM.,  
L.D.S. R.C.S. ENG.,

LECTURER ON DENTAL HISTOLOGY AND PATHO-HISTOLOGY, UNIVERSITY OF BIRMINGHAM.

A YOUNG woman, aged 19 years, of robust appearance and weighing 9 stones 8 pounds, was sent to me at the General Hospital, Birmingham, in March, 1902, after having been treated at the Dental Hospital for thickening of the gums, which was causing considerable protrusion of the upper lip and consequent deformity of the facial contour. The treatment followed, according to the patient's account, consisted in cutting away portions of the gum and the extraction of loose teeth, but in spite of the free paring the growth became more marked. The

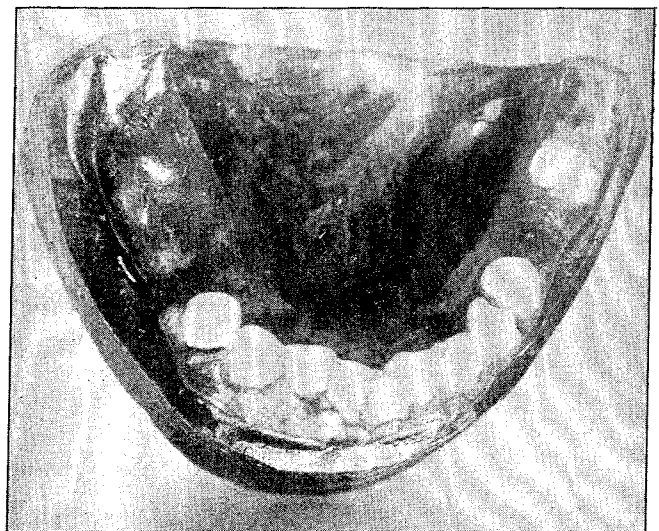
illustrations (Figs. 1 and 2) are from photographs of models of the upper and lower jaw respectively, made from impressions. It will be noticed that the hypertrophy is much less evident in the lower jaw, and this fact, together with the increased amount in the upper being on the right side, suggested that something had been applied with

FIG. 1.



Anterior aspect of the model of the upper jaw.

FIG. 2.

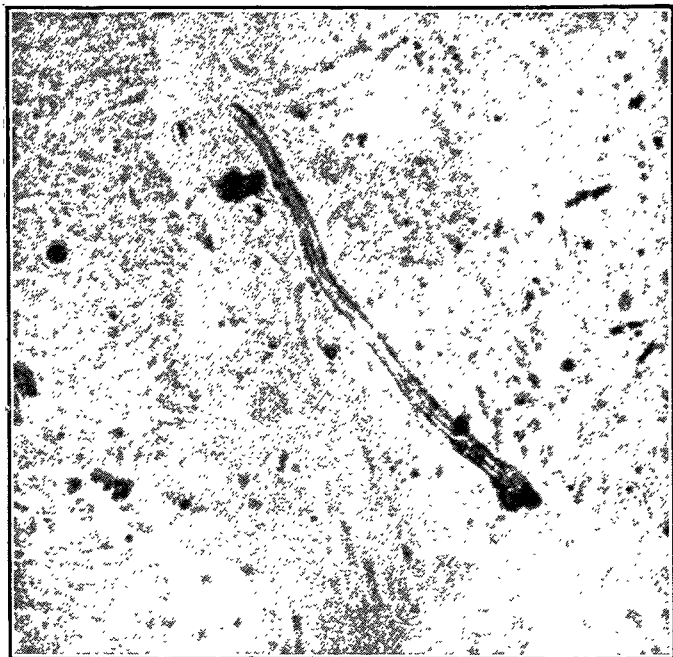


Model of the lower jaw.

the right hand in some way. The increase of thickening came about gradually, commencing in May, 1901, so that about ten months had passed before the case came under my notice. On questioning the patient I learnt that she was very fond of dumb animals, especially dogs, and on further inquiry was informed that she was in the habit of fondling and kissing the dog at home, which had died the previous Christmas, a little more than two months prior to my seeing the patient. On examining the mouth I found the greatest hypertrophy of the muco-periosteal tissue was situated between the first upper right premolar and the central incisor of the same side. It shelved off gradually to the left upper canine tooth, whilst on the mandibular alveolar border there was some hypertrophy occupying a corresponding position to the upper jaw, but to a much less degree. The upper teeth were slightly moveable on pressure, and although there was so much thickening the resilience was so marked in the soft tissue as to lead me to suspect the removal of some of the alveolar process. This surmise was found to be correct as subsequent examination showed considerable absorption of the osseous tissue. I extracted the right upper second premolar, which had become

hopelessly loose, and at the same time was thus better able to excise a little muco-periosteum for microscopical examination as I suspected from the history obtained some form of parasitic invasion. Sections after due preparation were cut and stained in various ways for demonstrating bacteria, but none were to be found after most careful examination. Instead there were to be seen in almost every section nematodes complete or portions of them (Fig. 3). This shows a field

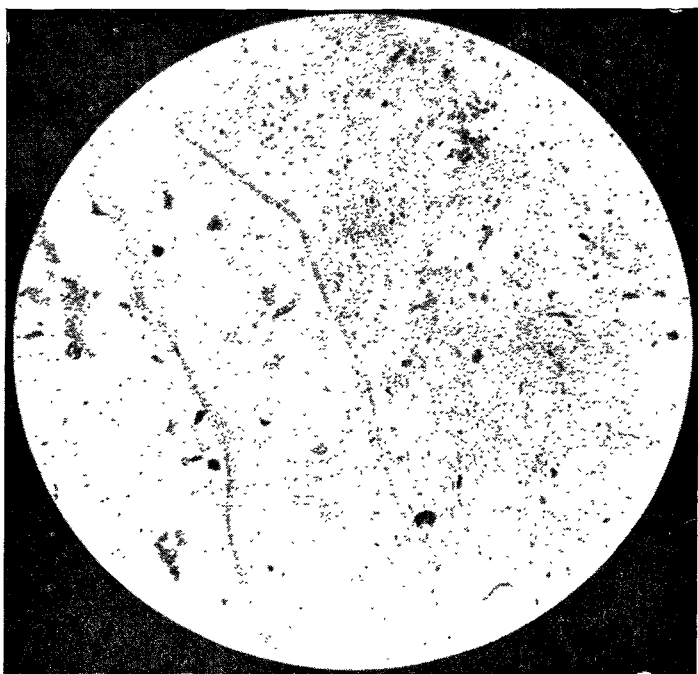
FIG. 3.



Nematode in muco periosteum of jaw. Stained by Gram's method. Zeiss D D objective. No. 18 compensating eye-piece. 33 cm. camera extension.

including the Malpighian layer with deeper cells of the epidermis and the submucous tissue of the muco-periosteum (gum); in the centre of the field is seen an embryo nematode. In Fig. 4 the parasite appears in a more advanced

FIG. 4.

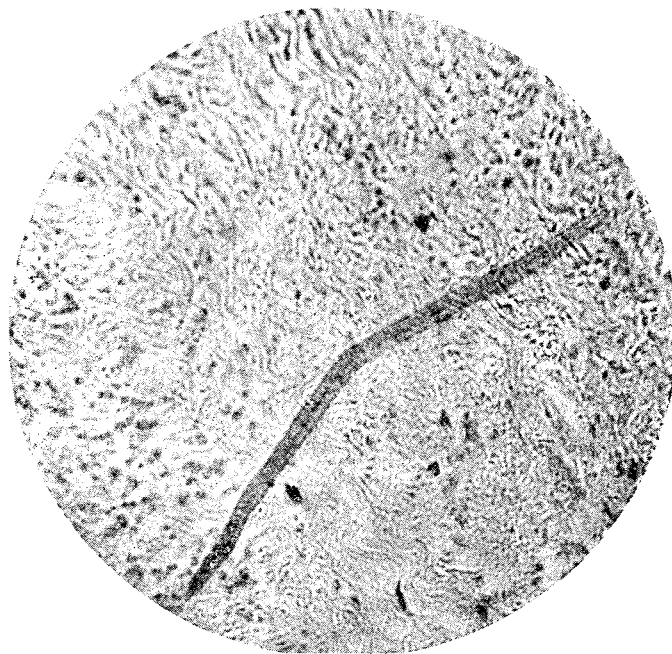


Stained by Gram's method. Zeiss A A objective. No. 1 eye-piece. 31 cm. camera extension.

state; the curves are suggestive of its great locomotive power enabling it to reach distant parts of its host. In Fig. 5, stained by Gram's aniline gentian violet, the nematode is seen deeper in the submucous tissue than in the two former sections, whilst its length is greater and its alimentary canal is more easily discernible.

On March 22nd, 1902, the third visit of the patient, I asked Dr. E. S. Nutting to make a blood examination, which he kindly undertook, and he reported that there was a slight increase of leucocytes—this is, 8000 per cubic millimetre. There were no marked increase in eosinophile cells and no myelocytes. Dr. Nutting further stated that under a  $\frac{1}{2}$ th of an inch oil immersion lens the films showed the presence

FIG. 5.



Stained by Gram's method. Zeiss A A objective. No. 18 compensating eye-piece. 33 cm. camera extension.

of one or two leucocytes in a field and never more; this statement should be borne in mind and compared with the condition found later. Having discovered the source and something of the nature of the infection my next step was to search for other signs and symptoms which might be occasioned by the parasite. The patient stated that she had had "an abscess" over the sternum in the middle line and at the nipple level about Christmas, 1901 (when the dog died), and since then at various times in other positions, but chiefly limited to the right side of the head, neck, and trunk. Down to the present time such lesions had not appeared upon either the upper or the lower extremities. In May, 1902, a "carbuncle-like" swelling was incised over the pomum Adami, from which a considerable amount of pus was evacuated; rapid healing took place. A little later another formed over the right superior angle of the scapula and close upon this another formed over the outer angle of the right eye at the edge of the hairy scalp. These "carbuncle-like" swellings were allowed to break down naturally as the patient had gone into the country for a change. The last to form was noticed on Dec. 1st, 1902. There was only a slight swelling on rising from bed in the morning and at night it was too painful to wear clothing over it, so rapid had been its formation. Many pustular swellings had occurred from time to time but these did not appear to have given the patient much inconvenience, as the inflammation was apparently only trifling, although a circumscribed button-like induration accompanied each. On Dec. 11th such a pustule formed on the inside of the right cheek. A photograph of the patient's back was taken on the 14th and it showed the scars resulting from the carbuncle-like swellings, the lowest being situated in the middle line of the lumbar region. I incised an upper darker coloured swelling seen at the base of the neck, which photographed as a black spot, but it was of reddish hue. From it there escaped some 30 minims of blood mixed with only the slightest tinge of pus, obtained by deep pressure. On microscopical examination I found at least ten of the nematodes in more or less complete forms.

I wish to express my gratitude to Mr. W. E. Collinge, B.Sc., F.Z.S., lecturer on zoology at the University of Birmingham, for examining the sections with me, and also to Professor W. C. McIntosh, St. Andrews University, who has kindly interested himself by writing to me at length on this subject after examining sections and photomicrographs which I had

prepared. He agrees with me that the nematode was probably the cause of all the trouble and further states that the suggestion that its source was a dog was borne out by the history of filaria. The aforesaid dog was a crossbreed—a Pomeranian crossed with a Skye terrier; its previous owner had never been out of England; he had had it from a puppy up to two years old when it was given to the patient's parents with whom it had lived four years. The patient had never been away from home prior to the infection, except a day excursion to Matlock, and had never bathed in the open, so that there is little evidence of any other source of infection than the dog.

As the nematode is a transparent object it can readily be overlooked in sections unless stained with methylene blue. On Jan. 15th, 1903, Dr. James Miller, assistant lecturer in bacteriology at the University of Birmingham, kindly made a careful examination of the patient's blood and furnished me with the following particulars:—

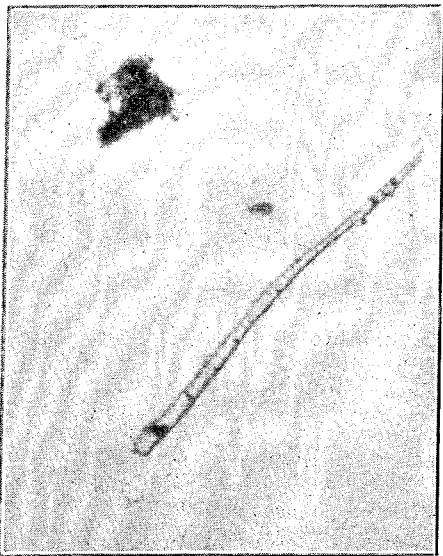
|                            |           |                       |
|----------------------------|-----------|-----------------------|
| Red blood corpuscles ...   | 4,500,000 | per cubic millimetre. |
| White blood corpuscles ... | 9300      | „ „ „                 |
| Hæmoglobin ...             | 80        | per cent.             |

*Differential Count.*

|                        |      |           |
|------------------------|------|-----------|
| Polymorphonuclears ... | 65.3 | per cent. |
| Lymphocytes ...        | 22.0 | „         |
| Large mononuclears ... | 6.7  | „         |
| Transitional forms ... | 4.5  | „         |
| Eosinophiles ...       | 1.5  | „         |

The above averages were the result of two separate examinations. On comparing the above result with that found by Dr. Nutting there is at the present time a considerable increase of leucocytes, that is, 1300 extra per cubic millimetre will be observed. Fig. 6 is a portion of a photo-

FIG. 6.



Thick film of fresh blood taken on Jan. 10th, 1903, untreated. Zeiss A A objective. No. 18 compensating eye-piece. 33 cm. camera extension.

micrograph of a thick untreated film of fresh blood taken from the same source as the foregoing. There is one nematode in the field exhibiting the same characters as seen in Fig. 3, photographed *in situ* in the muco-periosteum.

With regard to past literature on this particular parasite, so far as I can gather from books and papers written in English, the only similar case is described by Surgeon O'Neil, R.N., in 1875<sup>1</sup> who states that actively moving filariæ were found by him in papules which occurred singly, the worms measuring 0.01 inch by 0.002 inch, and bearing two black marks at the head end. According to Surgeon O'Neil the infection is said to appear after an incubation period of three days. If this is the same parasite I am able to confirm Surgeon O'Neil's statement that it is contagious, as I have found a similar parasite in the blood of the mother of the patient. A disease resembling Surgeon O'Neil's crawl was described some time ago<sup>2</sup> by Professor Neielly under the title "dermatose parasitaire." A French lad who

had never been abroad became affected with a papulo-vesicular eruption resembling scabies, in which Professor Neielly found a filariform parasite somewhat like that discovered by Surgeon O'Neil in crawl-craw. It had the same peculiar cephalic markings; in addition it had a well-defined alimentary canal and rudimentary organs of generation. Manson<sup>3</sup> suggests that "as the skin parasite in O'Neil's disease may have been an advanced form of filaria perstans this parasite normally and in pursuance of its evolution escapes from the human body through the skin after undergoing there a certain measure of developmental advance." This, I have every reason to believe, has been borne out by the skin lesions occurring in this case. So far as I can learn this case is unique and is of itself a sufficient warning that all should abstain from kissing members of the carnivora—a habit which, both with dogs and cats, is, alas, too frequently indulged in by the tender sex.

Birmingham.

A CASE OF  
FULL-TIME EXTRA-UTERINE PREGNANCY;  
FŒTUS LODGED IN A CAPSULE OF  
THE OVARY IN A PERITONEAL  
SAC RESEMBLING THAT OF  
THE TUNICA VAGINALIS.

BY JAMES OLIVER, M.D., F.R.S. EDIN., F.L.S.,  
PHYSICIAN TO THE HOSPITAL FOR WOMEN, SOHO-SQUARE.

A WOMAN, aged 33 years, who had been married nine years, came under my care at the Hospital for Women on Dec. 31st, 1902. She had had three children and one miscarriage. The last child was born three and a half years previously and since the birth of this child she had enjoyed good health. On Jan. 12th, 1902, the patient menstruated as usual and thereafter no hæmorrhagic discharge from the vagina was noted until Dec. 13th—i.e., during a period of 11 months there was complete amenorrhœa. The hæmorrhagic discharge which appeared on Dec. 13th continued without cessation until I removed the foetus and placenta by laparotomy on Jan. 1st, 1903. Although this hæmorrhagic discharge flowed continuously for 18 days it was never large in amount and it ceased immediately after the operation. When the menstrual discharge failed to make its appearance in February the patient considered herself pregnant and as the gestation ran its full course without producing one symptom different from those which she had experienced during her previous pregnancies she did not seek any opinion regarding her condition until she observed that in spite of the reappearance of menstruation the abdomen did not diminish in size. The patient felt the movements of the foetus for the first time about the end of June, but she thought that she never felt them after about the middle of October. Pain was never complained of and no labour-like pains were ever experienced. The physical signs were as follows. The abdomen, I found, was occupied centrally by a large globular swelling extending from the pelvis to four and a half inches above the umbilicus. Palpation detected the various parts of the foetus, but these were not more easily defined than we find them in many cases of uterine gestation. No sounds were detected on auscultating the tumour. The breasts displayed the characteristic appearances of pregnancy and from both colostrum was readily obtained. The cervix uteri, which was not specially soft, was but little deviated from its normal position in the pelvis. The body of the uterus could not be defined and separated from the abdomino-pelvic swelling, but the cervix did not appear to be structurally continuous with the latter.

Operation was performed on Jan. 1st, 1903. The abdomen was opened mesially between the pubes and umbilicus. On account of the then revealed relationship of the pelvic organs to the tumour and as there was promise that I might remove intact the sac containing the foetus and placenta I extended the incision to four inches above the umbilicus. The right mesovarium and mesosalpinx were spread out over the lower right half of the tumour and in consequence of this state of

<sup>1</sup> THE LANCET, Feb. 26th, 1875, p. 265.

<sup>2</sup> Archives de Médecine, April, 1882.

<sup>3</sup> Patrick Manson, M.D., LL.D.: Tropical Diseases, 1898.