

appeared as a result of this vaccination were collected and a portion of the resulting emulsion was inoculated on a second bovine. This animal also developed typical vaccine vesicles at the site of inoculation.

It seems evident that the pathological condition which affected the men's hands and the cows' udders was vaccinia. Endeavours have been made to ascertain how the condition first appeared in the cows but so far without success. No persons attending the cows had been vaccinated recently nor had any member of their families. The only other disease noticed among the farm animals was a few cases of foot-rot in sheep; and, from the experiments which I have made, foot-rot material inoculated on guinea-pigs, calves, and goats, not only sets up no pathological condition resembling vaccinia, but affords no protection against subsequent inoculations with calf vaccine.

The farmer states that his cows have on previous occasions suffered from sore teats, but according to his observations in not the same manner as on the present occasion. There is a possibility, therefore, that the vaccinia may have been endemic on the farm for some time. But the fact that no cow-men have contracted vaccinia previously contradicts such a supposition.

I am greatly indebted to Dr. Wilson, under whose care were all the patients, for his kindness in affording me readily every facility for investigation in his power and for much valuable help; and to my colleague, Dr. A. T. MacConkey, who during my brief absence from work was notified of the outbreak, for generously handing over the matter to my department on my return to Elstree.

ON A LOCALISED OUTBREAK OF SCARLET FEVER PRESUMABLY ATTRIBUTABLE TO INFECTED MILK.

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THE city of Dublin is intersected by a river, and the population of the northern side is slightly over 142,000. The population of the southern side is about 160,000. From July 1st to August 12th, 1908, 28 cases of scarlet fever occurred in the northern division and nine cases in the southern division of the city. On the south side the cases were widely separated. On the north side ten cases of scarlet fever were notified up to July 24th; they were pretty widely distributed. From July 27th to August 8th 16 cases were notified, all occurring within a radius of less than three-quarters of a mile. Of the patients two were adults and 14 were children. In each of two houses there were three cases of the disease; in the remaining ten houses there was one case in each house. In the district there were many dairies, but every one of the patients had used the milk of only one dairy, the owner of which resided in the centre of the affected area. The dairyman's establishment consisted of himself, his wife, nine children, and two workmen. His wife had a sore throat but not a severe one. One of the workmen had severe tonsillitis and was feverish. I found him in bed and had him removed to hospital, where he was kept under observation. No desquamation of cuticle took place. When I saw him there was no rash out and he said that he was ill only two days. The other workman had a slight sore throat. The cows of this dairyman were on pastures situated about three miles from the city. The men, together with the workmen of four other dairymen, slept in two houses near the pastures. Inquiry failed to discover that any of these men had recently been suffering from scarlet fever. These houses were occasionally slept in by other persons than the employees of the dairymen who were there when the outbreak of scarlet fever occurred. The cows were examined and found to be free from disease. A physician called in by the proprietor of the suspected dairy examined the whole family and certified that they were not suffering from any infectious disease. In these circumstances I could not prevent the sale of milk from the dairy. The houses in which the workmen had slept were, however, thoroughly disinfected, as were also the dairy and its churns and other utensils, as well as the dwelling house. To these operations the owner at once agreed.

The 16 cases of scarlet fever occurred in 12 houses. Although they were in the same district, yet the infected houses were not very close together, and there was no reason to suspect that the later cases were the result of antecedent ones by direct contagion. In attributing this localised outbreak of scarlet fever to the use of infected milk it would be more satisfactory if it could be shown that amongst the persons connected with the dairy one of them had suffered from scarlet fever. Still, it is in the highest degree improbable that 16 cases of scarlet fever should occur amongst persons using the milk from the dairy in question if the milk were free from pathogenetic micro-organisms. As large quantities of milk were sent out from this dairy it may be thought why were there not more than 16 cases of disease amongst the large number of persons supplied. It does not, however, follow that the whole of the milk was infected, and even if some persons drank the infected milk it does not follow that they must inevitably have contracted the disease. Some of them may already have had an attack of scarlet fever, others might not have been in that state of receptivity which is necessary before infection can develop into disease. On August 10th two children in one of the two houses in which, on August 4th, three cases of scarlet fever occurred were notified to have the disease. It seems more likely that these children were infected by the children who were infected by the milk. On August 24th it was notified that a second case had occurred in a house in which on July 27th a child was ill with the disease who had drunk the milk which I believe was infected. This last case was no doubt the result of the antecedent one in the same house, for in this instance and in nearly all the others the patients were not brought to hospital and being in good circumstances were attended to in their homes.

Dublin.

A CASE OF ECTOPIC GESTATION ON THE GOLDFIELDS.

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I WAS called 14 miles to a patient, a married woman, 39 years of age, who was said to be dying, and arrived at 1.30 P.M. on May 5th, 1908, when I found the patient slightly cyanosed and pale and complaining of pain in the abdomen and inability to move. On examination per abdomen I found, in a fat woman, pain in the left iliac fossa accompanied by tenderness but without rigidity. No tumour was anywhere palpable. Per vaginam a soft tender swelling filled the posterior and both lateral fornices. The pulse (94) was small but very strong and regular. The temperature was 99° F. On inquiring into the history of the present condition I was informed that during the previous night (May 4th) the patient, who had been quite well all day, awoke with severe pain in the left iliac fossa. She felt sick and faint but neither vomited nor fainted and the pain gradually became easier, though it was still too severe the next morning to allow her to move. The menstrual history showed that the catamenia began at the age of 17 years; they were regular, lasting four days, and recurring every 28 days. The patient was married at 19 years and had her first child before she was 20. She had had altogether 11 children. Two (Nos. 4 and 6) were stillborn and three died aged respectively 12 months, 14 months, and 2½ years, the cause of death being "teething," "diphtheria," and "teething" respectively. The youngest child was 18 months old. The patient had had three miscarriages, the last being three years ago. She last menstruated a fortnight previously (April 20th) and noticed that the amount was excessive. I diagnosed ruptured ectopic gestation and the treatment consisted of absolute rest in bed and opiates.

On May 14th I was called out at 12.10 A.M. and owing to bad roads and a tired horse arrived at 3 A.M. The patient then said that she had been steadily recovering till the evening of the 11th, when she had had another attack similar to the first but had recovered from it. On the evening of the 13th she had had a third attack and when I

arrived I found her extremely pale with thin, feeble pulse, which was regular and 88; the temperature was 97·5° F. The tumour in the fornices was as before and there was also a tumour in the left iliac fossa of about the size of a cricket ball; there were great pain and tenderness. Obviously the expectant treatment could not be risked any longer, nor did it seem to me reasonable in view of the premises (four rooms for a man and his wife and six children, one of whom was an imbecile, not to mention dogs, cats, goats, ducks, and chickens) to operate at the patient's home. I injected a quarter of a grain of morphine hydrochloride and four hours later repeated the dose and ordered the patient to be brought in to Nannine on a bed slung in a cart. I telegraphed for a colleague (Dr. Young) to give an anæsthetic and when he came, at 12 noon on May 15th, I operated with my wife and two nurses assisting me.

The tumour now reached half-way to the umbilicus and right across the abdomen. I opened the abdomen in the mid-line and the sheath of the rectus a quarter of an inch from the middle. Immediately below the peritoneum I saw a black mass; I opened the peritoneum, raised the omentum and the transverse colon, and evacuated two and a half pints of black blood and clot. Practically there was no bleeding at the operation. The left tube was found at a distance of one and a half inches from the uterus burst and ragged in its superior aspect; the inner, exposed, ragged surface of the tube was one inch long and three-quarters of an inch in breadth. The embryo could not be found nor any bleeding point. The patient was now cold and pulseless. The tube was ligatured on each side of the rupture and the peritoneum was rapidly closed, as well as the sheath of the rectum, the subcutaneous tissue and the skin, and the patient was put back to bed at 1.30 P.M. A two-pint infusion of normal saline solution was run slowly into the rectum and this was repeated on the following day, the foot of the bed being raised. On the day after the operation the temperature was 100°, falling to normal on the following day and never rising above this afterwards. On the tenth day the stitches (continuous silk) were removed from the skin and a small amount of golden serum was found in places. The skin edges had not healed and were approximated with grid-iron indiarubber plaster and in a fortnight from the date of the operation had healed. On July 7th the patient was getting about again and feeling quite well but was not allowed to work.

Had an abdominal surgeon been obtainable I should not have attempted this operation, though its happy result, due, I think, to the large amount of work which Mr. F. C. Wallis generously gave me to do when I was house surgeon to him, has justified it.

Nannine, J. P. Murchison District, Western Australia.

Reviews and Notices of Books.

Adenomyoma of the Uterus. By THOMAS STEPHEN CULLEN, Associate Professor of Gynæcology in the Johns Hopkins University; Associate in Gynæcology in the Johns Hopkins Hospital. Illustrated by HERMANN SECKER and AUGUST HORN. London and Philadelphia: W. B. Saunders Company. 1908. Pp. 270. Price 21s. net.

THE interesting group of tumours known as adenomyomata of the uterus of late years have been studied by a number of workers in gynæcology with the result that our knowledge of their structure and mode of origin is much more complete than it was. In the year 1903 Dr. Thomas Cullen, in a review of the literature published in Professor Orth's "Festschrift" reported 22 cases of this kind which he had studied personally. Since that date he has paid special attention to these tumours and in a series of 1283 cases of myoma examined he found no less than 73, or about 5·7 per cent., instances of adenomyomata.

It was in the year 1896 that the important work of von Recklinghausen first drew attention to this curious variety of tumour composed of gland elements and myomatous tissue. At that time, after a careful consideration of all the published cases, von Recklinghausen thought that the glandular

elements were derived from the Wolffian ducts. This opinion was based upon the supposed close analogy between the elements of the Wolffian ducts and the glandular structures present in adenomyomata of the uterus. In only one case did he find that the glands were derived from downgrowths of the uterine mucous membrane.

In his previous work on this subject, published in 1903, Dr. Cullen brought forward a good deal of evidence to show that the glands occurring in these tumours were derived in reality from the mucous membrane of the uterus, and his further investigations have tended to demonstrate the truth of this view. Of 50 uncomplicated cases of diffuse adenomyomata of the uterus in every one he has been able to trace the uterine mucosa extending into the myomatous tissue. In five out of six cases of adenomyoma of the uterus, complicated by a squamous-celled carcinoma of the cervix, the origin of the gland elements in the myoma could be traced to the uterine mucosa. Not only in the great majority of cases can such an origin of the gland tissue be established, but that these glandular spaces are in reality portions of the uterine cavity is shown by the fact that often they contain blood evidently menstrual in character, and in a few instances decidual changes have been conclusively demonstrated in them.

We think that no one can read this book without becoming convinced that the author's view as to the nature of these tumours is the correct one. Not only has Dr. Cullen shown that von Recklinghausen's theory is no longer tenable but he further points out that there is a very definite clinical history associated with these tumours. Increased loss at the menstrual periods is accompanied in typical cases by grinding pain in the uterus which is attributed to increased tension, since the islands of mucosa scattered throughout the diffuse myoma swell at the menstrual period and thus increase the size of the organ. As a rule there is no intermenstrual discharge, as the uterine mucosa is usually quite healthy. The tumours are essentially benign and there is no risk of their recurrence after removal.

This book is a good example of how such a monograph should be written. A large number of cases are recorded in sufficient detail to enable the reader to draw his own conclusions, there are a number of beautiful illustrations, and the results of the author's work are clearly and concisely summarised. This is an excellent work worthy of the high reputation of the author and of the school from which it emanates.

The Theory and Practice of Hygiene (Nottér and Firth). Revised and largely re-written by R. H. FIRTH, Lieutenant-Colonel, R.A.M.C., formerly Professor of Hygiene in the Royal Army Medical College; now Officer in Charge of the School of Army Sanitation, Aldershot, &c. Third edition. London: J. and A. Churchill. 1908. Pp. 993. Price 21s. net.

ALTHOUGH this volume is nominally the third edition of "Nottér and Firth," there has been such a re-arrangement of the subject matter and such a re-writing of the chapters that it constitutes what is practically a new work by Lieutenant-Colonel Firth. The author has had, as all writers who endeavour to combine the science and law of public health appear to have, considerable difficulty in deciding how to treat sanitary law, but although he may not altogether have succeeded in solving the problem he has, we think, made a useful advance. In former editions sanitary law was dealt with separately; in this the general legal provisions appertaining to sanitary authorities are treated of in the first chapter; while the law relating to special subjects, such as water and milk, is dealt with at the end of the chapters dealing with these subjects. In this