

## A CASE OF PERFORATING GASTRIC ULCER WITH RIGORS.

OPERATION FOR SUTURE FOLLOWED THREE WEEKS LATER  
BY VOLVULUS AND ACUTE INTESTINAL OBSTRUCTION  
REQUIRING A SECOND LAPAROTOMY.

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THE patient, a female, aged 27 years, was seen for the first time on Nov. 10th, 1899, three days before perforation took place. She was then suffering from slight dyspeptic symptoms, without anæmia or marked constipation, and gastric ulceration was not suspected. For two years, however, she had had gastric troubles of varying severity and had once suffered from anæmia. On Nov. 13th at 6 P.M. she had a sudden attack of pain in the left side with vomiting. She rallied from this and when seen on the 14th was fairly comfortable, but had vomited again. During the whole of this day she did not lose ground, and she took a fair amount of hot water and milk diluted with thin barley water. She had a good night. On the 15th she was not so well. She had a rigor at 9.20 A.M. The abdomen was tender and tympanitic. Another rigor came on at 12.37 P.M. There was no action of the bowels. Mr. Bowlby saw her at 6 P.M., and then, 48 hours after the commencement of acute symptoms, the abdomen was opened by a median incision above the umbilicus. A perforating gastric ulcer was found on the anterior wall and near to the cardiac end of the greater curvature. This was closed with six sutures without difficulty. The ulcer was about a quarter of an inch in diameter, round, with clean-cut edges as if punched out, without any inflammation or inflammatory thickening. The stomach contained about an ounce of mucus, but the abdomen, though distended, did not contain much fluid or solid matter, the latter being chiefly flakes of coagulated milk. The spaces behind the liver and Douglas's pouch were carefully sponged out, but the abdomen was not irrigated. A glass tube used to drain the gastro-hepatic region was kept in until the third day after operation. The patient recovered well from the operation and progressed very fairly for three weeks, though the temperature was never quite satisfactory except for a few days at a time. On Dec. 4th, three weeks after the operation, there occurred a sudden attack of very severe abdominal pain with vomiting and collapse. The patient complained of pain in the lower part of the abdomen with some tenderness, and though the pulse was good she looked and felt very ill. The abdomen was distended, especially below the umbilicus, and tympanitic. The liver dulness was almost entirely absent and there was nausea but no vomiting. The pulse-rate was 88 and the temperature was 100° F. Per rectum nothing was felt. From this time till 10.30 P.M. the pain gradually increased and the patient became more and more restless. The distension increased and the pulse became more irregular and more feeble, but it was never above 100. At this time the patient was again seen by Mr. Bowlby and it was decided to operate at once.

The operation was performed at 10.30 P.M. by a long incision below the umbilicus. The peritoneal cavity contained about a quart of darkly blood-stained fluid and in the lower part of it could be seen a mass of greatly distended and discoloured intestine. This was firmly fixed down in the pelvis where it seemed to be quite impacted. With some difficulty it was turned out of the peritoneal cavity in a mass, and it was then found that the greater part of the small intestine had been adherent at the bottom of Douglas's pouch and had become completely twisted from left to right so as to form a large volvulus. The adhesions were divided and the mass of distended bowel was untwisted, but was found to be so much distended that two small incisions had to be made with a tenotomy knife to let out gas and fluid before the intestines could be returned into the abdomen. The wounds were closed with Lembert's sutures and the intestines were sponged and returned to the

peritoneal cavity. The abdominal wall was sutured in layers and closed. Progress was subsequently uninterrupted and after careful feeding for three weeks the patient made a satisfactory recovery.

The case is interesting from several points of view, not least on account of the extraordinary vitality and recuperative power of the patient who survived two days of peritonitis following perforation and the necessary operation for suture as well as the strangulation of an immense quantity of small intestine and a very serious operation for its relief within three weeks of the first abdominal section. The conditions found at the second operation are fortunately rare and the adhesion of the intestine was evidently the result of inflammation of the pelvic peritoneum, the volvulus occurring secondarily to the adhesion and being the result of the attempts of the bowel to escape from the band, whilst the band itself by forming a fixed point enabled the twist to occur. As in all such cases the incisions into the bowel were of great service in permitting the replacement of the distended gut and in helping it to recover subsequently.

The symptoms before the first operation were also very unusual and misleading. It is certainly very rare for rigors to occur after perforation of a gastric ulcer, but in this case they were very severe and were accompanied by great pyrexia, the temperature at one time reaching 106°, while the pulse never became really rapid.

At the time of the occurrence of the volvulus, also, the pulse remained below 100, in spite of the strangulation of a large mass of intestine, and although the patient was evidently much collapsed and in intense pain. It is seldom that so serious a condition as was found in this case on opening the abdomen causes so little disturbance of the pulse-rate, but this case, and others which we have seen, should serve as a warning not to place too much reliance on a quiet pulse where the question of laparotomy is under consideration for the relief of such suspected conditions as perforated gastric ulcer and volvulus.

## ON SEROUS VACCINIA IN CONNEXION WITH CRETINISM AND RICKETS.

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THE serous character occasionally manifested by vaccine lymph is generally recognised to be of constitutional origin in the majority of cases, but, so far as I am aware, its connexion with cachectic states which may develop subsequently has not received much attention, whence there is reason to hope that the following cases may prove of interest.

CASE 1. *Serous vaccinia; myxœdema at the age of 34 years.*—This patient, an unmarried female, 40 years of age, the sister of a congenital cretin whose case was reported in 1884,<sup>1</sup> became herself myxœdematous at the age of 34 years. Shortly before or during the early stages of myxœdema she displayed great susceptibility to the action of primula obconica on the skin and experienced several attacks of dermatitis attended with an eruption of bullæ, which yielded a copious flow of thin watery serum, from the mere handling of this plant.<sup>2</sup> Her mother states that as an infant she had been extremely liable to become blue on exposure to cold, this being a feature common to most of the cases which follow. Of her vaccination it may suffice to state that lymph was taken from the arm on the eighth day and that it continued to flow freely from it afterwards during the whole afternoon, while both the first and second scabs which formed emitted serum copiously. On the day after the opening of the vesicle (one large insertion had been made) increased redness and swelling supervened, and the former extended from the back of the hand to the left ear, this condition lasting for 10 or 12 days, during which the child was extremely irritable, although her health was not injuriously affected afterwards. It is of interest to add, as showing that there were no germs other than those of vaccine in the lymph, that a neighbour vaccinated her own baby from it after the medical man had

<sup>1</sup> THE LANCET, August 23rd, 1884, p. 314.

<sup>2</sup> THE LANCET, March 4th, 1899, p. 579.

left and a perfect vesicle resulted which gave no trouble. I may here mention that in the brother of this patient, the congenital cretin already noticed, the vaccine lymph did not manifest the serous character and the same is to be said of another congenital case (a remarkable combination of cretinism and rickets) which I have had under observation. I refrain from commenting on this negative fact in the present article.

CASE 2. *Serous vaccinia; subsequent cretinism or juvenile myxoedema.*—In this case there can be little doubt that the sequelæ of vaccination led to acquired cretinism, although probably in a predisposed subject, this, I believe, being the first case of the kind recorded. The patient, a young man in his twenty-second year, first came under observation more than a year ago when his height was 4 feet  $\frac{1}{2}$  inch and his weight was 5 stones. Of his family history I may only mention that his mother, who died at the age of 47 years, was perhaps myxoedematous, as she was for some years very stout and supposed to be dropsical and is said to have had "a skin like wax and cheeks like roses." The patient's case, when he first came under notice, was a good illustration of what French writers have called *la forme fruste du myxoedème atrophique*<sup>3</sup> and was remarkable for certain negative features; for instance, there was no slowness or other defect of speech, so that when I first showed the patient to the Medico Chirurgical Society of Glasgow (on March 17th, 1899) the diagnosis of cretinism was generally doubted, and several members expressed themselves strongly against it.<sup>4</sup> Thyroid treatment was commenced on May 13th,

FIG. 1.

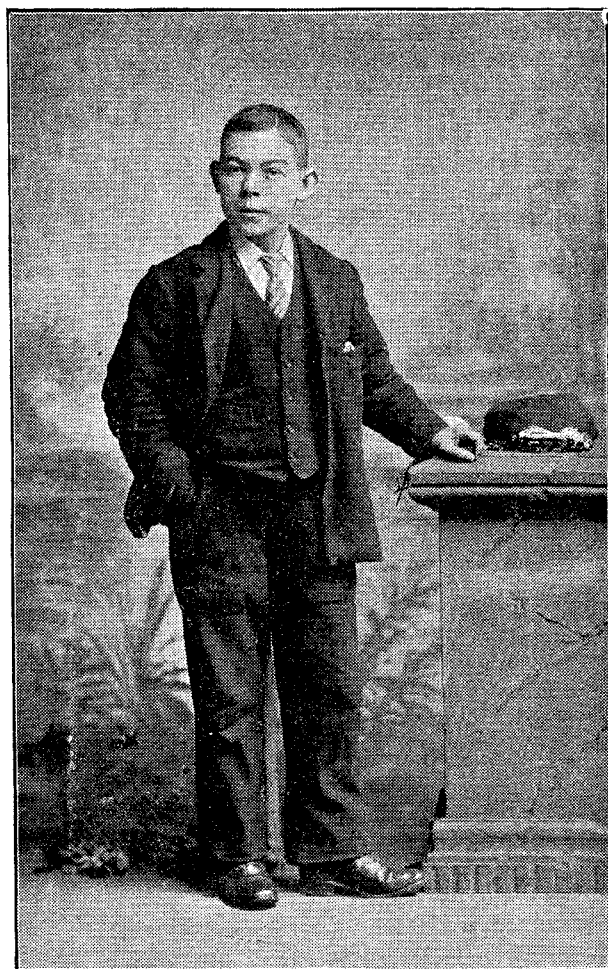


Before treatment.

1899, and when the patient was again brought before the Society (on Feb. 2nd, 1900) his height was 4 feet  $5\frac{1}{4}$  inches. At this meeting the President (Dr. G. S. Middleton), and Dr. A. G. Faulds suggested that it would be of interest to see the developmental state of the osseous system in the case, and to the latter, who has done some good work with the x rays at the Glasgow Royal Infirmary, I am indebted for a skiagram of the hand and forearm with regard to which he observes in a note that

"the bones are in a state of incomplete ossification with non-union of diaphyses and epiphyses similar to the condition seen in a child 11 years of age." This is analogous to what has been observed by Hofmeister and von Eiselberg in the experimental myxoedema of newly-born animals to which the president referred at this meeting.<sup>5</sup> Fig. 1 and Fig. 2 represent the patient as he appeared (Fig. 1) before treatment and again (Fig. 2) after he had grown to the height of 4 feet  $6\frac{1}{2}$  inches (in May last). In these the relative difference in height is closely preserved. At the date of writing (November, 1900) his height is 4 feet  $8\frac{1}{2}$  inches, so that it will be observed that he has not been growing so rapidly of late.

FIG. 2.



After treatment.

At neither of the above meetings did I refer to this patient's vaccination, this being a subject which I reserved for further observation. The following is a brief account of it derived from statements made by his eldest brother and other relatives. His mother took him to a public institution in this city for the purpose and she afterwards described the operators as being very careful, remarking that they examined behind the ears, the buttocks, &c. She also saw the vaccinifer, from whose arm a number of other infants were vaccinated at the same time, and confessed that it was a fine healthy child, with a beautiful "pock." Six insertions were made and all "took" and from all the six vesicles resulting lymph was taken on the return day. Lymph continued to flow freely from the arm after the mother left the dispensary, and next day redness and swelling supervened and extended by-and-by to the knuckles and the top of the shoulder, and this condition is said to have lasted for two or three weeks. The vesicles meanwhile continued to discharge serum, while the subsequent scabs are said to have done so for several months altogether. Strange as it may seem, the mother did not take the child back to the dispensary and did not call in a medical man till some weeks had elapsed, when the case proved refractory, for the arm was not completely healed for 18 months. From the time of his vaccination the child grew always very slowly, and the height which he finally reached when first seen, at the age of 21 years (4 feet  $\frac{1}{2}$  inch), was all completed before he was 10 years old. The unfortunate result in the case was

<sup>3</sup> Grancher: *Traité des Maladies de l'Enfance*, tome iii., pp. 910 and 916.

<sup>4</sup> Proceedings of the Medico-Chirurgical Society of Glasgow, vol. ii., p. 319.

<sup>5</sup> *Centralblatt für Anatomie und Pathologie*, 1893, p. 353.

evidently due to gross neglect and mismanagement, but I am here only concerned with the serous character of the vaccinia in its early stages, and as bearing on the constitutional origin of this feature the cases in the following family seem to be of special significance.

CASE 3. *Serous vaccinia in six members of a rickety family of seven children; cretinism in one child.*—The parents in this case were both alive in September last, when the mother died from aneurysm of the aorta and profound anæmia at the age of 66 years. The father is 71 years of age and of the children only three survive, of whom the cretin is one. He is the youngest of the seven and was a healthy child until the age of two years and four months when he was suddenly seized with croup of so violent a type that on the first day of the attack he was apparently suffocating, with crowing inspiration, &c. The medical attendant ordered leeching followed by poulticing; five leeches were applied and the poultices drew a large quantity of blood, leaving the patient ghastly pale. The dyspnoea was instantly relieved and it never returned, and although for a few days the child seemed to be dying he gradually recovered, but only to lapse at once into his present condition of complete cretinism. He is now 26 years of age, is bandy-legged, 3 feet 2 inches in height, and 3½ stones in weight. He has an extremely thin and delicate skin, showing the veins clearly in many places, although rough and scaly in others, a scrofuloderm (besides pseudo-lipomata) in the neck, and two cicatrices over one knee-joint, the remains of a chronic abscess from which he had suffered for many months. The mother had also a similar abscess at one time about the knee, and the entire family betrayed evidence of a marked proclivity to scrofula and (the children at all events) to rickets. On inquiry I ascertained from the mother that vaccinia had manifested the serous character in every member of this family but one, the eldest son, who was not rickety, is still surviving at the age of 36 years, but is now probably phthisical. In all the rest the sites of vaccination had discharged serum for several weeks, although in four of these the vesicles were not opened by the operator but ruptured spontaneously, and this in spite of the fact that one had only one, and another two small vesicles, and that the mother took every precaution to avoid this mishap. This spontaneous rupture happened in the case of the cretin and the only other survivor (also a son); this latter, about 34 years of age, is a pronounced example of rickets and is barely five feet in height, with a disproportionately large head; he did not cut his first tooth till the age of 18 months and could not walk till his seventh or eighth year. In the case of one child, a girl who died at the age of 18 months, the vaccinated arm, after rupturing spontaneously and discharging thin serum for a week or more, became affected by some inflammatory condition, apparently a form of lymphangitis, which extended to the corresponding side of the trunk and, as the mother believes, so undermined the child's health that she never fully recovered from the effects. She describes her as having had blue veins and a delicate skin, and as being very apt to turn blue with cold. She even attributed injurious results to vaccination in other instances, and there seems to be no doubt that vaccinia of this character may readily become the parent of other evils if not promptly and judiciously treated. It is surprising that this form of the affection is not mentioned in some recent works on vaccination or in the final report of the late English Royal Commission.

CASE 4. *Serous vaccinia with symptoms probably indicative of a myxœdematous tendency; spasmodic asthma at the age of six years.*—This patient, a boy aged seven years, was recently brought to me by his mother, an intelligent woman, who reported that of late he was easily tired and did not care to exert himself and frequently complained of sore legs, especially on walking up-hill. She had already regarded him as "delicate" and she said that as a baby he had had a pink-and-white skin and that his face and hands got cold readily. At the age of five years he had an attack of whooping-cough, which clung to him for months, and within the last 12 months he had had frequent paroxysms of an asthmatic character, in one of which I had lately the opportunity of seeing him. Without inquiry on my part the mother adverted to the subject of his vaccination and she drew a picture of a type of serous vaccinia which every experienced vaccinator would at once recognise, so that I need not enter into details. I may add, as a fact not without significance, that I

found this lad very easily blistered by a slight application of iodine liniment.

I can here only glance at some conjectures and opinions which I have been led to entertain with regard to the questions suggested by this subject. The records of cretinism (or myxœdema) and facts observed in my own cases have strongly impressed me with the view that constitutional factors play a predominant rôle in the causation of this cachexia, and it would appear that we might sometimes recognise the predisposition to it in infancy by the physical signs and symptoms manifested in some of the above cases, and these, it will be observed, are the same as were formerly assigned to a certain category of the scrofulous. An important fact in favour of this view of the etiology of the disease is the occasional occurrence of more than one case in the same family. The inherited constitutional vice seems to be a common source of various other forms of degeneration and disease, depending probably on the incidence of different exciting causes; thus, besides serous vaccinia, I have encountered in myxœdematous subjects and other members of the families to which they belong instances of blindness, deafness, mouth-breathing from nasal obstruction, tuberculosis, and rickets, besides such neuroses as spasmodic croup and spasmodic asthma (a notable example of the latter being a brother of the patient in Case 1). Passing over other problems I would here limit attention to the question: Is the thyroid specially concerned in the production of serous vaccinia and serous types of other affections? Briefly I would answer that the evidence seems to show that such is the case in many instances, although it would be hard to speculate on other factors which may sometimes coöperate. It would appear, further, that the condition of the gland in such cases is one in which it is prone to atrophy from exciting causes which would otherwise prove inefficient. The identity of the effect, so far as serous exudation is concerned, produced in Case 1 by vaccination and by the action of primula obconica and the subsequent development of myxœdema in the case seem to be facts of much significance. It would appear that we ought to recognise the existence of a serous as emphatically as we do that of a hæmorrhagic diathesis, and it is probable that the two are intimately related to each other, while it is evident that both are associated with great vulnerability of tissue by various morbid agents. Thyroid treatment has proved of value in hæmophilia and some of the other affections which have been here clinically grouped together, and quite recently I had a case of nasal hydrops of three years' duration in a girl, aged 12 years, which was promptly arrested by it. This is conclusive evidence if corroborated by further experience.

It has been concluded from experiments by Schiff and Horsley that the thyroid has an antitoxic action on certain toxic substances resulting from the digestion of albuminous bodies, and I would further ask, Is it possibly concerned also in defending the organism against the germs of some zymotic diseases? If the healthy gland is necessary to produce the viscid lymph of normal vaccinia it is readily conceivable that it may perform an office of this defensive kind, whether it has any toxin-destroying power or not. For lymph of a certain degree of viscosity may act as a bulwark of defence, limiting, perhaps, the multiplication of organisms and the amount of toxins produced and absorbed, whereas when it is of the serous character opposite results may ensue. I venture to submit, not without hesitation, a suggestion on this subject. It is that vaccination and perhaps experiments on vesication should be performed on calves and a few other animals after extirpation of the thyroid. It seems probable that the greater viscosity of calf lymph as compared with human lymph may be due to greater energy of the thyroidal function, this being probably necessary to maintain the higher temperature and more rapid growth of the calf. When we further reflect on the profound changes effected in experimental cachexia strumipriva, the diminished coagulability of the blood, and the leucocytosis and anæmia, as described by Halliburton and Horsley,<sup>6</sup> it is not unreasonable to suppose that some modification in the course of vaccinia or in the character of the lymph produced might be observed. And, if any such should be found to occur, experiments on variolation might be once more tried in the same condition of the bovine animal.

Glasgow.

<sup>6</sup> Report of the Committee on Myxœdema.