horse-hair suture. The lumbar region wound was partially closed by deep catgut and superficial horse-hair suture, and a large drainage-tube passed into the abdomen through it. Perchloride of mercury lotion (1-3000) was used to purify the wounds both before and after the operation, and boracic lotion, as already stated, for cleansing abdomen. Mercurial dressing and carbolized tow were used throughout the case, and antiseptic precautions were used as far as circumstances admitted. With the exception of some sloughing of the skin over the abdomen, the patient made an uninterrupted recovery, and his temperature never rose above 101° F. on the third day. He left the hospital at Chapra, where he was removed from Sanipore a fortnight after the accident, within ten weeks of his accident, with his wounds completely healed up, and in excellent health, apparently none the worse of the elephant's tooth passing through his abdominal cavity. The only regret is that the patient, being a Mahommedan, left the hospital before he could be photographed, this religious sect having strong religious scruples to having their own pictures or those of animals taken, I suppose in contradistinction to Hindoos, who are so fond of the worship of images and pictures of human beings and the lower animals.

V.—EXTENSIVE CELLULITIS WITH NECROSIS OF THE SKIN OF THE ABDOMEN IN AN INFANT.

By William Elder, F.R.C.P.E., M.B. C.M., Physician to Leith Hospital.

The following case is worthy of recording, because it must be one of considerable rarity.

The patient, a baby, was born on the 21st day of March 1894, apparently quite healthy. He was a small baby, but this was accounted partly for by the fact that he was born about the eighth month. There had been five other children in the family, most of whom were also slightly premature, but all of them were healthy when they were born. With the exception of a tendency to affections of a strumous nature, there is nothing unusual in the history of the family. No history of specific disease. During the time that the mother was pregnant with this child she did not enjoy very good health. She was nervous and sleepless, and had always a dread of something going to happen either to her or the baby.

The baby kept well till April 7, seventeen days after birth, when the mother noticed that the left breast was a little more prominent than usual and tender to pressure. On the 9th an abscess was seen to be forming, and on the 10th the skin over the left breast gave way, and there was a discharge of pus tinged with blood. It was dressed with boracic lint and it healed up in a few days; but just as it healed the other breast also became

tender, red, and swollen, and an abscess formed in it also, which opened on the 16th April, and there was a discharge of about three-quarters of a teacupful of thin pus. Before it was opened the redness, which began in the breast, had spread down the right side and over to the left of the abdomen to about the junction of the epigastric and umbilical regions, with the hypochondriac and lumbar on the left side. The whole of these regions on the right side was red and erysipelatous-looking. On the 17th an area about 2 inches long and 1 broad, immediately to the left of the middle line, and beginning about 1½ inch above the umbilicus, was seen to be slightly livid.

On the 18th the lividity was still more marked, and on the 19th, just at the upper part of this area, a whitish patch had appeared which was evidently a small slough.

This slough separated, and at the same time the rest of the bluish patch also became white and sloughed off. There was now an area about 2 inches by 1½ inch where the skin and subcutaneous tissue had sloughed off, leaving the deep fascia and the rectus muscle quite bare but healthy looking. The fibres of the rectus were quite evident. The edge of this ulcer was undermined and the skin around was red and inflamed, there being a distinct red line about ¼ inch from the margin. The edge of the wound maintained this character throughout the course of the disease until nearly the end, when the process seemed to be more rapid, and consisted more in the necrosis of the subcutaneous tissue in larger masses, so that the skin could be moved over the muscle in the same way as a jersey can be moved over the surface of the body, the skin being quite undermined. The area of the wound grew therefore gradually larger, and this was brought about partly by the gradual spreading of the destructive process, and partly in the following manner:—

The digestive organs of the child got out of order, and there was constantly present much flatulence in the stomach and intestines. This flatulent distension produced two results: 1*st*, an umbilical hernia developed, which never, however, attained much size; and, 2*nd*, the destruction of the skin in the upper part of the abdomen seemed to take away the resistance or elasticity of the abdominal wall, so that the distended organs (chiefly the stomach and large intestine) pushed forwards, separated the recti muscles, and projected through the hole in the skin, being covered only by the peritoneum and the different layers of fascia in the abdominal wall.

The result of this was that the wound in the skin seemed larger than it really was. The sloughing above extended to the costal margin and sternum, but did not extend beyond this, the edge of the wound following the costal margin exactly, and here there was little or no undermining. The measurement of the wound at death was 5 inches in each diameter, and it will

be understood that part of this was only apparent destruction of skin, when I say that it began at the ensiform cartilage above, and only extended to an inch above the umbilicus. It did not extend below the level of the umbilicus on the left side, but slightly below its level on the right side, about 2 inches external to the umbilicus.

On 23rd April there was a small discharge of pus from a small opening in the skin in the right inferior axillary region. This opening also from this date began to gradually enlarge, and on the 28th, when the child died, it was circular in form and about 1½ inch in diameter. The serratus magnus muscle was seen quite distinctly in the floor of this second opening, being covered by muscular fascia. The skin between the margins of the larger and the smaller wound was livid in colour and undermined, so that it could be made to slide over the muscle underneath, the subcutaneous tissue having disappeared. Posterior to this second opening the skin gradually became more livid, and at death the lividity extended quite to the middle of the back, there being a large patch of skin 3 or 4 inches long by about the same in breadth, the vitality of which had almost entirely gone. During the progress of this necrotic process on the abdomen the wound in the right breast healed up, but a few days before the death of the child a small collection of pus appeared in the left breast, which had been the first to be affected. The child got gradually weaker, and died on the 28th April, aged five weeks and three days, and exactly twenty-one days from the date when the first abscess was seen to be forming. A post-mortem examination was made on the afternoon of his death.

The condition found after death will be sufficiently understood by what has been said of the process during life. The stomach and intestines were much distended with flatulence, but otherwise normal. The other abdominal organs, as well as the heart and lungs, seemed normal. Pieces of the skin from the margin of the wound, together with a piece of the spleen, were removed and sent to Dr Noël Paton at the Laboratory of the Royal College of Physicians, who kindly reported as follows:—

"1. As to the piece of skin sent by you on May 1, I have to report that it shows dermis and subcutaneous tissue in an œdematous and inflamed condition, the epidermis almost entirely desquamated; the epithelium of sweat glands and hair follicles in a state of proliferation.

"2. The spleen sent on May 1 appears entirely normal. There is a very considerable amount of pigment in many of the cells."

Cases of mastitis and mammary abscesses in the newly born are pretty common—but they are usually very limited in area, and the child rapidly recovers after they are incised or have discharged of their own account, but cases of extensive cellulitis

following mastitis with destruction of the skin over a large area, as in this case, are rare in medical literature.

Mr Joseph Bell, who kindly saw the case with me, cannot recall one exactly similar from his large experience. I find that Bouchut, in his *Treatise on the Newly Born*, 1867, page 719, records a case of mastitis where inflammation extended to the connective tissue, with extensive ulceration, so that the pectoral muscle was exposed and the child died from prostration. Jacobi, in the *Archives of Pediatrics*, March 1888, states that he has observed several such cases.

The appearance and spreading of the disease suggested to one's mind the resemblance to such a disease as cancrum oris or noma, but there was one distinct difference, in addition to the locality involved, and that was the fact that the disease in this case did *not* invade muscular tissue, but was limited to the skin and subcutaneous tissue. The process consisted in a very acute inflammation followed by a rapid necrosis of the skin and subcutaneous tissue, the latter, however, being much more extensively involved than the former. It spread from a centre, and in the skin there was a distinct line separating the healthy from the necrosed portion. The disease seems undoubtedly to have been due to some form of septic organism, but whatever the cause, it advanced very rapidly, and treatment, which was directed to supporting the vital strength of the child and soothing and rendering aseptic parts locally, had little or no effect in stopping the progress of the disease.

VI.—PATHOLOGY OF THE NERVOUS SYSTEM IN RELATION TO MENTAL DISEASES.

By W. F. Robertson, M.D., Pathologist, Royal Edinburgh Asylum, Morningside.

(*Continued from vol. xl., page* 1005.)

Article VII.

Morbid Conditions of the Intra-cranial Blood-vessels.

The subject of the relation of derangements of the intra-cranial blood-vascular system to insanity naturally divides itself into two sections: one concerned with the pathology of the cerebral circulation apart from actual structural changes in the vessel walls, and the other dealing with such structural changes and their consequences. As the main purpose of the present series of articles is to describe the histological changes associated with mental diseases, I shall confine myself to the consideration of the latter of these divisions. This limitation is the more necessary since the former section is really a very large and complicated one, inseparably bound up with many difficult problems concerning the physics of the intra-cranial circulation, of which the recent