PLASTIC OPERATION FOR THE RELIEF OF STRUCTURAL CONTRACTION FROM A BURN.

By Albert G. Walter, Surgeon, Pittsburgh, Pennsylvania.

Among the many established surgical operations, there are few which are more satisfying in their results or less hazardous in their consequences, and which yet have contributed more to advance surgery to its present pre-eminence, than plastic operations, and those for the relief of deformities in general; for we find that, in the execution of the various open operations belonging to that department, artistic skill and ingenuity have necessarily become handmaids to the accomplished surgeon.

The decisive case of the above, from the high degree of deformity, the tender age of the patient, the extent of the incisions necessary for remedying the contraction, and its successful result, will not fail to be interesting to the professional reader.

Mary, daughter of Henry Hainz, of Sharpsburg, Alleghany County, Pennsylvania, aged six years, was placed under my care for the relief of a most distressing deformity, resulting from a severe burn incurred several months ago. The following history of the case was given me.

In the absence of her mother she was playing before the fire, when her clothes ignited, and before assistance could be had, or before she could extinguish the flames on her face, it was too late; the whole extent of the face of the child was burned, from the chin entirely up to the forehead. The right side of the neck was filled with a burn, and the entire edge of the sterno-cleido-mastoid was incised, with considerable stretching of the skin; the appearance of the scar is still evident. The alveolar process of the incisor teeth had yielded to the constant strain, evertiing it, and giving the teeth, thickly coated with tartar, an outward direction. Saliva was secreted, profusely wetting and chafing the neck and breasts. As mastication could not be performed, the child had subsisted on milk and other nutritious liquids. Though pale and emaciated, her general health had been good. Having decided on attempting relief by dividing the cleft into an incus and entire width of the cleft, and on transplantation, on January 12th, 1854, in the presence of Drs. Reynolds, Murdoch, and several others, the patient being fully under the influence of chloroform, I made a transverse incision, commencing on one side of the neck a little below the angle of the lower jaw, and carried forward to the other side, terminating at a point opposite to where it was commenced, care being taken that the terminal ends of the incision should be approximating; the cleft incus being separated at the platysma myoides, being found contracted, was divided to the same extent in the line of the first incision, together with a layer of fatty substance, which was found shortened and thickened; this was done with strokes of the knife, there was a slight little bleeding, and of a venous character. The sternal portions of both sterno-cleido-mastoid muscles were shortened, and had to be divided. The head now liberated assumed its natural position; the jaws could be closed, though the incisors did not meet. An open wound, five inches in a vertical and seven in a horizontal direction, was left to be filled up by a flap of skin borrowed from the right shoulder, upper arm, and back. From the right angle of the wound in the neck the

knife was entered and carried down and forwards in a curve over the shoulder and external surface of the upper arm to near the elbow, there mounting upwards along the posterior face of the arm and shoulder, forming the base of a pedicle of over three inches as the matrix for subsequent nourishment of the flap. By short and rapid strokes of the knife, the skin circumscribed by these incisions, together with the lower edge of the flap, was separated from the fascia from below upwards, thus entirely denuding the upper arm and shoulder. The flap was purposely made much larger than the space to be filled by it required, in order that union by first intention might not be prevented by the inherent power in transplanted skin of contraction upon itself, and which is so likely to occur where the flap is too limited, as well as to allow for any sloughing that might ensue. Notwithstanding the extent of wound, the loss of blood was inconsiderable. All oozing of blood having ceased, the flap, twisted at its pedicle, was placed in its new position in front of the neck, and secured by several interrupted sutures and Carliard needles; the spaces between them were carefully brought together by narrow strips of adhesive plaster, surrounding the neck, and making gentle pressure, approximating the transplanted skin to the bottom of the wound and its edges, thus facilitating the early and free insinuation of blood-vessels, and speedy intervention of that adhesive inflammation, without which a successful result could not be obtained. The wound on the shoulder and arm was treated with chloroform, and retained in that position by a small bolster placed between the occiput and shoulders, and by a bandage. The patient was placed resting on her back, and compresses wrung out of a warm mixture of camomile flowers were kept in place on the front of the neck, to afford genial warmth, the circulation and vitality of the flap, and promote its adhesion.

To effect this, was, during the first day after the operation, exceedingly difficult, from frequent vomitings that ensued, consequent on the inhaled chloroform; and much anxiety for the safety of the flap was occasioned by rather free bleeding from a vein over the trachea, which might have provoked inflammation, and necessitated the use of the precautionary adhesions, and been followed by suppuration or sloughing. To avoid this, some of the stitches were cut out, and the congelated blood removed. All bleeding having been arrested, the flap was again laid down, and confined by strips of adhesive plaster. No further bleeding after the first twenty-four hours having occurred, and the vomiting having ceased, the condition of the patient became more favourable. Very little fluid nourishment, given in ten-spoonfuls only, was allowed, and every care was taken to guard against speaking; sleep and quietude being secured by sulphate of morphine, in one-sixteenth grain doses at intervals of two or three hours, during the day; and chloroform was given for the first time during the last two days, and the patient was ordered to abstain from it; no only which not the wound but the position occasioned. The protracted posture of the patient on her back for some days was very irksome and uncomfortable; the craving for food and drinks was distressing continued, though but unfamiliar. On the fourth day after the operation, adhesion having taken place in the greater extent of the wound, six sutures and needles were removed; and over the neck and arm light linen-need-need poltices were substituted for the water-dressings. The adhesions were earlier and firmer on the right side; towards the point of the flap, they were slow in forming, and less firm. A small portion below the skin sloughed, from desiccation failing to take place between that part of the new flap and the old cleft. Suppuration, however, eventually closed the wound; the last suture was removed on the tenth day, when the wound had nearly closed. The shoulder was duly supported, and the arm and back kept in the most comfortable and free position, given frequently, being the only nourishment allowed.

Two weeks after the operation, the flap was completely adherent, except below the skin, where the part was being filled up by granulation, which, a week later, was completed. The patient was now permitted to change her position; and, owing to the pale and flabby condition of the great baldness of the arm and shoulders, and her feeble constitutional powers, wine and solid food were substituted for the liquid diet.

After another week, all functions being normal, and the wound of shoulder feeling kindly, she left her bed. Two months later, this too had closed, and the girl was restored to her natural condition; the head was erect and moveable, with well formed neck; her jaws approximated, and the lips were thickened; there was no longer that distressing expression which she had presented before.
I have seen my little patient frequently since. She is in excellent health, and I feel certain that no one would suspect the former deformity. But for the ejecture of the burn on the face and front of the chest, no mark of her former disfigurement remains.

Remarks. Success in cases like the foregoing cannot fail to force the attentive surgeon to a still more close and watchful study of Nature's inexhaustible resources, and to convince him that through the power of his present healing and restoring powers, there is much yet to be done, and much, too, to be acquired. Before resting satisfied, from the study of that great book of Nature, and, in closing its pages, he may consider his mission accomplished, and Nature's teachings exhausted.

Transactions of Branches.

BATH AND BRISTOL BRANCH.

CASE OF INTUSSUSCEPTION: SURVIVING FIVE MONTHS.

By AUGUSTIN PICKARD, Esq., Surgeon, Bristol.

[Read February 25th, 1858.]

On Monday, August 1st, I had the pleasure of meeting in the ambulance while playing with his brothers in a field near Clifton. An old nurse who was with him told him to press himself against the stile, by which he obtained some relief.

When he arrived home, he was given a little tincture of rhubarb, and two grains of calomel; and his bowels were moved the next day.

August 6th. I saw him, and found him sick and restless, with a little occasional wandering in his talk; but, as I had frequently attended him with slight feverish colds and other infantile affections, when he showed similar symptoms, I took no very special notice of them, and ordered him some salines to relieve his fever. The next day he was worse, and complained of great pain in the abdomen. The bowels had not been open, and no flatus had passed per anum. I ordered him a dose of castor oil, with two minims of laudanum.

August 7th. He was still restless. The bowels had not acted, and two injections had been administered with no result. He was given four drops of laudanum.

August 8th. He was weak and collapsed. He had taken no nourishment whatever since Monday, and his bowels had not been open since the Tuesday. He had been sick once or twice during the past day. He took, in addition, three doses of castor oil, none of which had returned; and he had also three injections of castor oil and turpentine with laudanum, in gruel, which had remained, but were ineffectual. From this date, I had the assurance of Dr. Symonds's aid in the difficult case, in this unpromising manner. We gave him a copious injection of warm water, while in the bath, which he resisted with the utmost violence, and screamed as if he suffered the greatest pain. A large quantity of water was thrown up, and returned without any faecal matter. He was then ordered a blister on the upper part of the back, under the idea that possibly some paralytic condition of the nerves of the intestines might be present; and, as he was delirious and sinking, he was to have some beef-tea and wine injections during the night.

August 9th. A small quantity of faecal matter followed the injection of beef-tea and wine, and he recovered a little, but was still delirious and extremely weak, complaining of soreness, and unwilling to swallow anything.

In this state he continued nearly a week, taking a little milk, becoming gradually thinner, and wandering a good deal in his talk. His bowels were not open, but there was a tendency to diarrhoea; and his mouth and throat became very aphthous. On the 20th—that is, fifteen days after his attack—he passed a portion of alimentary canal, perhaps rather more than a square inch in size; and he was getting excessively thin and weak. He complained for some days of great pain in passing water, and his urine became ammoniacal and alkaline. Much of gas came out from the urethra, and he screamed out that something hard was coming; and, in fact, it was soon apparent that fluid faecal matter was passing through the bladder. He was ordered some port wine and laudanum occasionally, what nourishment he could take, and a draught of cold-liver oil twice daily.

August 22nd. He was taken again with sudden and intense pain in the abdomen, with restlessness, delirium, and sinking; and, in the latter part of the day, he passed a portion of tissue, apparently not the membrane, but some loose cellular membrane with it. The next day we increased his wine, and he passed the third portion of tissue; and from this time he mended a little, and continued to take gas three hours, with occasional doses of laudanum and cod-liver oil; and the next week he took some nourishment; whilst, at the same time, he had much bubbling and pain when he passed water, and he was constantly pulling at his perineum. During the ensuing fortnight, he went on much in the same way, taking an ounce of wine with every three hours, and nothing else. The urine remained ammoniacal and bubbling, with an occasional discharge of the contents of the intestine through the urethra. His emaciation was so great that the integuments and muscles of the abdomen became so thin a layer as to show the vermicular or peristaltic action of the intestines; and this phenomenon, which I had never witnessed before, was sufficiently distinct to enable us to say that the intestines moved freely, and that there had been no general peritonitis producing adhesions. His shrinks, when he passed water, were most distressing.

September 14th. He was evidently sinking. He lay without taking any notice, except when roused, and then he became fretful; and it appeared to be impossible to get rid of the gas by mild means, which appeared simply strained over his skeleton, to give way. Pulse 140, scarcely perceptible. His extremities were cold, and he appeared moribund; and in the evening I left him, not expecting to find him alive in the morning.

September 15th. I found him slightly revived, having sweated much in the night. He began to take a little milk and other nourishment, and from this time he improved. The urine was occasionally tinged with fecal matter, and I discovered muscular fibres in the debris, apparently from some broth that had been given him. Now and then, for twenty-four hours, he escaped from the bladder without the slightest matters, or at least in a liquid state; and the stains of fecal matter upon the napkins into which he had just made water, he said, "Oh! that's what comes when it's blown."

He was at this time taking ten draughts of port wine every three hours, with four minims of laudanum at night, and occasionally by day; and gradually his appetite and strength improved, but he did not perceptibly gain flesh. Since the first week of his illness, his evacuations had been of a slate colour, without the slightest tinge of bile; and they have also had a slimy and greasy feel to the finger.

In the middle of October, he had another sudden attack of pain in the umbilicus, almost as severe as the first; but it soon subsided under the use of opiates, and without any distinct evidence of fresh intussusception, and he returned to his usual state; that is, some muscular power, fair appetite, with the most remarkable emaciation. At one period he ate as much as three mutton chops a day, besides taking cold-liver oil and milk, and nearly half a bottle of port wine, in the twenty-four hours; and still not a particle of adipose tissue could be discovered above his ribs.

October 18th. The bubbling of the urine ceased, and there was never again any evidence of communication between the intestines and bladder. He became stronger, so as to be able to sit up in bed, but not to stand. His urine became clear.

He was constantly tried with doses of quinine and acids, and different kinds of tonics, but without avail. The remedies that seemed to do most good were not only ammoniacal and salicylic, but vinicomica and oxgall in a pill. He never showed any sign that any fat was assimilated, and he never showed any indication of the presence of bile either in his evacuations or in his skin; and yet he took milk, and other articles of diet which are fat to the faten children. The faecal matter was generally of the same nature as the preceding; but he continued to pass gas, and to have an occasional passage of liquid blood, and sometimes of mucus, for some little time.