The treatment consisted in applying a Thomas's knee splint with extension as shown in the diagrams. Extension plasters are applied to the leg below the fracture, and the limb is passed through the ring, which encircles the thigh at the groin, and which is padded over with felt, leather, and impervious ollakin. The thigh is pulled, and the extension is maintained by the plasters which are affixed

FIG 4.

to the lower end of the splint (Figs. 3, 4). A bandage is placed round the limb, and no further treatment is needed than now and again to extend the limb by pulling at the plasters. The little patient can be carried, nursed, left to play on the floor, and no displacement of fragments is possible. It can be applied easily in five minutes, whether the child struggles or not, and an anaesthetic is never needed. (Figs. 1, 2, 3, 4.)

REFERENCE.

¹ Fracture in Forcible Delivery, with the Presentation of a Splint. *Surgery, Gynaecology, and Obstetrics*, February, 1908.

PLASTIC RESECTION OF THE BREAST AND ITS BEARING ON THE PRELIMINARY INCISION OF BREAST TUMOURS.*

By C. HAMILTON WHITEFORD, M.R.C.S., L.R.C.P.

TWENTY-FIVE years ago Thomas removed adenomata of the breast by enucleating the tumours through the deep surface of the mammary gland, which was exposed by turning up the breast by a curved incision along the line of junction of the lower edge of the breast and the chest wall. He made no attempt to suture the cavity left by the enucleation of the tumour, and in the case of a cavity in the upper part of the breast the distance from the skin incision would render suturing most difficult. Neither is it an easy matter to obliterate a more or less spherical cavity whose walls are composed of breast tissue. Consequently, after the removal of an adenoma of any size, Thomas's operation resulted in a considerable falling in of the skin over the site of the tumour.

Collins Warren has made a happy improvement on

Thomas's operation.¹ He found that an incision made along the outer edge of the breast, and where necessary prolonged along the under-surface of the anterior axillary fold, gave very complete access to the deep surface of the most remote regions of the breast and resulted in an inconspicuous scar. He does not enucleate the tumour, but excises the segment of breast in which the tumour lies and reconstructs the breast by suturing together the edges of the wedge-shaped gap.

At a recent meeting of the Plymouth Medical Society I demonstrated a patient in whom I had removed, in November, 1907, for persistent mastitis, from the upper and inner quadrant of the breast—the region which is least accessible, and which for the wearing of evening dress is most important—a wedge of breast tissue by Warren's method. The result, in spite of the formation of a retro-mammary haematoma which became infected, was really very fair. Four months after operation the breast was in its natural position, the skin over the resected area was normal, showed no depression and only a slight suspicion of flattening.

This method exposes all the deep surface of the breast and enables the surgeon to incise, on its deep surface, a tumour situated in any region of the mammary gland. If the tumour proves to be malignant, the cut surface of the tumour and adjacent breast tissue is cauterized, in order to minimize the risk of dissemination of cancer cells. A pad of gauze is packed between the breast and the greater pectoral muscle, and the breast, turned down into its natural position, is sutured to the greater pectoral muscle. A fresh set of gloves and instruments is taken, and the radical operation for cancer is performed in the usual manner. If the tumour prove to be innocent the procedure is as follows: The segment of breast tissue containing the tumour is excised. The wedge-shaped piece removed consists of the whole thickness of the breast, care being taken not to remove any of the subcutaneous fat. After ligature of every bleeding point, the contour of the breast is reconstructed by two layers of interrupted catgut sutures. The first layer, including the subcutaneous fat, but not the skin, approximates the superficial portions of the divided breast tissue. This layer produces wrinkling of the skin, which disappears when the sutures have been absorbed. The second layer approximates the sides of the deep portion of the wedge-shaped gap. The breast is then turned down into its natural position, and is attached by a third layer of sutures to the edge of the greater pectoral muscle. A fourth layer of sutures closes the connective tissue immediately beneath the skin incision, which is closed by sutures of either silk, linen thread, or silkworm gut. The breast is compressed by firm bandaging over the dressings.

Warren only employs drainage, which is made through the lowest part of the skin incision, in cases known to be infected, as in abscess. In the case referred to above Warren's advice as to omitting drainage was followed, and in spite of elaborate haemostasis by ligatures, followed by firm bandaging, a haematoma resulted.

In view of the extensive area involved in the dissection it is probably safer in every case to drain the retro-mammary tissues for twenty-four hours by a tube passed from the lowest part of the skin incision to the deep surface of the sutured area of the breast.

The skin over the lower portion of the breast in the case mentioned, its nerve supply being cut off, was rendered at first almost completely anaesthetic. Four months after operation this anaesthesia had almost disappeared.

CONCLUSIONS.

1. Every breast tumour should be incised prior to its removal. The surgeon who, in performing a radical operation for supposed malignant disease of the breast, neglects the elementary precaution of incising the tumour as a means of either confirming or disproving the diagnosis, runs the risk of finding himself in the unenviable position of having performed Halsted's or some equally extensive operation for a simple tumour such as an adenoma or abscess.

2. The exploratory incision should not be made through the skin which overlies the tumour. An incision made into the tumour through the overlying skin, in the event of the tumour proving non malignant and needing only local removal, results to a certainty in a scar and probably in a depression. This scar, or scar plus depression, if

* Read before the South-Western Branch of the British Medical Association on April 16th, 1908.

situated in the upper half of the breast, interferes with the wearing of a low-necked dress.

3. For exploration of, and if innocent for removal of, tumours situated in the upper hemisphere of the breast the incision and method of Collins Warren should be employed, because, in the event of the tumour proving innocent and needing simply local removal, this method prevents a disfigurement which, to a sensitive patient, is distressing and, surgically, is unnecessary.

REFERENCE.

¹ *Annals of Surgery*, June, 1907.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

ON ATROPHY OF THE PROSTATE AND ON MEASURING THE LENGTH OF THE URETHRA.

I saw two cases recently of disseminated spinal sclerosis, accompanied by prostatic atrophy, and would much like to know if neurologists have noticed this. Both patients were middle-aged men. No trace of prostate could be felt in either; in both impotency and partial urinary retention existed, and in both also a catheter drew off the urine when passed 7 in. exactly. I say "exactly" because I wish to point out the inexact means usually adopted for measuring the urethra. This passage may vary in length fully an inch in the same person according to the degree the anterior part is stretched over the instrument used, and this is important since knowledge of length accurately determined is a valuable aid in the diagnosis of prostatic alterations, and in the retention of catheters. Personally I always measure not only the anterior urethra, but the degree the penis is stretched; this entails no trouble. The length of the former deducted from the length of the catheter required to "tap" the urine shows, of course, the length of the deep urethra—the only measurement worth knowing. Finally, the proper way to drain the bladder by the urethra is not only to pass the catheter just the proper distance, but to pass it with its eye facing the trigone. Other things being equal there will be no leakage and little irritation.

JAMES MACMUNN.

LARGE THYMUS: SUDDEN DEATH.

On the last voyage from New York to the Mediterranean with about two thousand passengers on board, I had a case which might be of interest to readers of the *BRITISH MEDICAL JOURNAL*. One morning at 5 o'clock I was called to attend a child in the steerage that was said to be dying. A few minutes later I found a stewardess holding the child in her arms, and the parents and others standing around weeping. The child was dead, and as nothing had been said to me the previous day regarding it, I naturally suspected that the mother had overlain it. I made inquiries and gathered the following particulars: Parents Austrian, above the average peasant intelligence, and apparently healthy. One other child died about a year previously, aged 6 months, cause unknown, but also very sudden. This second child was a male, 3 months old, born in America, and with no history of illnesses. On the previous evening it was quite well, and took its milk as usual at 8 p.m., when it was put to sleep in its baby carriage, in the same room as the parents. When the latter retired at 10 p.m. it was sleeping quietly, and was all right at 1 a.m., when the mother woke up. About 5 a.m. the father rose up and looked into the baby carriage, when he noticed the child's eyes turning up, and before I could be called there was a spasm, and immediately afterwards it lay still, death having apparently taken place at that moment. I made a *post-mortem* examination and found the body to be well developed, well nourished, and quite normal in appearance. On opening the thorax I found a very large thymus gland, extending nearly the whole length of the sternum and adherent to the pericardium and to the pleura on both sides. It extended backwards to the vertebrae and seemed to occupy a large part of the thorax. The heart and lungs were healthy, but displaced by the enlarged thymus. The liver was much enlarged and the spleen enlarged. The stomach and intestines were normal. The left kidney was somewhat enlarged, and both suprarenals were enlarged. The thyroid gland was slightly

larger than normal. The brain was rather soft, with some effusion on the cortex. The pineal gland was enlarged. Death was probably due to pressure on the vagus by the enlarged thymus.

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ACUTE FAECAL IMPACTION IN THE RECTUM. WITH reference to the case reported by Dr. W. M. Robson in the *BRITISH MEDICAL JOURNAL* of May 2nd, p. 1041, the following cases may be of interest:

Case I.—A little shrivelled old woman was admitted to the Royal Infirmary, Liverpool, a few years ago, when I was house-physician to Dr. Richard Caton. Apart from great emaciation and apathy amounting almost to dementia, she appeared to have no special disease. Inspection of the abdomen showed visible peristalsis, and this was taken to point to chronic intestinal obstruction. The patient took very little nourishment. Examination of the rectum revealed a large rounded faecal mass, blocking the anus like a ball valve, but allowing the passage of liquid faeces to a certain extent. I removed the mass piecemeal with my fingers.

Case II, of which I have no notes, was that of an infant in ordinary health, and from 12 to 18 months old. The procedure was similar to that in the preceding case.

Case III, a well-built man about 24, with a mitral systolic bruit, had a slight haemoptysis, and was, therefore, kept in bed, very still, and fed upon milk. One night I was sent for because he was in pain and could not defaecate, in spite of aperient medicine and a desire to do so. I found the rectum filled with a ball of faeces like stiff clay, which the bowel was quite unable to manage or the anus to pass. I removed this as in the other cases, the operation causing considerable pain. The lump was almost as big as a fetal head, and the expulsion of the mass with assistance much resembled the act of parturition. The patient had been taking calcium chloride, and this drug was probably one of the chief causes of the condition, by forming a dry calcareous motion. In none of the cases was there excessive loss of fluid, either by diarrhoea or haemorrhage; nor was there rectal feeding, as in Dr. Robson's cases, but no doubt there was insufficient attention to the intake of water, a point to be remembered in the prevention of the condition.

Liscard.

SEYMOUR W. DAVIES, M.B., Ch.B. Vict.

HYDROGEN PEROXIDE IN PUERPERAL SEPSIS.

In view of Dr. Knyvett Gordon's paper on the treatment of puerperal fever, and Dr. Hovenden's note on the use of hydrogen peroxide in septic conditions, the following case may be of interest: I was called on the fourteenth day to see a puerperal woman who had been attended by a midwife. The pulse was 140, the temperature 104°; there was great pelvic pain and tenderness, and pus was seen oozing copiously through the os uteri. I curetted at once, then swabbed the uterine cavity thoroughly with pure lysol, and inserted a large double wick of sal alembroth gauze soaked in 1 per cent. lysol (removed next day). In a few hours there was considerable improvement. The pulse fell to 98, the temperature to 103°, and pain and tenderness almost disappeared. In two days, however, she became as bad as when first seen—or indeed worse. I again swabbed out the uterus, this time using hydrogen peroxide solution (10 vols.) and draining with sterile iodoform gauze soaked in the solution. The effect was most striking. In three hours the temperature fell from 104.2° to 100°, the pain vanished, and she looked like a different woman. When the gauze had been in the uterus for twenty-four hours she had a sudden rise of temperature to 104°, and pulse to 120; but this was apparently due to the gauze ceasing to act as a drain and becoming a plug, for on its removal the temperature fell to 98° and the pulse to 80, and recovery proceeded smoothly. It should perhaps be mentioned that before each uterine manipulation an attempt was made to discourage the vaginal germs by means of mercurial douches given with sterile apparatus. Fowler's position was employed throughout. The point that seemed noteworthy in this case was the marked superiority of the hydrogen peroxide over the pure lysol, both being used under practically identical conditions in the same patient.

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