

no shadow; no tubercle bacilli found in early stage. Later pyuria, tubercle bacilli. Nephrectomy; symptoms disappear.—Early in September, 1909, the patient noticed that he had to rise during the night more frequently than usual, and in the following December he consulted his medical attendant on account of the appearance of a small quantity of blood in the urine. For this he was ordered to bed; treatment was prescribed, and the hæmaturia disappeared at the end of a week. Between that time and July, 1910, when he consulted me, the frequency in micturition had increased to six or eight times, and during the day an hour and a half was as long as he could wait. There was no pain during or after micturition. But what he most complained of was a constant pain in the right testicle which was worst at night and prevented sleep. There was no recurrence of hæmaturia; the urine was clear; specific gravity 1008, acid, and threw down a very slight deposit on standing. The patient was tall, thin, and anæmic, so that the abdominal organs could be easily palpated. The testicles and the cord were strictly normal, but when pressed the right testicle was very tender. Nothing found on rectal examination. The patient never complained of spontaneous pain in the renal regions, but on palpation some enlargement of the right kidney was discovered, and he said that pressure on the kidney made him feel sick and made the testicle more painful. When he lay upon his left side the pain was eased.

Cystoscopic examination showed the bladder to be free from disease except that the orifice of the right ureter was unduly prominent and the lips thickened. Palliative treatment was prescribed, but I had a strong suspicion that the right kidney was the cause of the trouble. No shadow; no tubercle bacilli found.

In December of the same year the patient reported himself and said that he had had some bleeding and a thick deposit in the urine for over a week. Bacteriological examination and inoculations made by Dr. R. W. Buchanan now proved the presence of tubercle bacilli in the urine. Otherwise the symptoms and physical signs remained the same, except that the kidney was more distinctly felt. The right kidney was explored; a moderate-sized tuberculous focus was found in the lower pole, and three small ones in the body of the organ. It was removed, and the pain in the right testicle and the frequency in micturition disappeared.

In tuberculous disease of the kidney reno-testicular pain is sometimes present, the pain being independent of any testicular lesion, and relieved completely by removal of the kidney. It is well that this should be recognised, as tuberculous involvement of a testicle is likely to mitigate an operation on the kidney. It is well known that in renal calculus pain may be limited to a testicle, and sometimes it is so severe that removal of the testicle has been advised.⁸ This reflex is easily understood when it is remembered that the testicles receive their nerve-supply from the same segment of the cord as do the kidneys.

(f) *Reno-ovarian* and (g) *reno-gastro-intestinal reflexes*.—Lesions of pelvic organs are very frequent causes of pain in the back in women, which is increased by exertion. It often follows the posterior divisions of the first lumbar nerves, and in this way it is liable to be mistaken for pain of renal origin. The body of the uterus is supplied by the tenth, eleventh, and twelfth dorsal segments, the ovary by the tenth, and the Fallopian tubes by the eleventh, the twelfth, and the first lumbar, so that when these structures are implicated pain manifests itself very much in the same situations as in kidney disease. Hence the great difficulty when both the urinary and the genital organs are involved to discriminate the true origin of the suffering.

In kidney disease pain is very seldom reflected to the uterus, but is very commonly referred to the region of the ovary, as can be seen frequently in

cases of movable kidney. Instances are not uncommon where the pain over the region of the ovary was so severe and persistent that the medical attendant suspected ovarian rather than renal disease, and not a few have come under my notice where the pains have been mistaken for that of appendicitis.

In most of the surgical diseases of the kidney gastro-intestinal symptoms develop, but these are most marked in movable kidney. Many attempts have been made to explain the relationship between the gastro-intestinal symptoms and the displacement of the kidney. The disorders of digestion, the distension of the bowel and stomach, the sickness and the vomiting have all been attributed to reflex disturbance of the nervous system from dragging upon the renal nerve.

The neurotic symptoms are manifested by hyperæsthesia, acute neuralgia, and in a few by what may be included under the term "reflex cramp." In many the abdomen is extremely sensitive to touch, and when the kidney is manipulated even gently the patient complains of pain out of all proportion to the force used. This pain is increased by movement, by standing in the erect posture, but when the patient is kept in bed for a few days hyperæsthesia becomes less marked.

(To be continued.)

A SPLINT FOR A FRACTURED HUMERUS.

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THE splint now described is one which should be of practical value in casualty clearing stations. There it is of great importance to be able to dress any compound fracture of the humerus immediately prior to evacuation, consequently without anæsthesia, but with the minimum of pain. This is possible if the limb remains fixed and the splint is not moved during the dressing. As the Page splint has proved so useful for cases of fractured femur, I have modified it so that it may be applied to the arm.

It is obvious that if the fixed point of the upper end of the splint was against the axilla there would be a possibility of pressure of vessels—a state of affairs very undesirable where the wound may be already infected with gas-forming organisms. The fixed point of the upper end of the splint is above the shoulder, and is kept in contact with the acromial process by two straps. The chief difficulty in making the splint was the weakness of the shoulder portion. This was remedied by making the upper part of the splint with one piece of standard aluminium splinting, and I am indebted to Sergeant-Major Scott-Badcock, R.A.M.C., for the suggestion of the curve over the anterior aspect of the shoulder described later. Staff-Sergeant Lee, R.A.M.C., made various models on these lines, and I am greatly indebted to him for the interest and trouble he took in making them.

I will now briefly describe the method of making the splint from the standard aluminium splinting. The accompanying illustrations will render the method easier to understand.

To make the upper half of the splint (see Fig. I.). Take a full length of aluminium splinting (20 rings). (a) Bend on the edge at the middle point (x in 1 and 2) to a right angle. (b) If it is desired to make a splint for the left arm, bend on the flat the first six-ring length of the right-handed limb

⁸ THE LANCET, vol. i., 1909, p. 11, Case 4.

(holding the splinting with the angle towards one and the rings uppermost—x A in the diagram) in a semicircle directed upwards, so that the sixth ring is on the same plane as the left-handed limb (x B). (c) Now twist the remaining four-ring length portion of the right limb with pincers through a right angle so that its *edge* is now in the same plane as the *flat* of the semicircular portion (Fig. I., 3). (d) Bend on the *flat* in a gentle curve the first six-ring portion of the left limb (x B) so that the lower four-ring portion is opposite the lower four-ring portion of the right limb (Fig. I., 4). The upper portion is now completed, except for

FIG. I.

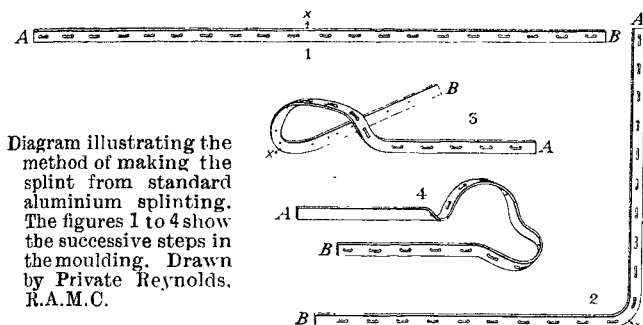


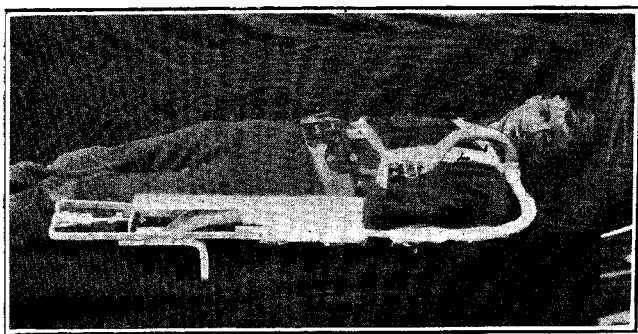
Diagram illustrating the method of making the splint from standard aluminium splinting. The figures 1 to 4 show the successive steps in the moulding. Drawn by Private Reynolds. R.A.M.C.

padding round the curved parts. If the splint is required for the right arm, substitute left for right and *vice versa* in the above description in steps 2, 3, and 4.

To make the lower half of the splint.—Take a 17-ring length of the splinting and bend on the *flat* at right angles just after the eighth ring. Bend again on the *flat* at right angles just beyond the ninth ring. The result is a U-shaped half (which should have the rings external). A step should be mounted to this half as in the lower portion of the Page splint. The two portions are assembled in exactly the same method as the Page splint, three or four rings being bolted together, according to the length of arm of the patient. The step should look in the opposite direction to the semicircular portion of the upper part of the splint.

Method of application.—It is better applied when the patient is under an anæsthetic, as when the wound is cleaned and dressed for the first time at a clearing station, but it can be applied without an anæsthetic and without causing very much pain. The arm is held in the extended position by traction on the forearm and slipped through the splint, which is held so that the semicircular portion is anterior and internal to the limb. This semicircular portion is now brought to be over the anterior aspect of the shoulder, and so that

FIG. II.



Shows the splint applied. Note the straps 1 and 2 which secure fixation of the point x. The photograph was taken by Captain McNeen, R.A.M.C. (S R.)

the extended arm lies between and in the same plane as the straight bars of the splint. The splint is fastened by a strap which passes round the chest (below the opposite axilla) from the point x on the diagram; this point is also fixed by a strap to a strap round the patient's waist. The arm is kept in a state of moderate extension by fixing the wrist to the distal end of the splint by means of a flannel bandage, or a stirrup made with Mead's strapping. Strips of flannel or perforated zinc passed beneath the arm and forearm from one side of the splint to the other form a support for the limb. Fig. II. shows the splint applied to the left arm.

Advantages of the splint.—1. It is easily made and applied. 2. It ensures fixation of the limb

without pressure from the splint on either the limb or on the vessels of the axilla. 3. If the lower end of the splint be supported the patient can turn on his side without pain, thus facilitating dressing of other wounds and nursing. The relative position of the arm to the patient can be changed if he so desires, and the arm may be freely abducted for purposes of dressing. 4. The wound can be dressed without removal of the splint. 5. The maintenance of moderate extension ensures free drainage.

Possibly the aluminium splinting will not prove sufficiently strong to stand the journey to the base, and a splint of this pattern made of malleable wire may prove more suitable. Some of the latter are now being made, though for purposes of dressing the flexibility of aluminium splinting renders access to the wound easier.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF HERMAPHRODITISM.

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CASES of hermaphroditism, whether of the true or so-called false variety, are sufficiently rare to justify the recording of any case coming under observation. In the case to be described there are certain features relating to the age and upbringing of the individual and the circumstances in which she first came under notice, which materially add to its interest, and which will be dealt with in due course. Before actually describing the case I propose to give a brief account of the personal and family history.

Her parents died when she was young, her mother having drowned herself when the child was 2½ years old. She is illegitimate, and her mother had two other children, one at least of whom was illegitimate. One brother, aged 26, is a collier, and apparently normal. A sister, aged 22, is said to be addicted to drink and gambling, and shows other immoral tendencies. Her antecedents and family generally appear to be decidedly degenerate and of a low moral type. She was brought up by foster-parents, was educated as a girl, and attended an elementary school from 4 to 14. She says that she reached Standard VII. at the age of 12, and afterwards competed for a scholarship at the secondary school, being bracketed with another girl for first place. After leaving the school she entered domestic service for a time, subsequently going to live with the sister before referred to. Later she worked as kitchen-maid at a restaurant and afterwards in a mill. Whilst there she stole a pair of boots, and was as a result removed to a Salvation Army shelter in order "to redeem her character." She signalled her stay in her new abode by stealing a small sum of money and decamping with "another girl." They appear to have stayed out all night and got into low company. Separating from her companion, she applied for employment at the local labour bureau, and her masculine voice and general appearance bringing her under suspicion, the police were communicated with. It was immediately after this that I first saw her. It was noteworthy that this was the first occasion on which any serious question had been raised as to her sex, she being then 17 years and 8 months old. It appears, however, that when her voice "broke" at the age of 17 she saw a medical man who attributed it naturally enough to a "cold." About the same age she is said to have menstruated for the first time, the catamenia lasting a week. She has since menstruated on two occasions, the period in each case lasting about two days.

External appearance.—She appears to be a tall, masculine girl, of rather pallid complexion, with long hair like a girl's, and dressed in female clothes. From her general aspect