PATENCY OF VEINS AFTER A NEW TECHNIQUE OF CUTTING-DOWN FOR TRANSFUSION

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During the course of a research project which necessitated the introduction of a catheter into a vein of an arm we felt somewhat guilty at depriving each patient of a vein which might be required later in an emergency that would conceivably need every available transfusion site. As our patients were all women, and also pregnant, this matter seemed very important. A technique was devised whereby the patency of the vein could be retained for any future occasion. This extremely simple method can be used for any type of transfusion where the introduction of a cannula is necessary. We recommend it particularly to junior house officers, who occasionally waste veins once and for all time. With this method they may still waste a vein through their inexperience, but only temporarily.

Method

The vein is exposed and mobilized in the usual way, using a small transverse incision, and a loop of fine catgut is drawn underneath by means of an aneurysm needle (Fig. 1).

FIG. 1

This loop is then cut so that there are two pieces of catgut—the upper piece, A₁ and A₂, and the lower piece, B₁ and B₂. The upper piece is not tied, but its two ends are secured with a pair of Spencer Wells forceps.

The lower piece is tied once only and the ends secured. A small nick is then made in the vein wall between the two pieces of catgut and the cannula is inserted. It will then be necessary to tie A₁ and A₂ together to secure the cannula, but this step is not necessary in catheter work.

At the end of the transfusion or research catheterization the loop A₁ and A₂ is untied and the free ends are brought through the upper skin edge. Similarly with B₁ and B₂, the free ends being brought through the lower skin edge (Fig. 2).

A₁ is then tied to B₁ and traction applied to the free ends A₂ and B₂. A few drops of penicillin are applied locally, the cannula withdrawn, and A₂ and B₂ tied together. The wound is then closed, and bleeding from the vein is controlled by direct pressure against the skin. It will be seen that there is no buried catgut, and the loops—A₁ and A₂, B₁ and B₂—come out spontaneously after five to seven days. Few cases of infection occur, and what infection does arise is very mild and is easily treated along usual surgical lines. As a prophylactic measure we recommend the introduction of 200,000 units of penicillin along the catheter as it is withdrawn. The final scar is minute.

FIG. 2

A refinement of the technique which makes this operation simpler, affords better control of the vein, and minimizes the chances of infection is to bring the cut ends of each loop out on the skin before nicking the vein wall.

We have been able to show that the veins thereafter remain patent in 100% of cases not only by inserting a needle but also by cutting down on them again in the course of our research.

Medical Memoranda

A Note on Direct Inguinal Hernia

Although commonly associated with advancing years, the direct variety of inguinal hernia is not infrequently found in younger men who are not necessarily of poor physique, and it is occasionally seen under the age of 20. For some of the older subjects surgical treatment cannot be entertained; but to others, especially those in active occupations, operation would be more acceptable than a truss if the results were less uncertain. Methods of repair are very diverse, and recurrence rates vary widely between figures of 4.4% (McCloskey and Lehman, 1940) and 35% (Page, 1943).

The narrow strip of conjoint tendon or the free margin of the internal oblique muscle which bounds the broad defect cannot be brought down to the inner end of Poupart's ligament. A Bassini repair is therefore unsuitable and carries an average recurrence rate of 17.6% (Mair, 1945). Instead it is necessary to fill in the intervening gap with fascia or other material which will remain in place permanently. As this gap lies directly underneath the external ring and the weak intercolumnar fascia, it appears advisable also to make full use of the external oblique by displacing the exit of the spermatic cord as far outwards as possible. Subcutaneous transplantation of the cord is not harmful (Rose and Carless, 1940), but doubt has been expressed about the value of the external oblique aponeurosis (Gallie and Le Mesurier, 1924). Yet at operation for recurrent hernia the aponeurosis is found to be an intact sheet, tough and fibrous, the sac emerging from an aperture left for the passage of the cord. Overlapping is less important than closure right down to the pubis.

In Service cases particularly the possibility must be kept in mind that operation may be marred by side-effects, especially upon the locomotor system, for which reason the routine use of fascia cut from the thigh is open to question. As an alternative I sought to apply the older method of McArthur (1901), for the deep half of the repair, to a consecutive unselected series of 55 direct herniae in 38 such patients. Most of them were aged 30 to 40, with extremes of 20 and 45. Five herniae were