TECHNICAL NOTE

A MODIFICATION OF THE McKENZIE SILVER CLIP

WILLIAM DUANE, JR., M.D.*

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In 1911 Harvey Cushing introduced the silver clip as a means of hemostasis in neurological surgery. The original clip was made by winding silver wire in a tight coil around an oval or diamond-shaped rod and then cutting off the individual clips with a wire cutter. This made small U-shaped bits of wire which were then held in the jaws of an ordinary clamp for application to the blood vessels.

The author has never used the original Cushing clips, but according to McKenzie the sides of the clips were often uneven in length, the ends rough, and the round wire caused a tendency for the clip to turn in the holder.

McKenzie in 1927 devised the instruments now in use: a punch which cuts out perfectly uniform V-shaped clips from a flat wire, and special clip holders for applying them.

It has been our experience that the V-shaped clips also have a tendency to wobble, and that they are easily dislodged when applying them since only the tips of the open end of the V come in contact with the grooves in the holder. Furthermore, we found that when applying a clip to a large blood vessel occasionally the vessel was squeezed out of the clip or only pinched by the open ends (Fig. 1, a).

To overcome this we had instruments made similar to those of McKenzie, but which punched out U-shaped, flat wire clips instead of the V forms. These were placed in an appropriately U-shaped magazine.

The clip holder is the same as McKenzie’s except that it is made slightly heavier to prevent a tendency of the jaws to spring a little due to the necessity of a little more force needed in flattening out the clip.

In Fig. 1, b it will be seen that the parallel sides of the U-shaped clip give a longer area of firm contact in the grooves of the holder, thus preventing any turning or

* University of Pennsylvania, The School of Medicine, Philadelphia 4, Pennsylvania.
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provocative dislodgment. Furthermore, as the clip is squeezed the arms of the U close, to encircle the vessel before compressive obliteration occurs, thus being more certain of accomplishing the desired effect. A crude example of the grasping properties of the two types of clips is in the approximation of one’s index and middle fingers as compared to that of the thumb and index finger.

In conclusion, a U-shaped silver clip has several advantages over the V form in that the area of contact between the clip and the holder is greater, preventing to a greater degree the turning or dislodgment of the clip. Secondly, this clip when applied encircles the vessel before compression is completed, thus eliminating a certain tendency of large, sclerotic or elastic blood vessels to be forced out of the clip or torn by the tips of its sides.*

REFERENCES


* The instruments may be obtained from George P. Pilling & Son Co., 3451 Walnut Street, Philadelphia 4, Pennsylvania.