THE SINGLE BREAK SILASTIC TEFLOM SHUNT

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The original silastic teflon shunt\(^{(1)}\) has been modified to eliminate the disposable teflon bypass (Figure 1, 2, 3 and 4). The shunt now consists of a long silastic component attached to a vessel tip in either the artery or vein which is joined by a single flanged teflon unit to a standard silastic component attached to a vessel tip on the other cannulated vessel of the shunt. The closure of the shunt is secured with a strip of paper tape across the flanged join of teflon. The shunt is stabilized by a standard stabilizer on the teflon segment and a wider grooved stabilizer which grips a strip of paper tape rolled round silastic tubing of the long silastic component.

In patients with standard silastic teflon shunts the shunt has been modified to a single break unit by using a teflon coupler to join a length of silastic tubing into a standard silastic component already in place. The rest of the shunt is identical to the unit already described, except that a standard stabilizer is used to hold the shunt on both sides. The site of the wide groove stabilizer is taken by the teflon coupler and a standard stabilizer is used on the teflon coupler.

The shunt is opened by cutting the paper tape along the join. Connection to blood lines for haemodialysis is achieved by a pair of couplers, one flanged and one unflanged to fit the flanged and unflanged segments of teflon.

The advantages of this shunt are:

\(^{(1)}\) No need to manufacture, sterilise and replace teflon by-pass units.
\(^{(2)}\) Considerably easier to break and make shunt thus permitting patients with leg cannulas to start, finish and declot their own shunts. In addition this shunt has proven invaluable for home dialysis training where the patient and relative can manage the problems of connection and declotting if required without difficulty.
\(^{(3)}\) Only two open ends instead of four open ends at finish of dialysis.
\(^{(4)}\) Elimination of extension tubes and reduction in overall length of shunt reduces tendency to clotting.

To date our experience with the single break shunt (2 patients with long silastic cannulas; 5 patients with long modified silastic cannulas with teflon bridges) has been 30 patient months with no loss of cannulas or infection. 3 patients have had one or more episodes of clotting. The longest set of cannulas have functioned over five months since modification (ten months since insertion).

Suppliers

Stabilizers and Crimp rings

REFERENCE


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Figure 1. Model of shunt illustrating component units.

Figure 2. Shunt in right forearm with flanged teflon joint untaped. The paper tape roll in which the wide groove stabilizer holds the long silastic tube is seen on the radial site of the shunt.

Figure 3. Model of shunt opened for dialysis and attached to blood lines - illustrating connector units.

Figure 4. Shunt opened in vivo and connected to blood lines (the joins have been left untaped for clarity).