

Technical note

A versatile protective shield for pulsatile jet irrigation

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Technique

We use the MicroAire® pulse lavage set for irrigation of infected spinal wounds and prolonged (> 4 hours) operations. The set consists of a pistol, tubing and their common plastic packaging (Figure 1).

The transparent plastic lid (20 × 23 cm) of the package is kept sterile and a 1.5 cm hole is made in its center with a scalpel. The nozzle of the pistol is inserted through the hole and the plastic lid is kept close to the wound while irrigating. The suction tip is advanced into the wound under the periphery of the lid (Figure 2).

Discussion

Pulsatile jet irrigation has been well established in the surgical management of infected and potentially contaminated wounds, since it significantly reduces the bacterial load (Brown et al. 1978).

Debridement and irrigation of spinal wounds carries an additional risk of splash contamination because of its duration (> 1 hour) and blood loss (> 250 mL) (Panlilio et al. 1991). Microscopic exposure of the conjunctivae to splash injury occurs much more frequently than it is perceived by most surgeons (Marasco and Woods 1998) and carries a substantial risk of viral contamination (Pietrabissa et al. 1997).

The use of eye protection is a *sine qua non* during pulsatile jet irrigation (Marasco and Woods



Figure 1. MicroAire® pulse lavage set: tubing with nozzle, pistol and plastic lid.



Figure 2. Pulse lavage and protective shield in use.

1998), although it has been argued that it compromises visibility (Abouzahr and Wider 1996). On this basis, additional barrier techniques by means of adhesive drapes have been described (Chernofsky et al. 1993, Abouzahr and Wider 1996).

Our technique provides an additional barrier during pulse wound irrigation that is effective, simple and can be used repeatedly in the same procedure. The use of packaging of the lavage set itself adds no extra cost and renders the use of the proprietary shield recommended by the manufacturer questionable. Its visibility is excellent and the surface area covered more than adequate.

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