ANNEX 5

Measurement of intracompartmental pressure in tensely swollen snake-bitten limbs

To confirm a clinical suspicion of intracompartmental syndrome (see **5.8.3**) the pressure inside the particular compartment should be measured directly.

The threshold pressure required to initiate the flow of liquid into the fascial compartment is a measure of the tissue pressure inside that compartment. With full sterile precautions and after infiltrating local anaesthetic, a 21 or 22 gauge cannula, approximately 3-4 cm long, is inserted into the compartment through or around an introducing 20 or 21 gauge needle. The cannula is connected through narrow pressure tubing to a syringe or low speed infusion pump. Through a three-way tap, the system is connected, through a side arm to a blood pressure transducer or saline or mercury manometer (Fig 47). The system is filled with sterile isotonic saline. If a syringe-type infusion pump and arterial blood pressure transducer with monitor is used, the pressure can be measured continuously at a very slow rate of infusion (*eg* 0.7 ml/day). If a saline or mercury manometer is used, a much higher rate of infusion is required to initiate flow into the compartment. These systems are not suitable for continuous intracompartmental pressure monitoring.

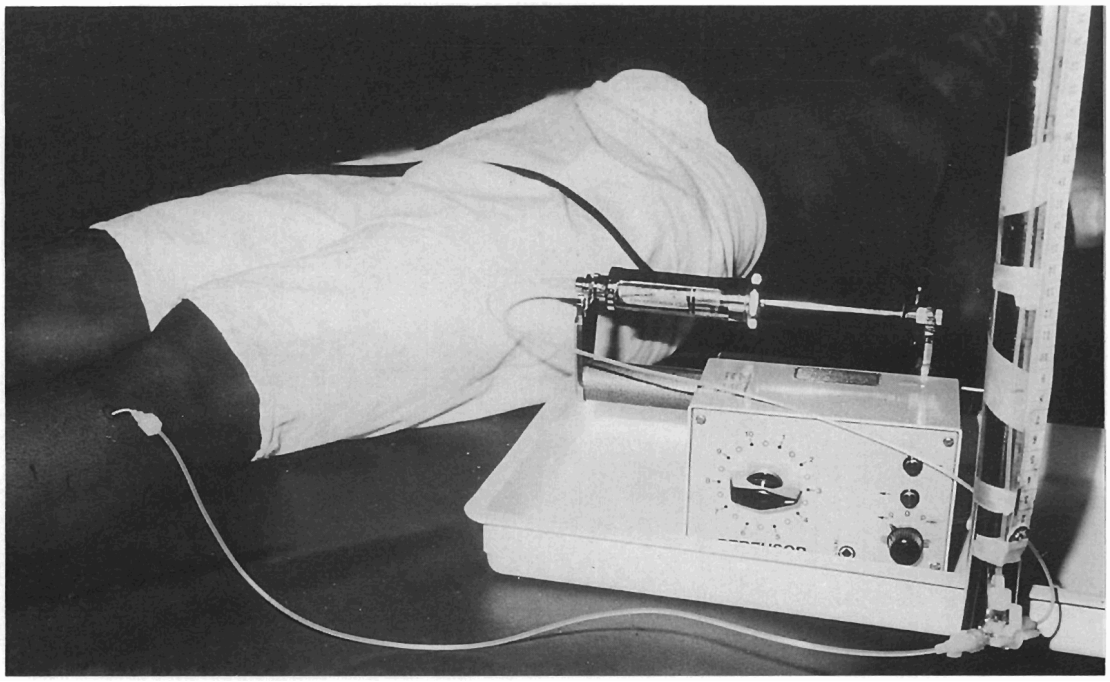

Figure 47 : Infusion pump, saline manometer system in use for measuring the tissue pressure inside the anterior tibial compartment. *(Copyright DA Warrell)*

Alternatively, the simple but expensive Stryker pressure monitor can be used (Fig 48).

Whatever system is employed, the zero point in the pressure measuring device must be aligned to the level at which the cannula enters the fascial compartment.

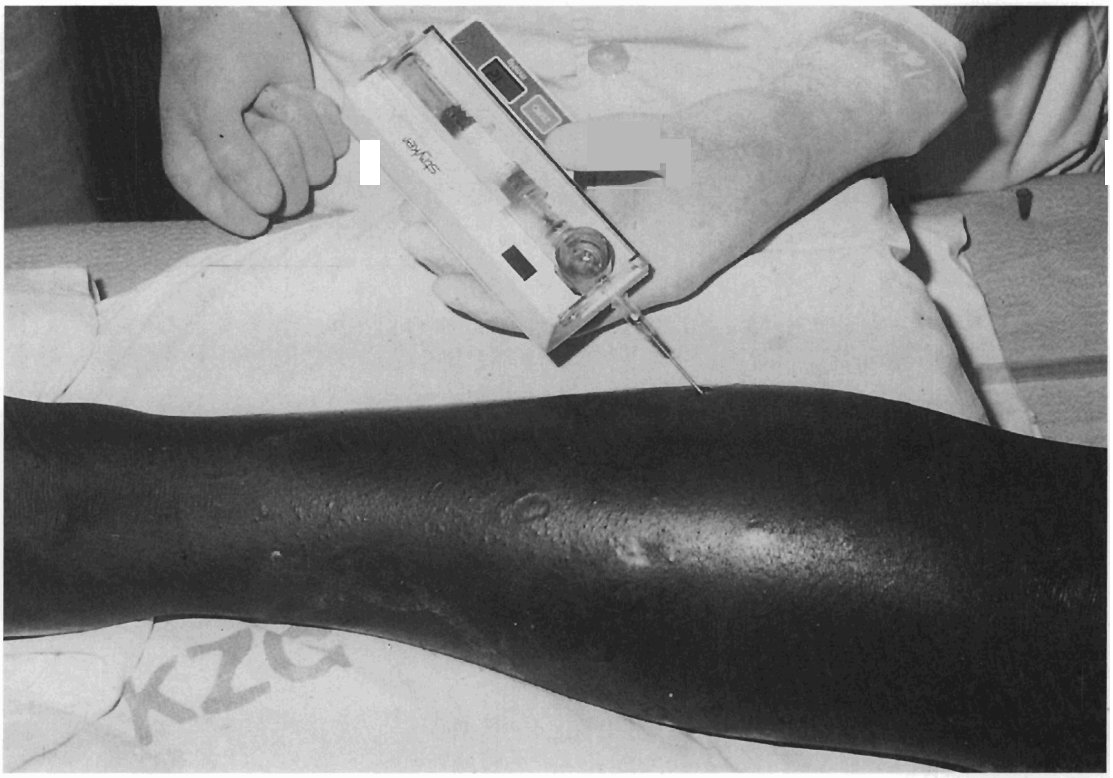

Figure 48 : Stryker pressure monitor in use for measurement of intracompartmental pressure. *(Copyright DA Warrell)*