

An improved, low cost electronic pressure gauge to measure tracheal cuff pressure in intensive care patients and comparison of its performance with an imported pressure gauge

Tracheal cuff pressure should be maintained below the mean mucosal capillary perfusion pressure of 30cm H₂O in order to prevent ischaemic damage. However, pressure gauges to monitor the tracheal cuff pressure are not available locally due to the high cost of imported devices. We have reported previously the design and construction of a low cost, portable, direct reading pressure gauge to monitor the cuff pressure. In this study, the design and construction of the pressure gauge have been further improved, and the new device was clinically tested in intubated patients. The performance of the improved version was compared with a modern, commercially available imported pressure gauge. The locally constructed pressure gauge performed equally well and the pressure readings obtained from the two instruments were comparable.