An audit of Correct cuff selection in Obese Patients Evaluation (COPE)

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Objective: To ensure accurate readings, correctly-sized blood pressure cuffs must be used. We aimed to determine what proportion of obese patients were allocated correctly-sized cuffs in the perioperative period at the Royal Brisbane and Women’s Hospital.

Methods: During July 2020 patients with BMI > 35 kgm^{-2} had their mid arm circumference (MAC) measured (Figure 1). The MAC was used to determine the correct cuff size, based on the manufacturer’s recommendation (Figure 2). Cuff selection was audited at three time points: preoperatively, intraoperatively and postoperatively.

Results: The median (IQR) BMI was 41.6 (8.7) kgm^{-2}. The minimum MAC was 35 cm. The minimum cuff size in all patients should have been a 12L however at 61 time-points (50.8%), a size 11L was allocated. No size 13 cuffs were allocated despite 8 patients meeting the MAC for that size. Correct cuff allocation increased preoperatively to intraoperatively but still remained low throughout (Figure 3).

Conclusion: This audit has demonstrated for patients with BMI > 35 an inappropriately small non-invasive blood pressure cuff is most often allocated in the preoperative period. This has significant risks for clinical practice with many NIBP readings likely overestimating blood pressure.


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