

Preoperative fasting and administration of regular medications in adult patients presenting for elective surgery. Has new evidence changed clinical practice?

The duration of preoperative fasting from solid food and liquids, a time-honoured anaesthetic practice, has been the subject of extensive clinical investigations [1,2], editorial comment [3] and speciality guidelines [4,5] in the past decade. Dr Pearse and colleagues' study of current UK clinical practice relating to the duration of preoperative fasting of adult patients and compliance with ongoing cardiac drug administration is therefore timely [6].

Historically, preoperative fasting has not always been a prerequisite of safe, prudent anaesthetic practice. Lister, in the late 19th century, advised oral fluid intake up to two hours before anaesthesia [7]. Despite a body of recent evidence in support of Lister's conclusions, clinicians have continued to err on the side of caution and practice the maxim that 'longer is better'. Mendelson described the risk of gastric acid aspiration during obstetric anaesthesia with the consequent development of pneumonitis in his landmark 1946 study [8]. The conventional wisdom was that techniques to minimize the volume and increase the pH of the gastric contents would reduce the risk of Mendelson's syndrome. The concept of 'nil by mouth' (or in North America NPO), encompassing both fluids and food after midnight, was regarded as a logical practice to ensure an empty stomach at the time of surgery.

Prolonged preoperative fasting contributes to patient discomforts, including dry mouth and thirst. In addition, the practice may, in some situations, lead to dehydration, hypovolaemia, and nausea and vomiting [9]. If excess gastric acidity was also a consequence, surely the practice should warrant a major review? The most noteworthy data arising from Pearse and colleagues' study involving 153 adult patients were the range of fasting times. For solids, the range was from 4 h and 30 min to 48 h

and for fluids the range was from 4 h 30 min up to 20 h.

Concerns about preoperative fasting may be a significant factor in the omission of usual concurrent drug treatment as highlighted in this study. Approximately 25% of patients undergoing elective surgery take regular concurrent medication [10]. Wyld and Nimmo [11] reported that analgesic and pre-medication subscriptions are routinely given. However, 38 of 95 drug treatments for cardiovascular disease, 34 of 103 for respiratory disease and 10 of 61 for endocrine disorders were omitted.

When clinical studies in adults undertaken at the Foothills Hospital, Calgary, confirmed that an oral intake of 150 mL water [12] and subsequently coffee or fruit juice [13] 2–3 h before scheduled elective surgery had no clinically important effect on residual gastric fluid volume or pH, fasting guidelines for ambulatory patients were amended to prohibit solid food but permit clear fluid intake. The Canadian Anaesthetists' Society subsequently published guidelines stating that fasting for oral fluids for more than 3 h is unnecessary in healthy patients undergoing elective surgery. The American Society of Anesthesiologists Task Force on preoperative guidelines, published in 1999, were unequivocal in their recommendation that it is appropriate to fast for oral fluids for 2 h or more before procedures requiring general/regional anaesthesia or monitored anaesthesia care in adult patients. Clear liquids include, but are not limited to, water, fruit juices, carbonated beverages, clear tea and black coffee.

Clinical investigations and the authority of society practice guidelines has an impact on North American clinical practice because the majority of institutions, both university and private practice, revised their fasting policies in recent times [14]. Why is British

practice so slow to change? Perhaps anaesthetists fear that, if the absolute fasting rule is relaxed, patients will eat and drink at will, with subsequent delay or cancellation of surgical procedures. A concerted effort to inform surgeons, nurses and patients of the rationale behind current fasting guidelines enabling both ambulatory and in-patient to take, if they wish, clear fluids before surgery will enhance patient comfort and, considering the vagaries of operating theatre schedules, will be a safe, cost-effective practice.

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