

volume of reservoir bag to utilise all the supplementary oxygen in millilitres [2].

Laerdal used to make a simple and neat valve arrangement which combined an over-pressure and air-intake valve (Part no. 531902) as illustrated in Fig. 1. This mated readily with a bag oxygen reservoir (Part no. 531901).

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References

- 1 Eales M, Rowe P, Tully R. Improving the efficiency of the drawover anaesthetic breathing system. *Anaesthesia* 2007; **62**: 1171–4.
- 2 Yoganathan S, Johnston IG, Houghton IT. Reservoir volume in a drawover system. *Anaesthesia* 1987; **42**: 1137.

Use of propofol in patients with food allergies

We read with interest the recent correspondence highlighting the inclusion of peanut allergy in the list of contra-indications in the product literature for propofol [1]. The potential for peanut-allergic patients to be sensitive to propofol is due to the fact that soya oil is one of the excipients of propofol, and that cross-reactivity occurs in legume allergy, for example between soya and peanut. However, it is the protein component that is responsible for allergic reactions in these patients, and as the soya oil present in propofol is refined, it is unlikely to contain significant quantities of allergenic particles. In the food industry soya-containing mixed vegetable oil may be sold for consumption without listing soya as an ingredient [2]. The reason for this is that the dose of protein contained in refined soya oil is too small to provoke a reaction when ingested. Although the minimum dose of protein required to trigger a reaction after oral ingestion has been identified, the same is not true of parenteral administration [3].

There is no mention of egg allergy in the product literature for propofol. The

main triggers for egg anaphylaxis are three proteins found in egg white: ovalbumin, ovomucoid and conalbumin. Lecithin, a purified egg phosphatide present in propofol, is not thought to be problematic for patients who are allergic to eggs. Allergic reactions to propofol have been shown to be triggered by the iso-propyl or phenol groups rather than the lipid vehicle [4, 5].

One case report describes an anaphylactic reaction following administration of propofol to a child with multiple food allergies including egg and peanut. However, other drugs including rocuronium had also been administered. Skin prick testing was not performed and the specific causative agent remains unclear [6]. We have spoken to the Medical Information Department at AstraZeneca who informed us that the final decision to use Diprivan in patients with egg allergy remains at the discretion of the individual anaesthetist concerned (personal communication, D. Gupta, AstraZeneca Ltd).

In summary, the negligible protein content of refined soya oil in propofol suggests the drug is unlikely to trigger a reaction in patients with peanut allergy. The fact that the product literature cites this as a contra-indication must, however, be given careful consideration prior to administration. If the clinician decides propofol is unsuitable, inhalational induction of anaesthesia may provide a useful alternative.

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References

- 1 Gangineni K, Scase AE, Fearn J. Propofol and peanut allergy. *Anaesthesia* 2007; **62**: 1191.
- 2 Eat well, be well – Soya allergy. <http://www.food.gov.uk> (accessed 30 October 2007).
- 3 European Medicines Agency. *Public Statement on the Allergenic Potency of Herbal Medicinal Products Containing Soya or Peanut Protein*. London: European Medicines Agency, 2006. <http://www.emea.europa.eu/pdfs/human/hmpc/13813905en.pdf> (accessed 30 October 2007).

- 4 De Leon-Casasola OA, Weiss A, Lema MJ. Anaphylaxis due to propofol. *Anesthesiology* 1992; **77**: 384–6.
- 5 Laxenaire MC, Mata-Bermejo E, Moneret-Vautrin DA, et al. Life threatening anaphylactoid reactions to propofol (Diprivan). *Anesthesiology* 1992; **77**: 275–80.
- 6 Hofer KN, McCarthy MW, Buck ML, et al. Possible anaphylaxis after propofol in a child with food allergy. *Annals of Pharmacotherapy* 2003; **37**: 398–401.

Hypertension and general anaesthesia: guidance for general practitioners and results of a questionnaire

Hypertension in the peri-operative period is associated with peri-operative ischaemic events, arrhythmias and increased cardiovascular lability. A meta-analysis of 30 observational studies demonstrated an odds ratio for the association between hypertensive disease and perioperative cardiac outcomes of 1.35 (1.17–1.56) [1]. Consequently, hypertensive patients may be cancelled on the day of surgery, causing distress and compromising efficiency.

There is potential to reduce this problem by careful determination of a hypertensive patient's suitability for general anaesthesia. Patients with dangerously elevated arterial blood pressure should ideally not be referred from Primary Care, or detected at pre-assessment clinics and referred back to their general practitioner. Conversely, general practitioners or pre-assessment staff may feel that patients with moderate hypertension are yet to be adequately controlled and require further optimisation prior to anaesthesia and surgery, when evidence is lacking to support this practice.

We attempt to provide a template, based on current anaesthetic teaching, which could reduce this problem. We envisage that this information would be useful to general practitioners and pre-assessment clinics.

Evidence for adverse outcomes associated with hypertension is sometimes