Of course, in many cases, neither the medical/anaesthetic history nor the preoperative examinations raise suspicions for an arrhythmogenic syndrome. A characteristic case is the one reported by Hirata and colleagues,\textsuperscript{3} regarding a surgical patient with undiagnosed sick sinus syndrome and normal preoperative cardiac examinations, including a Holter electrocardiogram. The syndrome was unveiled after induction of general anaesthesia and was confirmed a few months after operation by a diagnostic new Holter electrocardiogram.

In patients with unexplained, suspicious intraoperative arrhythmias, even if they resolved without further complications, postoperative 24 h haemodynamic monitoring and further cardiological investigation, although associated with increased costs, would probably be useful in revealing an arrhythmogenic syndrome. If a sudden perioperative death occurs, postmortem investigation and—if indicated—familial genetic screening should be performed. In these cases, the anaesthesiologists may also play a significant role in announcing the death, explaining, informing, and even guiding the family members towards investigations which may be lifesaving for them, if a hereditary syndrome is diagnosed and thus treated early.

**Declaration of interest**

None declared.

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doi:10.1093/bja/aes328

**FIO\textsubscript{2} and studies on oxygenation during one-lung ventilation**

Editor—We read with interest the study by Roze and colleagues\textsuperscript{1} comparing the effects of two ventilation strategies on oxygenation during one-lung ventilation (OLV).

Although not explicitly stated, the authors seem to have used variable levels of FIO\textsubscript{2} across subjects during OLV. However, to study the effects of changes in ventilation strategy (or any other intervention) on oxygenation during OLV, it may not be advisable to vary FIO\textsubscript{2} across subjects and present data as PAO\textsubscript{2}/FIO\textsubscript{2}. It rather may be helpful to use a constant and high FIO\textsubscript{2} in all patients and present data as PAO\textsubscript{2}.

Why is it problematic to vary FIO\textsubscript{2} and present data as PAO\textsubscript{2}/FIO\textsubscript{2}? This is because the relationship between PAO\textsubscript{2}/FIO\textsubscript{2} and FIO\textsubscript{2} is not linear and may vary considerably with FIO\textsubscript{2}.\textsuperscript{2,3} The variation would be most apparent in patients with large shunts and ventilation/perfusion abnormalities, pathologies prevalent in the thoracic surgical patient population. A low FIO\textsubscript{2} in patients with low ventilation/perfusion ratio may, for example, increase venous admixture. Thus, using variable levels of FIO\textsubscript{2} in a patient population with respiratory disease and different shunt fractions may generate excess variation in PAO\textsubscript{2}/FIO\textsubscript{2} values unrelated to the intervention. The cross-over design in this study may have averted gross variation with respect to the intervention but does not rule out excess interindividual variation.

Why is it better to use not only a constant but also a high FIO\textsubscript{2} (>0.8) and present data as PAO\textsubscript{2}? This is better because while using high FIO\textsubscript{2} even small changes (increase or decrease) in shunt fraction, induced, for example, through the intervention under study, would predictably lead to large changes in PAO\textsubscript{2}. While using low FIO\textsubscript{2}, similar changes in shunt fraction may lead to comparatively smaller changes in PAO\textsubscript{2} and thus less chances of obtaining statistically significant results. This can be readily appreciated by studying the iso-shunt lines, the graphic interrelationship between PAO\textsubscript{2}, shunt, and FIO\textsubscript{2}.\textsuperscript{4}

During clinical OLV, however, we too advocate using low FIO\textsubscript{2} compatible with sufficient oxygenation.

**Declaration of interest**

None declared.

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2. Whiteley JP, Gavaghan DJ, Hahn CE. Variation of venous admixture, SF6 shunt, PAO\textsubscript{2} and the PAO\textsubscript{2}/FIO\textsubscript{2} ratio with FIO\textsubscript{2}. Br J Anaesth 2002; 88: 771–8

doi:10.1093/bja/aes329

**Reply from the authors**

Editor—We thank Karzai and Klein for their interest in our article.\textsuperscript{1} We totally agree with them regarding the interpretation of the PAO\textsubscript{2}/FIO\textsubscript{2} ratio. It is important to clarify that this