Arrhythmogenic right ventricular dysplasia cardiomyopathy and pancuronium

Editor—We read with interest the review on perioperative management of hereditary arrhythmogenic syndromes. It states that pancuronium is contraindicated in patients with arrhythmogenic right ventricular dysplasia cardiomyopathy (ARVD). This recommendation appears to be based on 13 reported cases, which are cited in the review. Interestingly, pancuronium was used in only one of these cases, and in this case, the outcome was good. In the other reported cases, in which vecuronium, succinylcholine, or atracurium was used, death resulted. A case in which cisatracurium was used had a good outcome. Based on these case reports, it seems reasonable to assume that as pancuronium and cisatracurium were used in successful cases, they are safe, whereas vecuronium, succinylcholine, and atracurium, which were associated with death, should in fact be contraindicated. In our institution, in the last 5 yr, at least five patients aged 26–61 with ARVD as a main, histologically indicated. In our review, we consider that ‘pancuronium is best avoided because of its cardiovascular profile. Avoidance of this particular agent, this suggestion is mostly based on the drug’s well-known cardiovascular profile.

The authors note that in the cases reported in our review, pancuronium was used only in one case. We consider that this is clearly indicated in the manuscript and in Table 4. According to the report, even though the patient survived surgery, she developed severe ventricular and supraventricular arrhythmias perioperatively. As several drugs were used concomitantly, a single triggering factor was difficult to identify. Regarding the three cases reported where vecuronium, succinylcholine, and atracurium were used, the outcome was fatal. However, two of the patients died several hours after operation, while surgical factors along with fluid loading were implicated in the third death. There was no association between these deaths and the neuromuscular blockers used. In these cases, the outcome was not indicative of the drugs’ safety.

The authors provide in their letter unpublished data from their institution regarding the safe use of pancuronium in patients with ARVD undergoing heart transplantation. Considering the limited published data, the information given by the authors is of great interest. In our review, we considered data from seven published reports, as there are no randomized prospective studies. These reports described the anaesthetic management of patients with ARVD who underwent non-cardiac surgery. Apart from the fact that data are practice, pancuronium can safely be used in such cases. We would like to suggest that the authors reconsider their recommendations for the use of neuromuscular blocking agent in patients with ARVD.

Declaration of interest
None declared.

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Reply from the authors
Editor—We thank Drs Valchanov and Ghosh for their interest in our review1 and for sharing their experience in the anaesthetic management of patients with arrhythmogenic right ventricular dysplasia cardiomyopathy (ARVD). In our review, we suggest that ‘pancuronium is best avoided because of possible arrhythmogenicity; since published data are insufficient to support specific recommendations on the use or avoidance of this particular agent, this suggestion is mostly based on the drug’s well-known cardiovascular profile.

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