Paradoxical Orthodeoxia in a Patient with a Large Aortic Aneurysm

Dear Editor,

Double Negatives and Being Not Unambiguous

We refer to the case report by Soon et al titled *Paradoxical Orthodeoxia in a Patient with a Large Aortic Aneurysm* in Ann Acad Med Singapore 2007;36:203-5. The authors report a very interesting case. The elderly man with an aortic aneurysm displayed shunting through a patent foramen ovale in the supine position. The authors cited previous reports of orthodeoxia occurring in association with aortic aneurysms, and emphasise that in their case, instead of orthodeoxia, they demonstrated supine hypoxia. However, we wonder if the label "paradoxical orthodeoxia" coined by the authors would be confusing. Firstly, because it appears ambiguous and, secondly, because it is used to describe what is actually a usual pattern of postural hypoxia. Our comments, of course, do not detract from the important and unique findings in this case.

In normal elderly people, PaO_2 falls in the supine posture because of the physiological fall in resting lung volume. This phenomenon is more pronounced when there is underlying lung disease. Thus, patients who are breathless and hypoxic usually need to be propped up in bed. In contrast, hypoxia occurs paradoxically upon assuming the upright position in a few rare situations such as pulmonary a-v fistula. This is termed orthodeoxia (and platypnoea when there is accompanying dyspnoea).

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The Authors Reply: Thank you for your comments. Specifically orthodeoxia has been described in association with aneurysmal aorta. The case report illustrates an atypical presentation of hypoxia due to similar intra-cardiac shunting but in the supine position in an elderly patient with an aortic aneurysm, in the absence of significant pulmonary disease and pulmonary hypertension. The patient was asymptomatic, and the investigations were triggered by observation of low saturation on pulse oxymetry when supine. We chose the term "paradoxical orthodeoxia" to not only lead the reader to the well recognised phenomenon of orthodeoxia, but also to emphasise that the changes seen in the report were unique and are beyond what one would normally expect in physiological postural hypoxia. More specifically, this shows that intracardiac shunts in aortic aneuryms can also occur in the supine position.

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