Chimney, periscope, or snorkel technique to relieve dysphagia

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Complete vascular rings such as the right-sided aortic arch with aberrant left subclavian artery are rarely discovered during adulthood. The treatment of this lesion, if the presenting problem is that of compression, classically involves division of the left-sided ligamentum arteriosum via a left thoracotomy. Aberrant left subclavian artery can also present with a diagnosis of a large Kommerell diverticulum, which in at least 1 prior report is frequently associated with cystic medial necrosis.¹

Hai and colleagues² describe a novel approach in the treatment of a symptomatic Kommerell diverticulum: Thoracic endovascular aortic repair. In this case, thoracic endovascular aortic repair required compromise and modification of the typical approach. Difficulty in using an endovascular approach for treating Kommerell diverticulum revolves around 2 issues. The first is the observation that the arch configuration is typically Gothic in form, predisposing the stent graft to deploy in a noncoaxial alignment in the proximal landing zone. This results in a high frequency of so-called bird beak stent graft deployments where the leading edge of the stent graft fails to conform to the lesser curvature of the native aorta. The second is the often-shortened length of the proximal landing zone due to the presence of critical arch vessels. Both of these limitations suggest that use of endovascular methods can potentially be associated with diminished long-term efficacy, although this was not found in a recent publication from our group.³

The authors used a novel strategy to overcome these limitations—the so-called chimney technique. This modification employs parallel stent graft deployment into a branch vessel to allow placement of the thoracic endograft into a more proximal location, extending its proximal landing zone while maintaining branch vessel perfusion. Although the benefits of this approach include complete endovascular treatment, its limitations involve the potential for gutter endoleaks and incomplete exclusion of the pathology. Although this limitation has obvious consequences when treating aneurysms (ie, adverse influence on life expectancy), in this particular case, an endoleak could keep the

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Central Message

Endovascular therapy to treat Kommerell diverticulum is being used with increasing frequency. This editorial reviews a case report describing a novel variation of endovascular repair.

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Kommerell diverticulum pressurized and result in persistent dysphagia. This effect would likely be more pronounced in the setting of a complete vascular ring. Indeed, the most surprising result of this case report revolves around the relief of dysphagia lusoria without division of the ring itself. The presence of the thrombosed diverticulum in this fixed space did not result in persistent dysphagia. Clearly, this successful result occurred because the pressure within the Kommerell diverticulum sac was reduced and perhaps shrank just enough to permit passage of food. As other reports have suggested, perhaps the chimney, periscope, or snorkel technique will prevail in the treatment of dysphagia lusoria for any pathologic variant.³ We anxiously await the potential for use of branched devices for this pathology.

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