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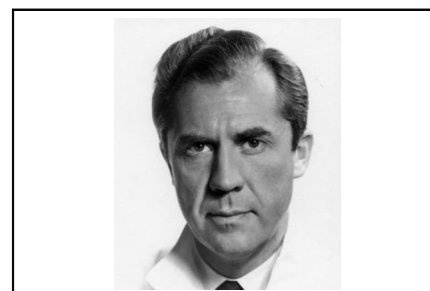
## Commentary: The genius of Ake Senning

Charles B. Huddleston, MD

In 1959, Ake Senning reported on the remarkable correction of transposition of the great arteries (TGA) using a so-called atrial inversion technique.<sup>1</sup> It is perhaps the most difficult operation to describe but not particularly difficult to perform. This innovative operation was a game-changing development in the treatment of congenital heart disease and likely served as a catalyst for further innovations that followed. Although no longer the treatment of choice for TGA, the principles of this operation are occasionally used, often in the setting of very complex congenital lesions in which separation of the pulmonary and systemic circulation is very challenging.

The article in this issue of the *JTCVS Techniques* describes 4 patients with TGA and total anomalous pulmonary venous return who presented very late for treatment; one was 22 years of age.<sup>2</sup> The authors describe a clever way to deal with this problem in 3 of the patients (the fourth also had a ventricular septal defect and underwent arterial switch/ventricular septal defect closure and repair of total anomalous pulmonary venous return) using a modification of the pioneering technique described by Senning. These 3 patients survived and did well, at least in the short term.

Case reports such as this serve a couple of purposes. When successful, they provide information on an extremely rare congenital cardiac lesion and how one center approached this unusual lesion, should the opportunity arise in which this rare condition is seen again by others. Do I think that I will ever see a patient with TGA and total anomalous pulmonary venous return presenting at greater 1 year



Ake Senning

### CENTRAL MESSAGE

Repair of rare, complex congenital cardiac lesions may require the thoughtful modifications of unusual techniques for success.

of age? No. I have never heard of such a case in the 30 years I have been a practicing congenital heart surgeon before reading this article. The other important point of case reports in congenital heart surgery is that they demonstrate the ongoing need to be innovative, to think “outside the box” (a phrase I dislike), and to continue to strive to figure out how to care for children with very complicated problems. This may occasionally require digging out procedures long since buried by newer techniques. This article by Mishra and colleagues does just that.

### References

1. Senning A. Surgical correction of transposition of the great vessels. *Surgery*. 1959; 45:966-80.
2. Mishra A, Garg P, Agrawal V, Rana Y. Transposition of great arteries with total anomalous pulmonary venous connection: a modified Senning procedure for late presentation. *J Thorac Cardiovasc Surg Tech*. 2020;4:223-6.

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