

## Long-Term Outcome after Senning Operation for Transposition of the Great Arteries

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### Summary

*Background:* The Senning operation for transposition of the great arteries (TGA) was first introduced by Senning in 1959 and was revived by Quaegebeur *et al.* in the late 1970s, thus becoming the intervention of choice for the correction of TGA in many centers.

*Hypothesis:* The purpose of this study was to evaluate the long-term follow-up of a group of patients undergoing surgery with the Senning procedure for TGA.

*Methods:* From November 1978 to November 1987, 73 consecutive patients underwent the Senning operation. The 70 survivors had an average follow-up of 19 years (16–25 years).

*Results:* (1) Cardiac rhythm: with time there was a progressive decrease in stable sinus rhythm (60% after 20 years) and a progressive increase of supraventricular tachyarrhythmias requiring therapy (10% after 20 years). (2) Right ventricular function: 20% of the patients had reduced ejection fraction. (3) Late mortality: in the last 12 years of follow-up years there were two sudden deaths (2.8%). (4) Functional status: 80% of patients were in NYHA class I, 17% in class II, and 3% in class III.

*Conclusions:* Our results confirm that the patients who undergo the Senning procedure have a progressive loss of sinus rhythm, an increase in active arrhythmias, and other important adverse outcomes such as late sudden death and a decrease in right ventricular function; however, most patients (93% in our series) are alive and in good functional status.

**Key words:** transposition, Senning, arrhythmias, right ventricle

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Received: October 20, 2003

Accepted with revision: August 24, 2004