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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