

Long-term follow-up of patients with surgically corrected congenital heart disease and implantable cardioverter-defibrillator

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Introduction

Knowledge and experience about implanted cardioverter-defibrillators (ICD) use in adults with congenital heart disease (CHD) and structural defects surgically treated is very limited.

In fact, there is lack of data about the long-term outcomes of CHD patients (P) submitted to ICD implantation.

Aims

We aimed to evaluate the clinical evolution and ICD-related complications in adults with CHD and an ICD.

Methods

CHD corrected surgically during childhood or adolescence

ICD implantation due to spontaneous ventricular tachyarrhythmias (VT/VF).

Mean follow-up of 45 ± 29 months

Results

- 23 underwent an ICD implantation
- 2% of all ICD population followed for > 2 years in our center

Congenital Heart Defect	N
Tetralogy of Fallot	12
Atrial septal defect	6
Transposition of the great arteries	1
Ebstein disease	1
Subaortic stenosis	1
Patent arterial duct	2

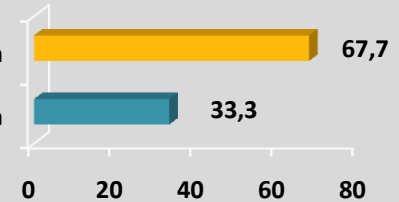
Type of device	N
Single chamber	15
Double chamber	4
CRTD	1
Subcutaneous ICD	3

Clinical features	N
Age (years)	36.7 ± 16
Males (n)	18
Baseline left ventricle ejection fraction (%)	45 ± 13

Index Arrhythmia	%
Monomorphic ventricular tachycardia	47.8
Ventricular fibrillation	13

Secondary Prevention

Primary Prevention



- There were no complications related with ICD implantation.
- In 1P, the polarity of the shock was reversed to obtain a safe margin during the DFT test.

Follow-up	N (%)
Appropriate therapy	11 (47.8)
ATP	7 (30.4)
Shocks	8 (34.8)
Transplant	1 (4.35)
Generator replacement	7 (30.4)
Mortality	4 (17.4)
Cardiac	1 (4.35)
Non cardiac	3 (13.4)

Conclusion

P with CHD represent a very small proportion of all ICD population, with secondary prevention being the indication for this therapy.

However, despite a high rate of effective appropriate interventions, during very long-term follow-up the mortality rate is still high.