

# EFFECTIVENESS AND SAFETY OF THE LEFT VENTRICULAR ASSIST DEVICE (LVAD) AS DESTINATION THERAPY IN PAEDIATRIC PATIENTS

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**Introduction:** Heart failure (HF) is a rare condition in the paediatric population. It is mainly due to structural cardiac causes (congenital cardiopathies, CC) or non-structural (myocardiopathies or myocardial dysfunction associated with surgery) or non-cardiac causes. It is estimated that the main cause of HF is CC (52%), followed by primary and secondary cardiomyopathies (18-19%). Both the underlying causes of HF and the symptoms associated with it differ according to age. The incidence of HF in children and adolescents (< 18 years) ranges from 0.87 to 7.4 per 100 000. According to data from the National Institute of Statistics (INE), the mortality rate associated with HF during 2017 was 0.858 deaths per 100 000 inhabitants in the paediatric population (< 19 years). The highest rate was observed in children under 1 year of age (0.509 deaths per 100 000) and no data was recorded in the 5-9 year age range. Medical treatment of HF in children focuses on correction of the underlying cause if it is reversible, such as in sepsis or electrolyte imbalance; or on control of the symptoms and progression of the disease when the failure is due to CC or myocardiopathy. This includes the use of various general measures, pharmacological treatment, corrective surgical interventions in the first instance, and implantation of short or long term ventricular assist devices, or heart transplant when the previous therapeutic options are ineffective. In addition, there are cases in which the use of long-term support would be indicated due to the fact that improvement is not achieved with short-term support or that the heart transplant would be limited by various serious irreversible clinical situations. In these latter cases, the use of long-term support would be considered as a target therapy.

**Aims:** The main aims of this report are to assess the safety in terms of adverse events and effectiveness in terms of survival in paediatric population of VADs as target therapy compared to drug treatment or other ventricular assist devices. As secondary objectives it has been considered relevant to estimate the economic impact associated with the use of VADs as target therapy in paediatric age and to assess the organisational, social, ethical or legal aspects derived from the use of VADs as target therapy in this population group.

**Method, Results, discussion and conclusions:** See the [complete english summary](#)

## DOCUMENTOS RELACIONADOS

Summary pdf

Spanish web page