

Short Term Outcomes of Minimally Invasive Approach For Repair of Congenital Heart Defects

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Introduction

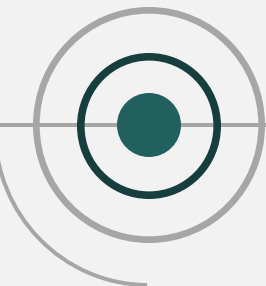
Median sternotomy is the most common surgical approach used in Cardiac Surgery procedures in general. It provides the best surgical exposure; however, it has always been associated with concern of emotional and psychological distress and cosmetic unsatisfaction. Recently, there is a trend toward performing less invasive surgical approach for management of congenital heart disease

To assess the short-term outcomes of three different minimally invasive surgical approaches for the management of congenital heart defects in the pediatric population

Methods

This is a retrospective cohort study involving 22 pediatric patients who underwent minimally invasive surgical repair of congenital heart defects. The approaches included vertical right axillary thoracotomy, upper mini-sternotomy ,and lower mini-sternotomy

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Results

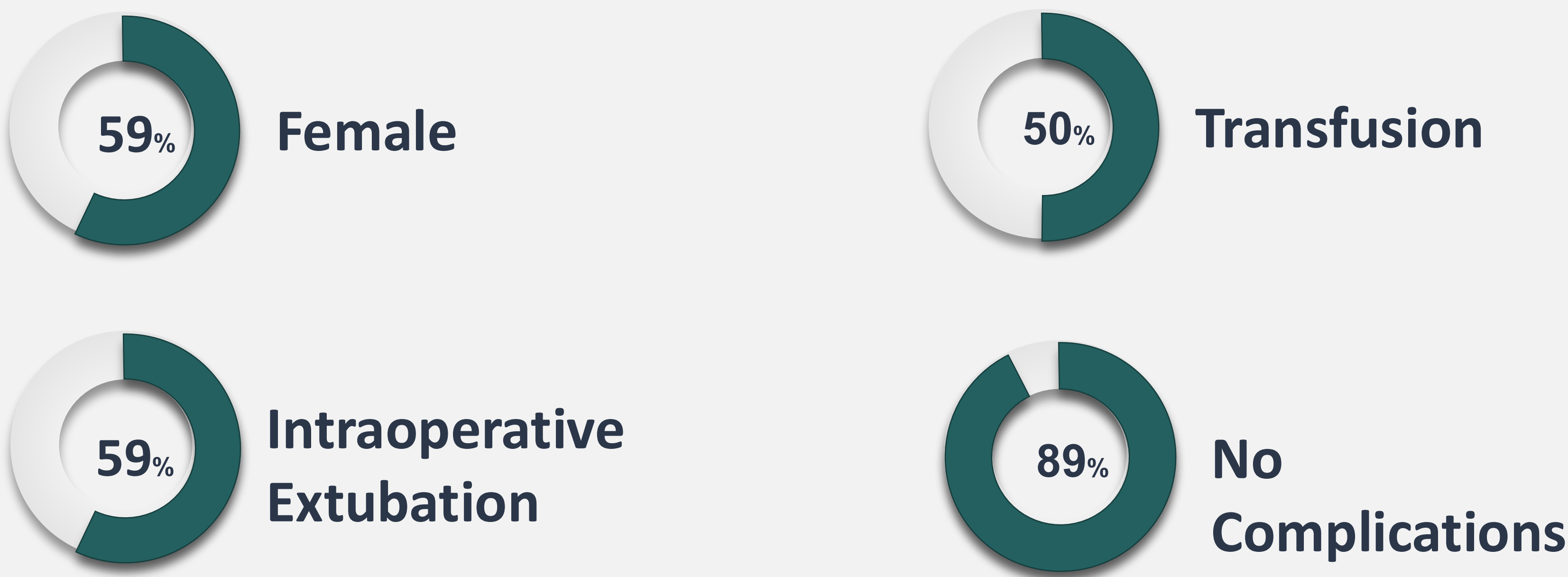


Figure1 : Demographic Characteristics of categorical data

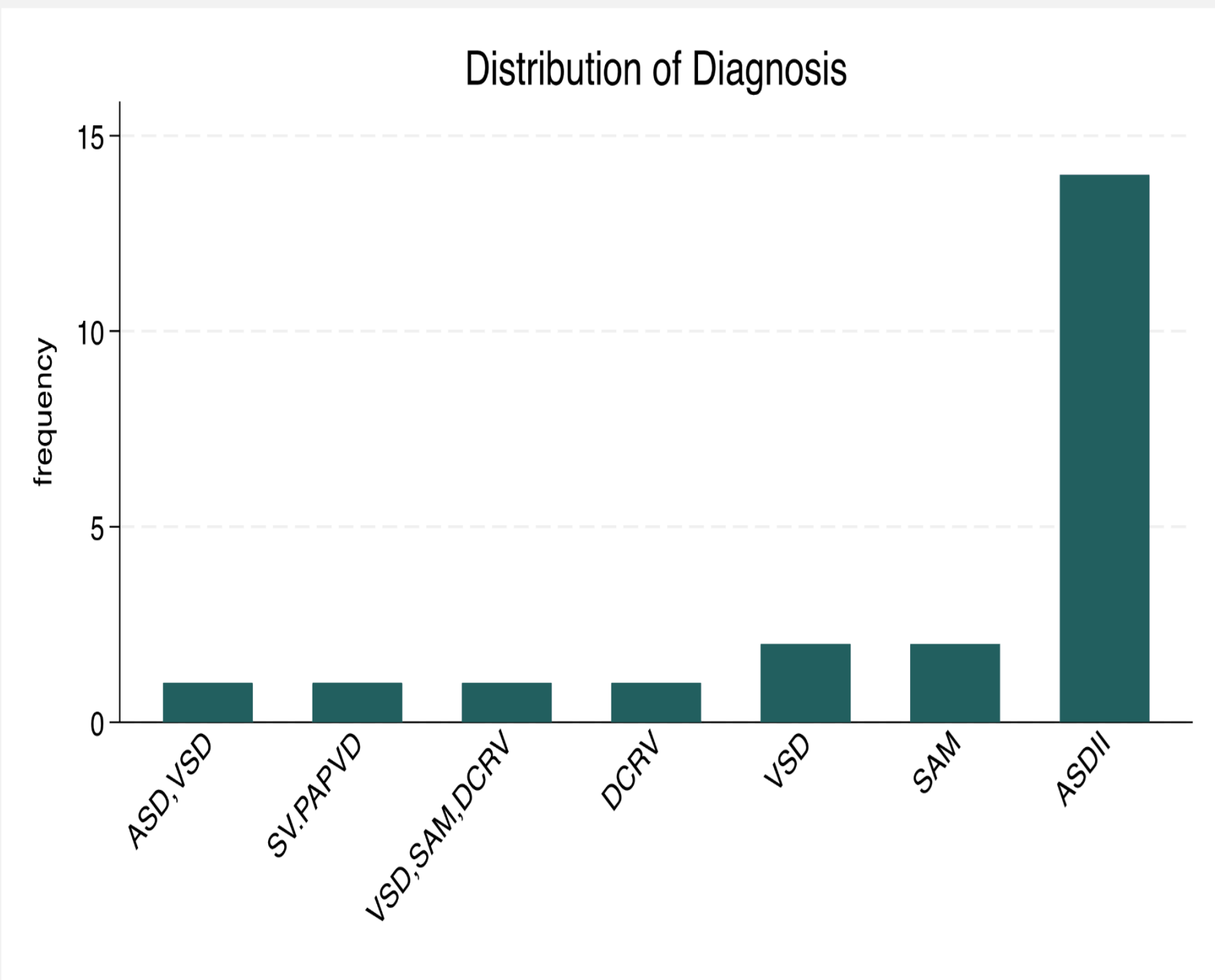


Figure2 : Demographic Characteristics of Diagnosis

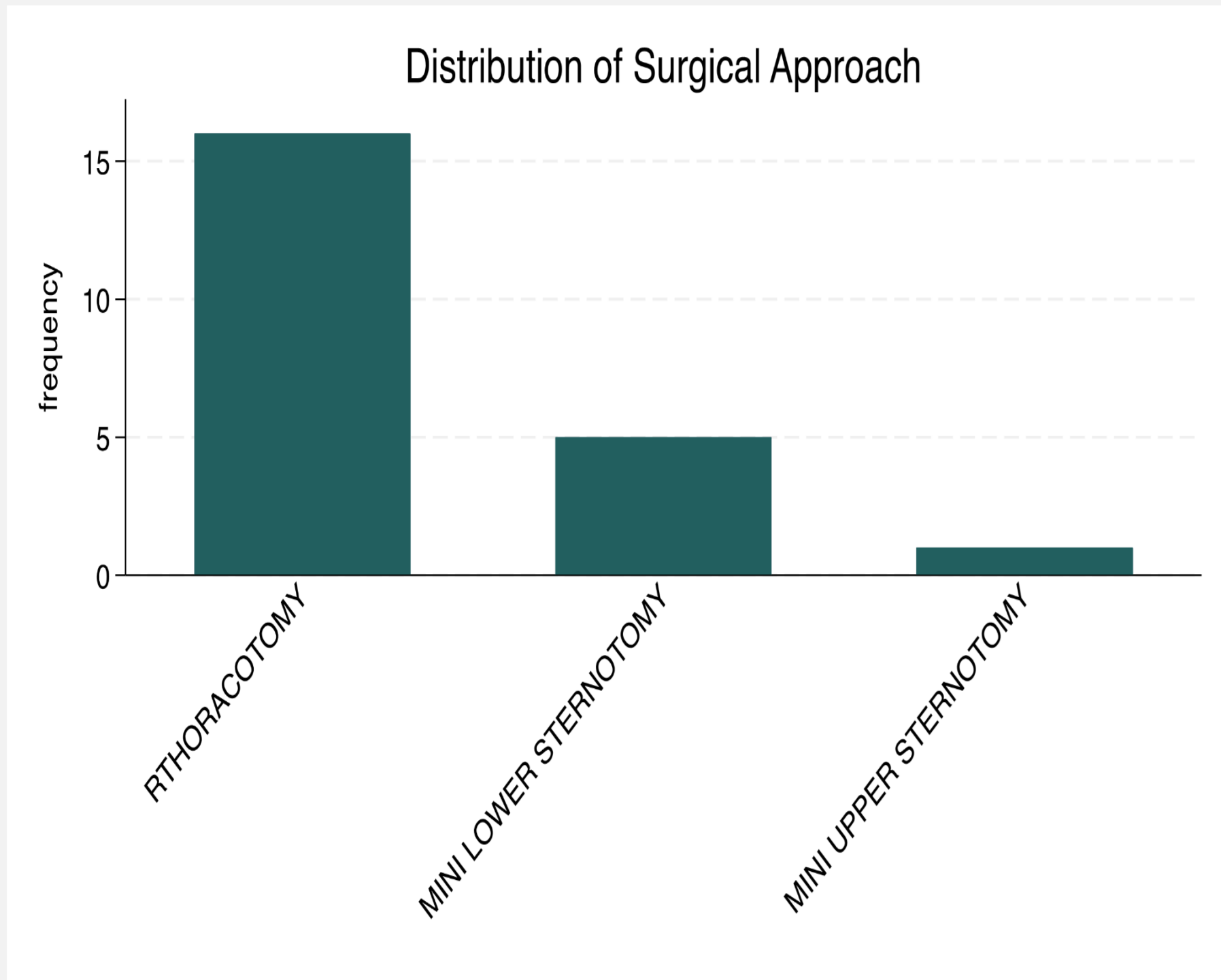


Figure3 : Demographic Characteristics of Surgical Approach

Table 2: Demographic Characteristics of quantitative data

Demographic Characteristics	Mean
Chest Tube Removal (Days)	2.18
ICU Stay Length (Days)	2.64
CPB Time	89.0
Length of Hospital Stay	6.68
Cross Clamp Time	62.09
OR Time (minutes)	217.82
Age in Month	37.82
Weight Kg	14.42

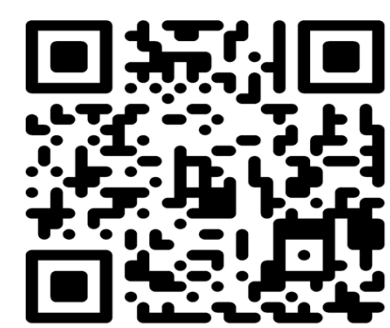
Discussion

Minimally invasive congenital cardiac surgery is gaining momentum as an alternative to median sternotomy. Techniques like VRAT, mini upper, and lower sternotomy have shown safe and effective outcomes in pediatric patients. In our experience, VRAT was the most frequently used approach, reflecting its clinical feasibility, safety, and growing acceptance.

Conclusion

VRAT is a safe, effective, and cosmetically superior alternative for the repair of select congenital heart defects. With increasing experience and appropriate patient selection, this technique has the potential to become a preferred approach in modern pediatric cardiac surgery

References



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