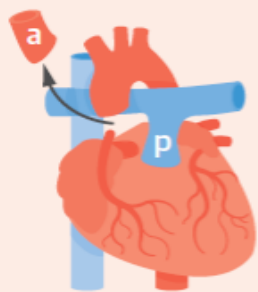
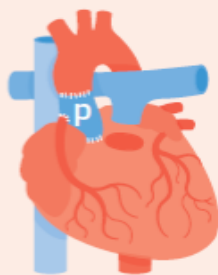


CENTRAL ILLUSTRATION Algorithm for Patient Selection for the Ross Procedure

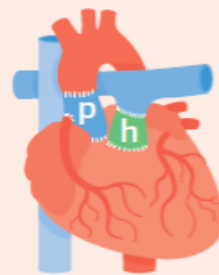
A THE ROSS PROCEDURE



The diseased aortic valve is removed



The pulmonic valve replaces the aortic valve



A homograft replaces the pulmonic valve

Advantages

- ✓ Excellent long-term survival
- ✓ Excellent quality of life
- ✓ Avoidance of anticoagulation
- ✓ Superior hemodynamics
- ✓ Low rates of valve-related complications

Potential Pitfalls

- ⚠ Technical complexity
- ⚠ Potential long-term failure of two valves
- ⚠ Complexity of reoperations

B Patient Treatment Algorithm



High levels of physical activity and women contemplating pregnancy

Young/middle-aged adults with unreparable aortic valve disease

Patients without: Familial aortopathy; connective tissue disorder; autoimmune disorder; limited life expectancy ≤ 15 years

Ideal anatomic substrate

Aortic stenosis

Small or normal-sized aortic annulus

Ross procedure (any technique)

Suboptimal anatomic substrate

Aortic insufficiency or mixed lesion with predominant aortic insufficiency

Dilated annulus (≥ 27 mm)

Aortic/pulmonary size (mismatch > 2 mm)

Modified Ross procedure (autograft reinforcement)

Tight postoperative blood pressure control (for 6-12 months)

Mazine, A. et al. *J Am Coll Cardiol.* 2018;72(22):2761-77.

(A) Advantages and pitfalls of the Ross procedure; (B) indications and contraindications for the Ross procedure. This proposed algorithm remains to be further validated and supported by practice guidelines. a = aortic; p = pulmonic; h = homograft.