



Description: Localized narrowing near the insertion of the ductus arteriosus, which results in increased pressure proximal to the defect (head and upper extremities) and decreased pressure distal to the obstruction (body and lower extremities).

Pathophysiology: The effect of a narrowing within the aorta is increased pressure proximal to the defect (upper extremities) and decreased pressure distal to it (lower extremities).

Clinical manifestations: The patient may have high BP and bounding pulses in the arms, weak or absent femoral pulses, and cool lower extremities with lower BP. There are signs of HF in infants. In infants with critical coarctation, the hemodynamic condition may deteriorate rapidly with severe acidosis and hypotension. Mechanical ventilation and inotropic support are often necessary before surgery. Older children may experience dizziness, headaches, fainting, and epistaxis resulting from hypertension. Patients are at risk for hypertension, ruptured aorta, aortic aneurysm, and stroke.

Surgical treatment: Surgical repair is the treatment of choice for infants younger than 6 months old and for patients with long-segment stenosis or complex anatomy; it may be performed for all patients with coarctation. Repair is by resection of the coarcted portion with an end-to-end anastomosis of the aorta or enlargement of the constricted section using a graft of prosthetic