

# Editorial Note on General Features, Clinical Assessment, Diagnosis and Treatment of Atrial Septal Defect

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## Editorial

Atrial Septal Defect (ASD) is a congenital heart defect that allows blood to flow between the left and right atria through the atrial septal defect. It causes the arteries (high oxygen content) and veins (low oxygen content) to mix oxygen mixing of blood may cause a shunt from left to right, which can return to a shunt from right to left over time. This complication is called Eisenmenger syndrome. Right-to-left shunt can cause further complications, such as right heart failure and pulmonary hypertension. For every 1,000 live births, 1.64 have ASD. 4,444 types of ASD account for 35% to 40% of congenital heart defects, making it the second most common congenital heart defect. The male to female ratio is 1:2. The family recurrence rate is approximately 10%. The secondary foramen is the most common type of ASD, located in the opening of the atrial wall in the area of the foramen ovale.

## Clinical assessment

Due to advances in ultrasound and auscultation during physical examinations, most patients with ASD are diagnosed in the womb or early childhood. The symptoms of ASD are related to the size of the defect. Small and medium ASD may not cause symptoms in early childhood. Babies with large ASD may have cyanosis, heart failure, repeated respiratory infections, or growth retardation. Adults who have not been diagnosed in childhood usually develop around 30 or 40 years of age. Exercising dyspnoea recently onset heart failure stroke atrial fibrillation in patients with long-term ASD, a right-left shunt will occur it can be seen on physical examination of cyanosis. The result of the physical examination depends on the size and location of the defect.

**Precordial palpation:** bulging of the right ventricle is most evident on the left border of the sternum. If the patient has pulmonary hypertension, he may feel a surge at the upper edge of the left sternum.

**Heart sound:** S2 wide, fixed and divided is a characteristic of ASD and is best evaluated when the patient is sitting or standing. Other murmurs that

can be auscultated include: Mid-systolic pulmonary blood flow or ejection murmurs, low-pitched diastolic murmurs seen in the larger left-to-right lead, late apical or whole heart murmurs can be heard when the artery Pulmonary is dilated Systolic murmur, atrial murmur can be heard in patients with mitral regurgitation caused by ASD. In patients with left-to-right shunt, diastolic noise that increases with inhalation may be noted. S4 is noticed in patients with pulmonary hypertension caused by ASD.

## Diagnosis

Echocardiogram diagnostic screening test Transthoracic Echocardiography (TTE) and colour Doppler will show the expulsion of blood from the left atrium to the right. Bubbles moving from the right atrium to the left indicate that the pressure in the right atrium is higher. If the ASD does not show up on the TTE or to help size and identify accompanying abnormalities, a transoesophageal echocardiogram may be required. The chest radiograph may be normal. Later in life, it may show enlarged heart contours and pulmonary oedema. In patients with sinus defects (defects near the superior or inferior vena cava), you may see a "Levy" scalpel. It is a vertical curved right pericardial line density that increases in width as you approach the right phrenic angle. ECG Prolonged PR interval in patients with first degree heart block Incomplete right bundle branch block Lower shunt R-wave notch Left QRS electrical axis deviation, more common in primary ASD, which is the mitral valve or the mitral valve level tricuspid valve communication QRS axis deviation to the right (ASD secondary orifice) P-wave axis deviation to the left (sinus venous defect).

## Treatment

The treatment plan is determined based on the time of discovery and the size and location of the defect. Patients with severe pulmonary hypertension are best treated symptomatically for heart failure. Surgical correction is the ideal choice before the development of pulmonary hypertension, and the risk of complications during surgery is the lowest 25 years in patients. Closure can be performed as open-heart surgery or, more commonly, percutaneous surgery.

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