

Ventricular septal defect in octogenarian: a case report

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ABSTRACT

It is not a common case that we see in our day-to-day clinical practice, a patient presenting with congenital VSD at the age of eighty. Ventricular septal defect (VSD) is a developmental defect of the interventricular septum resulting from a deficiency of growth or a failure of alignment or fusion of component parts of ventricular septum.¹ Ventricular septal defects are the most common form of congenital heart disease and among the most frequently seen congenital abnormalities.² Perimembranous defects are the most common types of ventricular septal defects and account for 80% of such defects.³ It is estimated that 25–40% of VSDs will close by the age of 2 years, and they are unlikely to persist after the age of 10 years; thus adults with congenital heart disease, VSDs represent only about 10% of the cases.⁴

Keywords: Congenital heart disease, congestive heart failure, elderly, VSD

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CASE REPORT

A 80-year-old male from rural Nepal without any known past medical history presented with complain of abdominal distention for 1 months and bilateral lower limb swelling for 15 days. Both increase in severity over this duration. Progressive abdominal distention led to shortness of breath with NYHA grade III, fatigue and palpitation. Patient had history of COVID 19 infection two month back diagnosed at another center where screening echo was done and VSD of 1.6 cm was found. Patient oxygen saturation was 88% in room air despite of ventricular septal defect. Patient had no other known comorbidities and no history of medical or surgical intervention at past. He had smoking pack year of around 25 years.

On examination patient was ill looking, had anasarca. The patient was tachypneic and tachycardic with respiratory rate of 26 cycles/minute and 120 beats/min respectively. Blood pressure was 110/70 mm Hg in right arm and saturation 78% in room air. On general examination patient had grade III clubbing. On auscultation patient had crepitus in right lower zone of the chest with prolonged expiration. On cardiac examination single S2 with pan-systolic

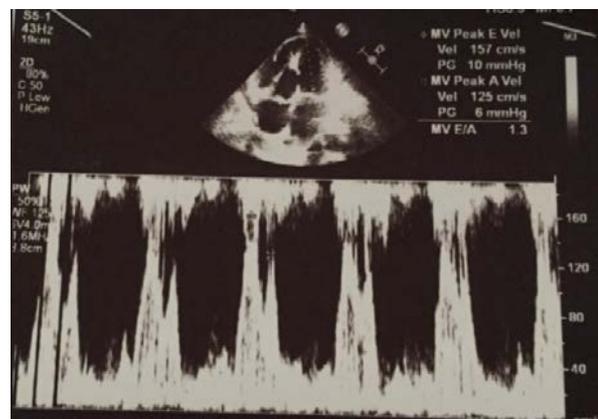
murmur was heard at tricuspid region with increased intensity on inspiration with palpable P2. On per abdominal examination he had shifting dullness and rest of the examination was within normal limits. Patient was admitted with provisional diagnosis of Cyanotic congenital heart disease with Eisenmenger syndrome secondary to ventricular septal defect with feature suggestive of right heart failure post Covid status

X ray chest postero-anterior view findings: homogeneous opacity in the right lower lungs field likely pleural effusion obscuring right costophrenic and cardiophrenic angle. There was enlarged right pulmonary artery with peripheral pruning of arteries suggestive of pulmonary hypertension. On complete blood count hemoglobin was 18.4 gm/dl with hematocrit of 56%.

Echo findings: congenital heart disease: muscular VSD (15 mm) with left to right shunt. Normal left ventricular systolic function (EF = 60%). Moderate mitral regurgitation. Moderate tricuspid regurgitation with severe Pulmonary arterial hypertension (RVSP = $63 + 15 = 78$ mmHg). LVDD grade II with raised LVEDP. Minimal pericardial effusion.



Figure 1. Echocardiography showing VSD

**DISCUSSION**

Ventricular septal defect can result in various outcomes, including infant death from heart failure and pulmonary hypertension, adult death due to pulmonary hypertension, the development of stenosis in the right ventricular outflow, morbidity in infants and children linked to pulmonary infections and increased blood flow in the lungs, occurrence of subacute bacterial endocarditis, spontaneous closure of the defect without treatment, and may be asymptomatic patients.⁶

Definitive management of such patient is done by surgical correction if there is no feature of pulmonary hypertension.⁷As in the present case, the patient had features of Eisenmenger syndrome the management of which includes long-term oxygen therapy, anticoagulation, infective endocarditis prophylaxis and immunizations.⁸

In the present case the patient was managed with long term oxygen therapy, use of low dose oral diuretics (tab furosemide 20mg BD, tab. Spironolactone 25mg per oral OD), endothelin receptor blocker (tab Bosentan 62.5 mg per oral OD) and Phosphodiesterase inhibitor (Tab

Sildenafil 25 mg per oral TDS). The patient was also immunized with influenza and pneumococcal vaccine and counselled about infective endocarditis prophylaxis.

Study identified a common trend of late diagnosis and a notable prevalence of complications in cases of congenital heart disease (CHD) and Consequently, surgical interventions for CHD in these settings should be accompanied by early detection and a referral system that encourages cooperation between general practitioners, pediatricians, obstetricians, and cardiologists.⁵

CONCLUSION

This case study emphasizes the importance of considering congenital heart disease, such as ventricular septal defect, in adult patients presenting with symptoms suggestive of right sided heart failure. Timely diagnosis, appropriate management strategies, and long-term follow-up can significantly improve the quality of life and prognosis for adults living with congenital heart disease. Further research and awareness efforts are needed to ensure early detection and optimal care for this unique patient population.

Conflict of Interests

There is no conflict of interest regarding this article.

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