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Congenital Mitral Stenosis Discovered in an Elderly Woman: A Case Report

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Abstract **Case Report**

The last few decades have seen great progress in the early detection and management of congenital heart diseases. Advances in surgical techniques have enabled many children to reach adulthood without the need for further surgery. However, in developing countries, adults with congenital heart disease never diagnosed in childhood are still found. In this case we describe the discovery of congenital mitral stenosis in a 75-year-old female patient.

Keywords: Mitral stenosis, congenital, valvulopathies.

INTRODUCTION

Congenital mitral stenosis is a rare heart disease characterised by complex anatomical abnormalities, rarely isolated and often associated with other congenital malformations. The diagnosis of congenital mitral stenosis is based clinically on symptoms and relies mainly on the use of echocardiography.

PATIENT AND OBSERVATION

Mrs H. N, 75 years old, was referred to us for a disabling dyspnoea. The patient is diabetic diagnosed since 6 years on sulfonamide, and with no other cardiovascular risk factors.

History taking revealed that her activities have been limited for years due to a scoliosis that appeared early in adulthood. Her actual complaint is a progressively worsening dyspnea which appeared a few days before her referral, first on walking, then on the slightest effort. She did not report any other symptoms.

On physical examination: pulse is regular at 109 beats per minute, blood pressure is 130/60 mm Hg, resting respiratory rate is 16 cycles per minute. There is a diastolic mitral murmur and a pronounced pulmonic component of the second heart sound (P2), discrete basithoracic rales.

In addition, the patient had a spinal deformity of the scoliosis and dorsal hyperlordosis type.

The rest of the examination found to be without anomaly.

The frontal chest X-ray: showed normal parenchyma, cardiomegaly depending on the right cavities, and free costophrenic angles.

Realisation of electrocardiogram revealed a regular and sinusoidal rhythm, with right atrial enlargement and complete right bundle branch block.

Echocardiogram performing an echocardiogram revealed slightly remodeled mitral valve with normal motion, a severe mitral stenosis by narrowing of the annulus measuring 10 mm in diameter (Figure 1), planimetric measurement showed an area of 0.7 cm 2 and a mean atrioventricular gradient of 11 mmHg. There was no associated mitral regurgitation, and other valves were without abnormalities.

Both of papillary muscles: postero-medial and antero-lateral were well visualized with no significant abnormality.

Atypical mid-ventricular stenosis, continuous Doppler with a dagger shaped appearance and a maximum gradient measured at 41 mm Hg (Figure 2, 3).

The left ventricle was normal in size and a good systolic function with an ejection fraction of 66%. A dilated right cavity with preserved longitudinal

systolic function of right ventricle and atrium of 25cm^2 pulmonary hypertension with a pulmonary arterial systolic pressure of 50 mmhg, undilated vena cava, and finally aorta was without significant abnormalities.

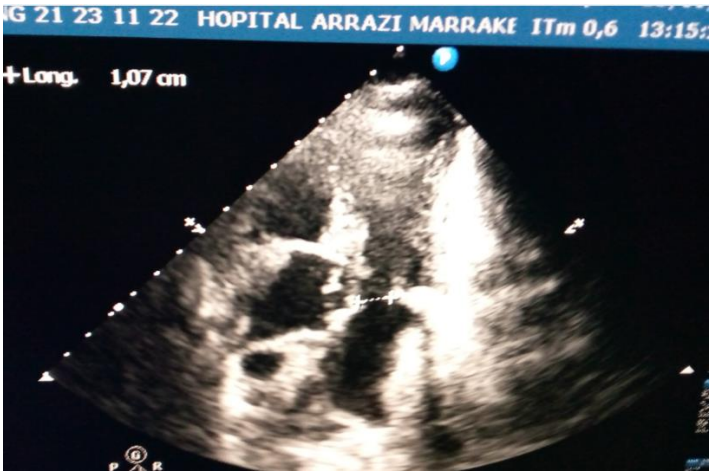

Figure 1 : TTE showing Mitral stenosis with a 10mm mitral annulus

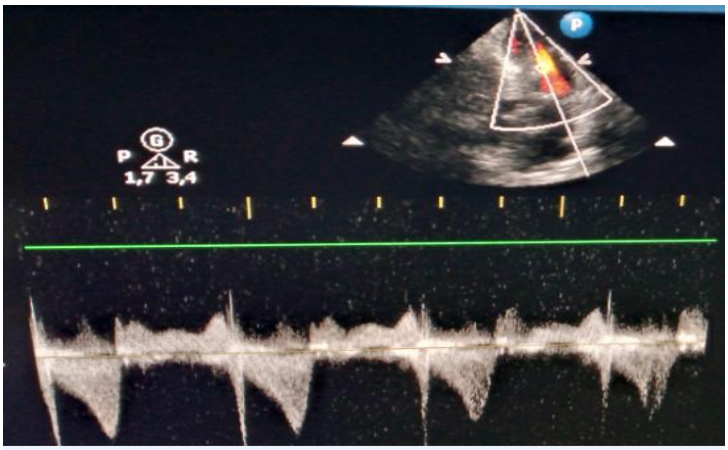

Figure 2: TTE showing Mid-ventricular aliasing with a dagger shaped appearance on continuous Doppler

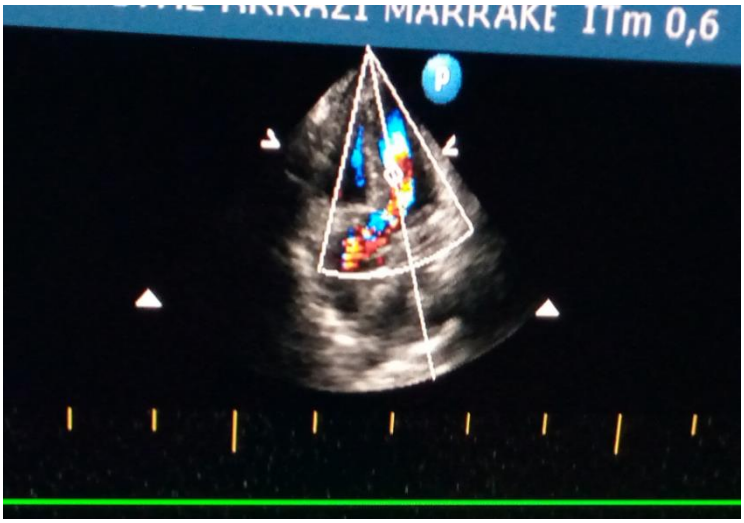

Figure 3: TTE showing Mid-ventricular aliasing

DISCUSSION

Congenital mitral stenosis is a rare heart disease characterised by complex anatomical abnormalities in the annulus, supravalvular area, valves, chordae tendinae and papillary muscles [1]. Congenital mitral stenosis is uncommon, occurring in 0.6-1.2% of congenital heart malformations identified at autopsy and 0.2-0.4% of clinical cases [2, 3].

It is rare to find this anomaly alone, as in 60-90% of cases it is associated with other congenital malformations such as: coarctation of the aorta and/or valvular or sub-valvular aortic stenosis, ventricular septal defect etc. [4].

The diagnosis of mitral stenosis is based on symptoms and relies mainly on the use of echocardiography. Which shows the anatomy of the stenosis, its degree and impact on the heart, as well as detecting other abnormalities that may be associated. As this lesion is rare and usually associated with other congenital heart defects, it may be missed during clinical examination or even cardiac catheterization [5].

Congenital heart diseases diagnosed in adulthood are most often benign and compatible with an almost normal life. Therefore, these patients do not seek help and are often not diagnosed. In adults, congenital heart disease includes heart defects that were treated in childhood but deteriorate over time, as well as defects that were asymptomatic at birth and are discovered later in life [6].

Thanks to advances in the field of congenital heart diseases in recent decades in both imaging and therapeutics, a large number of heart defects are diagnosed well before birth. Many of them benefit from surgery and reach adulthood without the need for further intervention. Some of them develop other problems later in life that require re-intervention in adulthood. This has prompted the creation of a sub-specialty within the congenital heart disease department: the GUCH 'grown up congenital heart disease' unit [6].

In developing countries, few heart diseases are detected during childhood, a minority of them is operated on and very few reach adulthood either with minor or quite advanced heart diseases that are then inoperable. And only a small proportion can still benefit from surgery at this age [6].

CONCLUSION

Congenital mitral stenosis is an uncommon heart disease and is rarely an isolated anomaly. Thanks to the advances made over the last few decades in the field of congenital heart disease, both in terms of imaging and therapeutics, the late discovery of congenital heart disease in adults is becoming increasingly rare.

Patient Consent: The patient has given consent.
Conflicts of Interest: The authors declare no conflicts of interest.

Author Contributions

All authors contributed to the drafting of the manuscript, all authors read and approved the final version of the manuscript.

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