

ASYMPTOMATIC SEVERE HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY DETECTED ON PHYSICAL EXAMINATION

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BACKGROUND

- HOCM is an inherited myocardial disease characterized by abnormal cardiac wall thickening and left ventricular outflow obstruction.
- Typical presenting symptoms include angina, dyspnea, palpitations, syncope, and sudden cardiac death.
- There is an established correlation between obstruction severity and symptom burden.
- Severe obstruction is rarely diagnosed incidentally by physical examination alone.

CASE PRESENTATION

- A 53-year-old female with hypertension was hospitalized with hypertensive intracerebral hemorrhage
- New high-pitched systolic ejection murmur auscultated during routine daily physical examination
- Transthoracic echocardiogram (TTE) revealed findings consistent with HOCM [Figure 1]
- No family history of HOCM or sudden cardiac death
- Patient was asymptomatic despite severely elevated resting and provokable peak left ventricular outflow tract (LVOT) gradients and velocities
 - LVOT gradient at rest: 213 mmHg
 - LVOT velocity at rest: 7.3 m/s
 - LVOT gradient with Valsalva: 225 mmHg
 - LVOT velocity with Valsalva: 7.5 m/s
- Started on beta blocker and discharged
- Lost to follow-up
- Presented 1 year later with asymptomatic hypertensive urgency
- TTE showed persistently severe LVOT gradients and velocities
- Started on calcium channel blocker and education provided regarding severity of condition and need for close cardiac monitoring
- Discharged with 30-day event monitor and scheduled follow-up at a specialized HOCM Clinic.

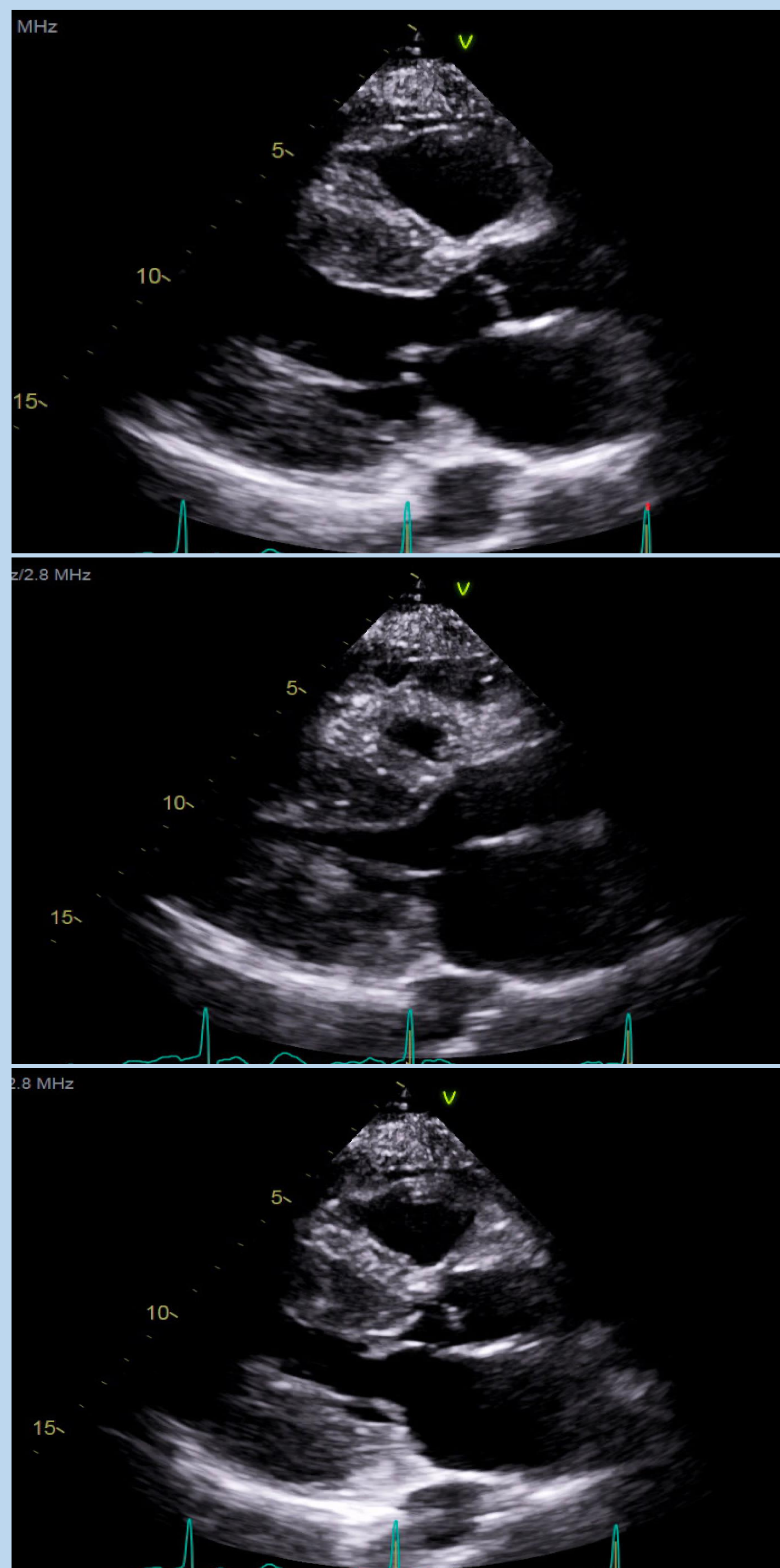


FIGURE 1:
Transthoracic echocardiogram (TTE) parasternal long-axis views of: (A) thickened left ventricular myocardium; (B) small left ventricle; (C) systolic anterior motion (SAM) of mitral leaflet

DISCUSSION

- HOCM is typically suspected on physical examination or based on presenting symptoms and confirmed with imaging.
- There is an established correlation between severity of outflow obstruction and symptom development, disease progression, and adverse outcomes.
- LVOT gradients >50 mmHg are associated with greater symptom burden and rarely present asymptotically.
- This case highlights a unique asymptomatic presentation of HOCM with a severe LVOT obstruction; underscores the importance of daily thorough physical examination; and emphasizes the challenges faced by patients with new diagnoses in the peri-hospitalization period.
- Effective patient education and resource support before discharge are essential to ensuring safe and adequate treatment.

CONCLUSIONS

- Routine and thorough physical examinations, even in stable hospitalized patients, can detect abnormalities that may lead to crucial diagnoses.
- Patient education and resource support prior to hospital discharge can aid in the management of new diagnoses and improve clinical outcomes.

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