A 27-years old male was complaining from hypoxemic dyspnea.

Dyspnea was aggravated while sitting or standing and relieved while in supine position.

He had recurrent chest infection & intermittent dyspnea on exertion since childhood.
* His blood pressure was 110/70 mm Hg, pulse rate was 85 beats per minute.
* Multiple clicks & a grade II systolic murmur was heard on the left sternal border.
* The electrocardiogram (ECG): sinus rhythm and non-specific RSr' pattern in V1

The pulse oximetry showed a saturation of 94% in a supine position, but this declined to 75% rapidly after standing.
Systemic review revealed......

- No significant findings, only he had several attacks of migraine
- He did not smoke cigarettes.
- No specific past medical history
- Irrelevant family history.

Clinically...
**Transthoracic echocardiography**

- A TTE showed an 27 mm sized ASD with a right-side volume overload and a left-to-right shunt through ASD
- A septal aneurysm was seen (22 mm)
- Mild tricuspid regurgitation with peak PG of 32 mm Hg
Transesophageal Echo...

- A 35 mm-sized ASD.
- Hypermobile aneurysm with 27mm in diameter
- Two color jets across the inter-atrial septum: one was close to the aortic rim and the other close to the posterior rim

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Approaches......

- Surgical approach is the best; But the patient refused
- Percutaneous intervention: all interventionists refused
- ???????????????????????????????????????

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By our congenital team under supervision of our leader

Professor Ragab A. Mahfouz, MD

Our Approach......

- Mid-aneurysmal septostomy
- Right upper PV technique.
- Locked system- clockwise rotation
Lock the valve and the whole system (device + cable + delivery sheath) \( \Rightarrow \) Clockwise or (posterior) rotation \( \Rightarrow \) good orientation
Platypnea-orthodeoxia syndrome is an under-diagnosed condition characterized by dyspnea and deoxygenation when changing from a recumbent to an upright position.

It is usually caused by increased right-to-left shunting of blood on assuming an upright position, with normal pressure in the right atrium.

**Why hypoxemia, in spite of nearly no pulmonary or mild PH?**

Simply due to the anatomic redirection of blood by abnormal anatomically large Eustachian’s valve.
3- Classification of IAS aneurysms (Olivares-Reyes and colleagues).

**Type 1:** right (R) if the bulging is in the RA only.

**Type 2:** left (L) if the bulging is in the LA only

**Type 3:** RL if the major excursion bulges to the RA and the lesser excursion bulges toward the LA.

**Type 4:** LR if the maximal excursion is toward the LA with a lesser excursion toward the RA

**Type 5:** Atrial septal aneurysm movement is bidirectional and equidistant to both atria during the cardiorespiratory cycle.

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**Accordingly......**

- We categorized the patient as having a complicated type 5 atrial septal aneurysm (bi-directional and equidistant to the right as well as to the left, fenestrated with left to right shunt)

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1. Platypnea - orthodeoxia syndrome be considered in the differential diagnosis in patients with unexplained dyspnea & hypoxemia.

2. Global approach to the patients.

3. No thing is impossible; if you think physiologically & anatomically.

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Thank You