Anesth Pain Med 2023;18:327-329
https://doi.org/10.17085/apm.22255
pISSN 1975-5171 • eISSN 2383-7977

Image and Video

Massive pericardial effusion in undiagnosed turner syndrome

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Received November 21, 2022
Revised April 5, 2023
Accepted April 5, 2023

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An 18 years old girl presented to the preoperative anesthesia clinic for surgery of a distal phalanx fracture. She had a history of delayed milestones and irregular periods with easy fatigability. Physical examination revealed that the patient was short-statured with a webbed neck (Fig. 1A). Family history was not significant except for short-statured parents. Her heart rate was 70 beats/min, blood pressure was 100/66 mmHg, respiratory rate was 14 breaths per min and body temperature was 36.5°C. Her preoperative investigations were normal except for an electrocardiogram, which showed low-voltage complexes (Fig. 1B), and chest radiographs, which showed a moneybag heart (Fig. 1C). Point-of-care ultrasound examination of the heart showed a swinging motion within the anechoic space (Fig. 2, video). In the four-chamber apical view, the anechoic space measured > 2 cm posterior and > 1 cm anterior to the heart, suggesting a large pericardial effusion (Fig. 2C). No collapse of the right atrium or ventricle was observed, which ruled out tamponade physiology and precluded the need for pericardiocentesis (video). A thyroid function test was also ordered, and its result showed severe hypothyroidism (thyroid stimulating hormone > 496 μIU/ml, T3 < 0.05 ng/ml, and T4 < 2 μg/dl). Other differential diagnoses included tuberculosis, autoimmune diseases, renal failure, and tumors, which were excluded based on biomarker and antibody measurements. Other routine hematological investigations were normal. A cardiologist's opinion was sought, who advised only correction of the hypothyroid status for the management of the effusion. The patient was started on thyroxin therapy at 100 μg, which was increased to 150 μg. One week later, the patient underwent an uneventful surgery under a wrist block. The thyroid function test and echocardiography were repeated after 4 weeks, which showed a return to the euthyroid status with minimal pericardial effusion. Karyotyping results showed a mosaic variant of Turner Syndrome, for which she was advised to undergo gynecological and endocrinological follow-up.

Written informed consent was obtained from the patient to report this case without revealing her identity.

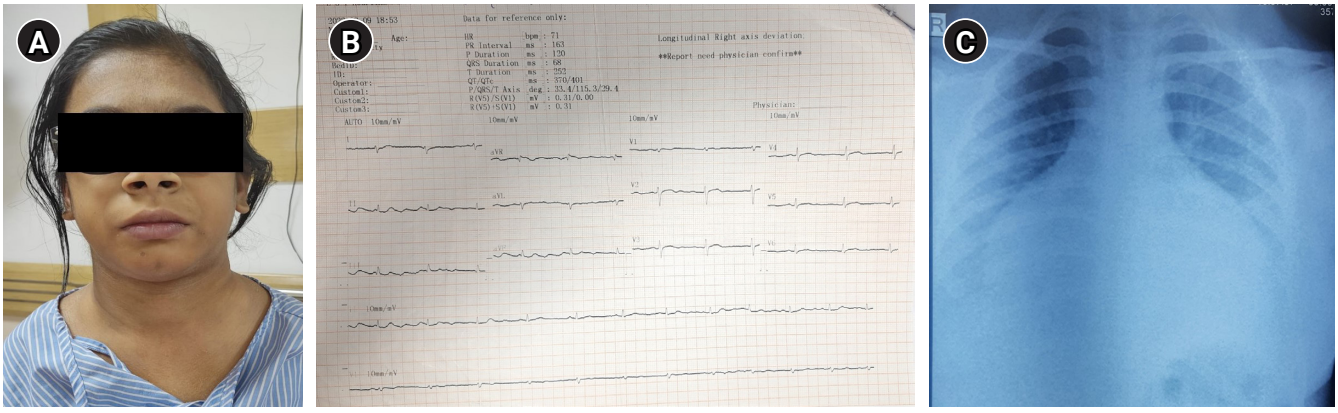

Fig. 1. (A–C) Patient profile, ECG, chest X-ray. ECG: electrocardiogram.

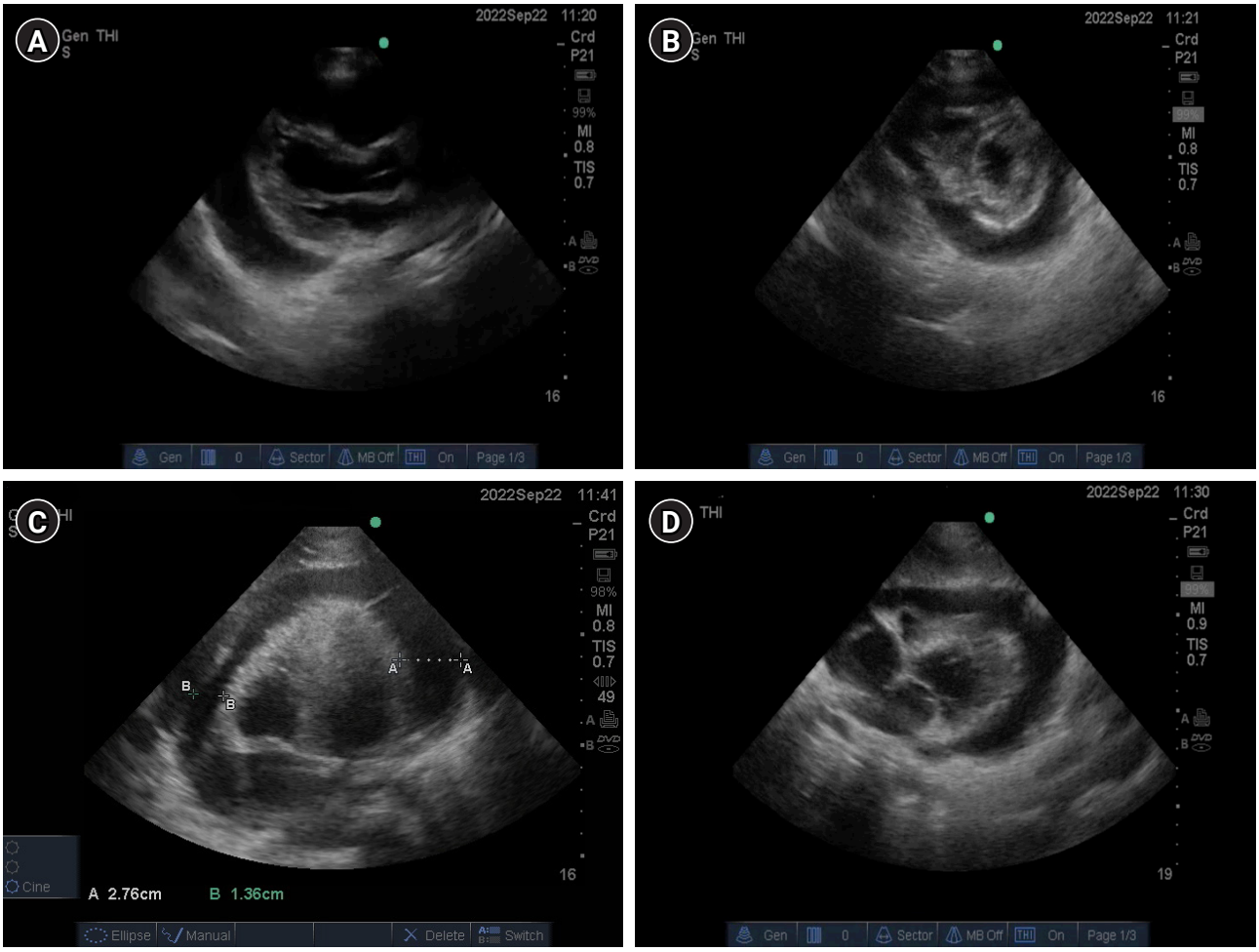

Fig. 2. (A–D) Parasternal long axis view, parasternal short axis view, apical 4-chamber view, subcostal 4-chamber view.

SUPPLEMENTARY MATERIALS

Supplementary video is available at https://doi.org/10.17085/apm.22255.

FUNDING

None.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

DATA AVAILABILITY STATEMENT

All data generated or analyzed during this study are included in this published article.

AUTHOR CONTRIBUTIONS

Writing - original draft: Divya Sethi Sethi. Writing - review & editing: Divya Sethi Sethi, Garima Garg. Investigation: Divya Sethi Sethi, Garima Garg. Resources: Divya Sethi Sethi, Garima Garg.

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