

# Stork leg sign in acute pericarditis

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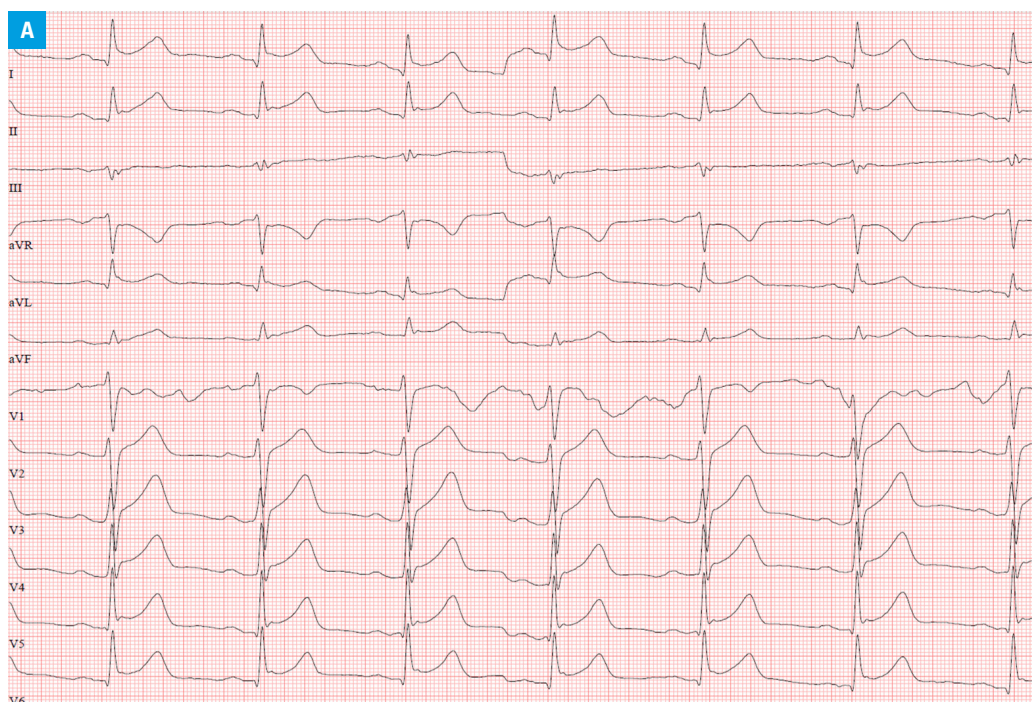
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A 41-year-old man presented to the emergency department due to retrosternal chest pain and dyspnea, which had aggravated on exertion. He was a nonsmoker and denied trauma or drug abuse, but he had a history of HIV infection which was treated with tenofovir, emtricitabine, and efavirenz. Physical examination was unremarkable without Kussmaul sign or prominent jugular veins. Electrocardiogram revealed ST-segment elevations and PR-interval depressions in leads I, II, aVL, V<sub>3</sub> to V<sub>6</sub> with reciprocal ST-segment depression and PR-interval elevation in lead aVR corresponding to injury of subepicardial myocardium and atrium. Additionally, small positive deflections in the J-point region could be detected in leads II, aVL, V<sub>5</sub> and V<sub>6</sub> (FIGURE 1A). Laboratory tests showed: leukocytosis (white blood cell count,  $13.23 \times 10^9/l$ ; reference range,

$4.4\text{--}11.3 \times 10^9/l$ ), elevated C-reactive protein levels (19.1 mg/l; reference range, 0–5 mg/l), and elevated N-terminal pro-B-type natriuretic peptide level (221 pg/ml; reference range, 0–150 pg/ml) without elevated troponin T (7 pg/ml; reference range, 0–14 pg/ml) or D-dimer (<0.19 mg/l; reference range, 0–0.5 mg/l). Echocardiography showed mild pericardial effusion.

J waves are a manifestation of early repolarization and are sometimes referred to as Osborn waves after their describer who studied the effect of hypothermia on the cardiac function in dogs.<sup>1</sup> Besides hypothermia, J waves were described in other conditions such as hypercalcemia, Brugada syndrome, or early repolarization syndrome.<sup>2–4</sup> In acute pericarditis, J waves are sometimes referred to as “stork leg sign” due to their pattern if the electrocardiogram is turned 180° whereby



**FIGURE 1 A** – electrocardiogram of a 41-year-old man revealing ST-segment elevations and PR-segment depressions. Additionally, J-waves could be detected in leads II, aVL, V<sub>5</sub>, and V<sub>6</sub> called stork leg sign

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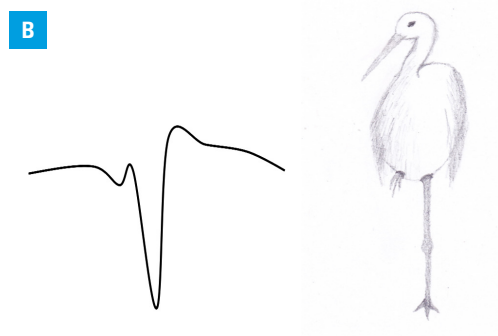
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**FIGURE 1 B** – schematic QRS complex and J-wave reversed 180° with an illustration of a stork standing on one leg. Inverted R wave corresponds to the standing leg while the other leg is lifted to the stork's body (inverted J point deflection) (FIGURE 1B).



the QRS complex looks like a stork standing on one leg (inverted R wave) while the other leg is lifted to the stork's body (inverted J point deflection) (FIGURE 1B). After initiation of ibuprofen 600 mg 3 times daily, the patient could be discharged home after 4 days with an uneventful recovery. No J waves were observed anymore on follow-up electrocardiograms 2 days after initial presentation and 1 month after discharge (FIGURE 1C).

## ARTICLE INFORMATION

**CONFLICT OF INTEREST** None declared.

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