



# Cyclosporine-Associated Pericardial Tamponade in a Child with Steroid-Resistant Nephrotic Syndrome

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*To the Editor:* Cyclosporine (CsA) is the preferred choice in steroid-resistant nephrotic syndrome (SRNS). A 2-y 10-month old boy with SRNS with minimal change histology, normal renal function and stage 2 hypertension was on prednisolone, CsA, enalapril and amlodipine. He developed respiratory distress 15 d after initiation of CsA (trough level 79 µg/dL). Considering acute respiratory infection, CsA was withdrawn and treated with appropriate antibiotics. Echocardiogram showed moderate pericardial effusion (PE). His respiratory symptoms resolved with no change in PE. CsA was restarted on a higher dose and discharged.

He was brought 11 d later with cardiac tamponade. Emergency pericardiocentesis removed 250 mL of blood tinged fluid, which was transudative, sterile with inflammatory cytology and negative for tuberculosis (TB) by culture. He was euthyroid and antinuclear antibody (ANA) was negative. Post procedure echocardiogram revealed moderate PE. A positron emission tomography (PET) scan ruled out malignancy.

As isolated PE is rare in NS, ruling out secondary causes including infection, TB, lupus nephritis, malignancy, hypothyroidism and uremia, CsA-associated PE was considered by exclusion [1]. CsA causes PE by idiosyncrasy or hypersensitivity [1, 2]. CsA was replaced with mycophenolate mofetil and echocardiograms on follow-up revealed resolving PE but edema and proteinuria remained unabated. Only two reports in children with SRNS on CsA developing PE could be identified,

but causal association is not proven [3, 4]. Early suspicion and withdrawal of the offending agent is the key. This case describes the need for a thorough history and a high index of suspicion for rare side effects of drugs used in SRNS.

**Data Availability** All data are transparent.

## Declarations

**Ethics Approval** NA

**Conflict of Interest** None.

**Consent to Participate** Informed consent obtained.

**Consent for Publication** Informed consent obtained.

## References

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