

CONCLUSION

SAT can present with a focal lesion on the ultrasound during the early stage of the disease, making it difficult to distinguish from a thyroid abscess due to overlapping features. Good clinical judgement guided by FNA and appropriate follow-up imaging may be helpful in differentiating between the two conditions.

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RESCUE PLASMA EXCHANGE IN THYROID STORM: SUCCESSFUL BRIDGING TO THIONAMIDE THERAPY

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INTRODUCTION

Therapeutic plasma exchange (TPE) has emerged as a rescue therapy in thyroid storm. Multiple cycles are often required to achieve adequate reduction in circulating thyroid hormone levels. We report a case of thyroid storm with multiorgan failure successfully managed with only two cycles of TPE, followed by carbimazole.

CASE

A 43-year-old female with no significant past medical history presented with a 5-month history of altered bowel habits. She has a small goiter, which was not investigated before. She underwent elective esophagogastroduodenoscopy and colonoscopy at a private centre, both of which were unremarkable. Post-procedure, she developed unstable tachyarrhythmia and cardiac arrest. Return of spontaneous circulation was achieved after three cycles of cardiopulmonary resuscitation, and she was transferred to the intensive care unit. Biochemical evaluation revealed severe thyrotoxicosis (thyroid-stimulating hormone [TSH] <0.008 mIU/L, free thyroxine 4 [FT4] >100 pmol/L). Burch-Wartofsky Point Scale was 90.

Her clinical course was complicated by multiorgan failure, including ischemic hepatitis with coagulopathy and oliguric acute kidney injury requiring continuous veno-venous hemodialysis. Lugol's iodine and corticosteroids were initiated as thionamides were contraindicated due to severe hepatic dysfunction. She developed refractory tachyarrhythmia despite electrical cardioversion. Following a multidisciplinary discussion, TPE was initiated due to the limited choice of antithyroid medication.

After two TPE sessions, thyroid function improved markedly (TSH 0.01 mIU/L, FT4 26.2 pmol/L), accompanied by improvement in hepatic and renal function, allowing safe commencement of carbimazole. Thyroid function remained stable with FT4 of 19.3 pmol/L 1 week post TPE. Echocardiography demonstrated mildly reduced left ventricular ejection fraction (45–50%) with bi-atrial dilatation.

CONCLUSION

This case highlights the role of limited-cycle TPE as an effective rescue therapy and bridging strategy to definitive treatment in severe thyroid storm with multiorgan failure. Timely TPE initiation may improve biochemical control and clinical outcomes in critically ill patients.