

Serum uric acid and adverse outcomes in preeclampsia: A case study

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ABSTRACT

Introduction: Preeclampsia is a multisystem disorder which can result in maternal and fetal complications. Uric acid is a marker of oxidative stress, tissue injury and renal dysfunction, resulting from placental ischemia and reduced maternal glomerular filtration rate. Therefore, serum uric acid might be helpful in the prediction of complications of preeclampsia. **Case Description:** A 32-year-old grand multipara with gestational hypertension was admitted at 28 weeks gestation for hypertensive crisis. Her serum uric acid was increasing in trend from 251 to 305 and 422 $\mu\text{mol/L}$. She was readmitted 9 days later for severe preeclampsia complicated with abruptio placenta and intrauterine demise. She also developed acute kidney injury and disseminated intravascular coagulopathy (DIC). Fortunately, she delivered vaginally and was discharged well. **Discussion:** The role of serum uric acid in the management of preeclampsia remains debatable. Some studies reported raised uric acid levels to be positively correlated with adverse maternal and fetal outcomes, others found it a poor predictor. Nevertheless, the test is widely performed routinely in the standard investigative workup of preeclampsia to assess disease severity and guide management. International guidelines recommend that uric acid is not a diagnostic criterion for preeclampsia and should not be used to determine the timing of delivery. However, uric acid has significant association with preeclampsia progression and poor maternal and perinatal outcomes. We propose that hospitals systematically review their data on the correlation of hyperuricemia and outcomes in preeclampsia and set a local policy of uric acid threshold that warrants inpatient care for increased surveillance.

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Thyroid storm in pregnancy: A case study

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ABSTRACT

Introduction: Inadequately treated maternal hyperthyroidism increases the risk of severe preeclampsia, heart failure, and thyroid storm. Thyroid storm is a life-threatening endocrine emergency characterized by multiple organ failure due to severe thyrotoxicosis. A storm can be triggered by precipitating events such as trauma, surgery, infection, delivery; even pregnancy itself. **Case Description:** A 35-year-old lady presented to the emergency department with complete miscarriage. She had underlying hyperthyroidism for six years but defaulted her follow-ups and medications since the beginning of the Covid-19 pandemic. She complained of palpitations despite minimal vaginal blood loss. ECG showed sinus tachycardia with a heart rate of 190 beats per minute. Her hemoglobin level was stable, but thyroid function test showed hyperthyroidism with raised free T4 (60 pmol/L) and low TSH (< 0.01 mIU/L). Her Burch-Wartofsky score was 35, implying an impending thyroid storm. IV Verapamil was given immediately and her heart rate improved to 140-150 bpm. She was transferred to a high dependency ward for close monitoring and started on oral Propylthiouracil and Propranolol. Regrettably, when she began to improve, she requested for discharge against medical advice. **Discussion:** The diagnosis of thyroid storm is clinical, with laboratory tests consistent with overt hyperthyroidism. Clinical scoring systems such as the Burch-Wartofsky Score helps to confirm diagnosis and triage disease severity. Treatment is multimodal using medications (thioamides, iodide, beta-blockers, corticosteroids, antipyretics), oxygen, volume resuscitation, and correction of electrolyte imbalance. A high index of suspicion, rapid recognition, prompt treatment and intensive monitoring are key elements of management.