

A case report of a new diagnosis of Neuropsychiatric Lupus in an acute presentation of coma and seizure in pregnancy

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INTRODUCTION

- Systemic Lupus Erythematosus (SLE) is a multi-system, autoimmune disease predominantly affecting women of childbearing age.¹
- Neuropsychiatric lupus (NL)** is a severe form of SLE with psychiatric &/or neurological manifestations. It is a rare cause of coma & seizure in pregnancy, with significant associated maternal & foetal, morbidity & mortality.¹
- We report a rare case of first presentation of NL during pregnancy.**

CASE REPORT

Background:

- Patient X, 34-year-old fit & well Primigravida, 18 weeks gestation

Presentation:

- Covid positive with a 2-day history of headache, cough & pyrexia
- Acutely reduced Glasgow Coma Score followed by generalised tonic-clonic seizure

Initial Management

- Intubation, ventilation, sedation, antiepileptic agent loading & maintenance of normal blood serum biochemistry
- Uncommon presentation in previously healthy patient led to diagnostic uncertainty

Investigations:

- CT head: normal. MRI head & spine: cerebral oedema (see Figure 2)
- Electroencephalogram: cerebral dysfunction consistent with encephalitis. (see Figure 1)
- Antibodies: Positive for Anti-La SS antibodies

Specific treatment:

- Plasma exchange + Methylprednisolone
- Extubated on day 10 & discharged from hospital on day 22
- Regular review by Maternal Medicine Team & MDT discussion

Delivery Plan

- Elective lower segment caesarean section (LSCS) performed at 37/40 under uncomplicated spinal anaesthesia. Baby was delivered in good condition.

Follow Up

- Both mother & baby were discharged post-delivery on day 4.
- At 8-week follow-up the mother remained asymptomatic whilst continuing a tapering dose of oral steroid

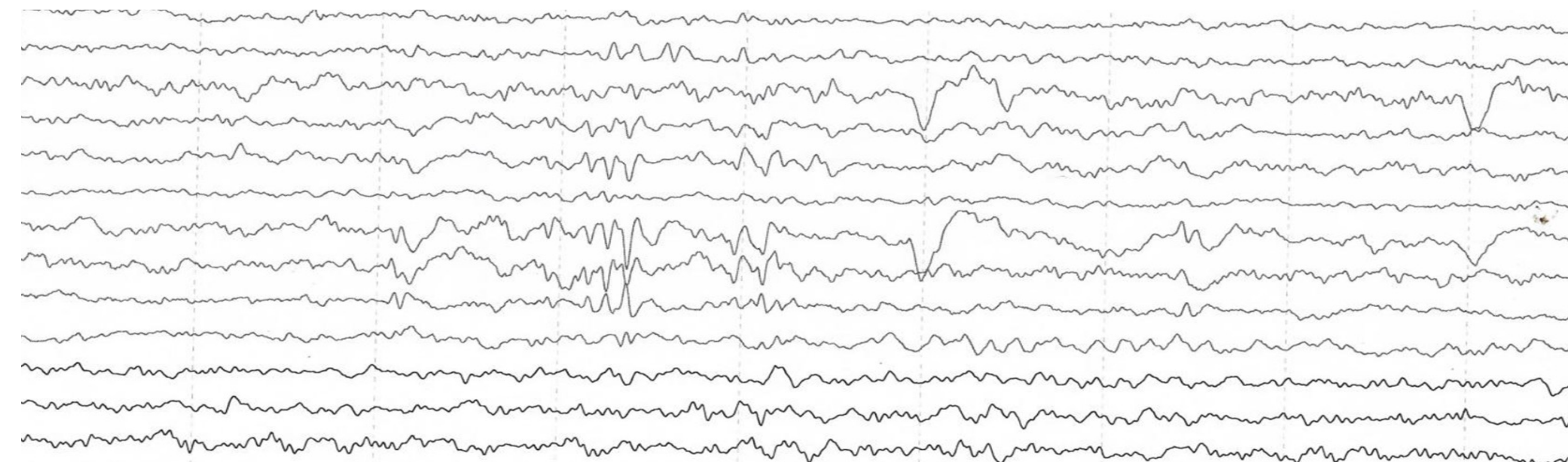


Figure 1: Example electroencephalogram (EEG) demonstrating cerebral dysfunction consistent with encephalitis as can be seen in NL²

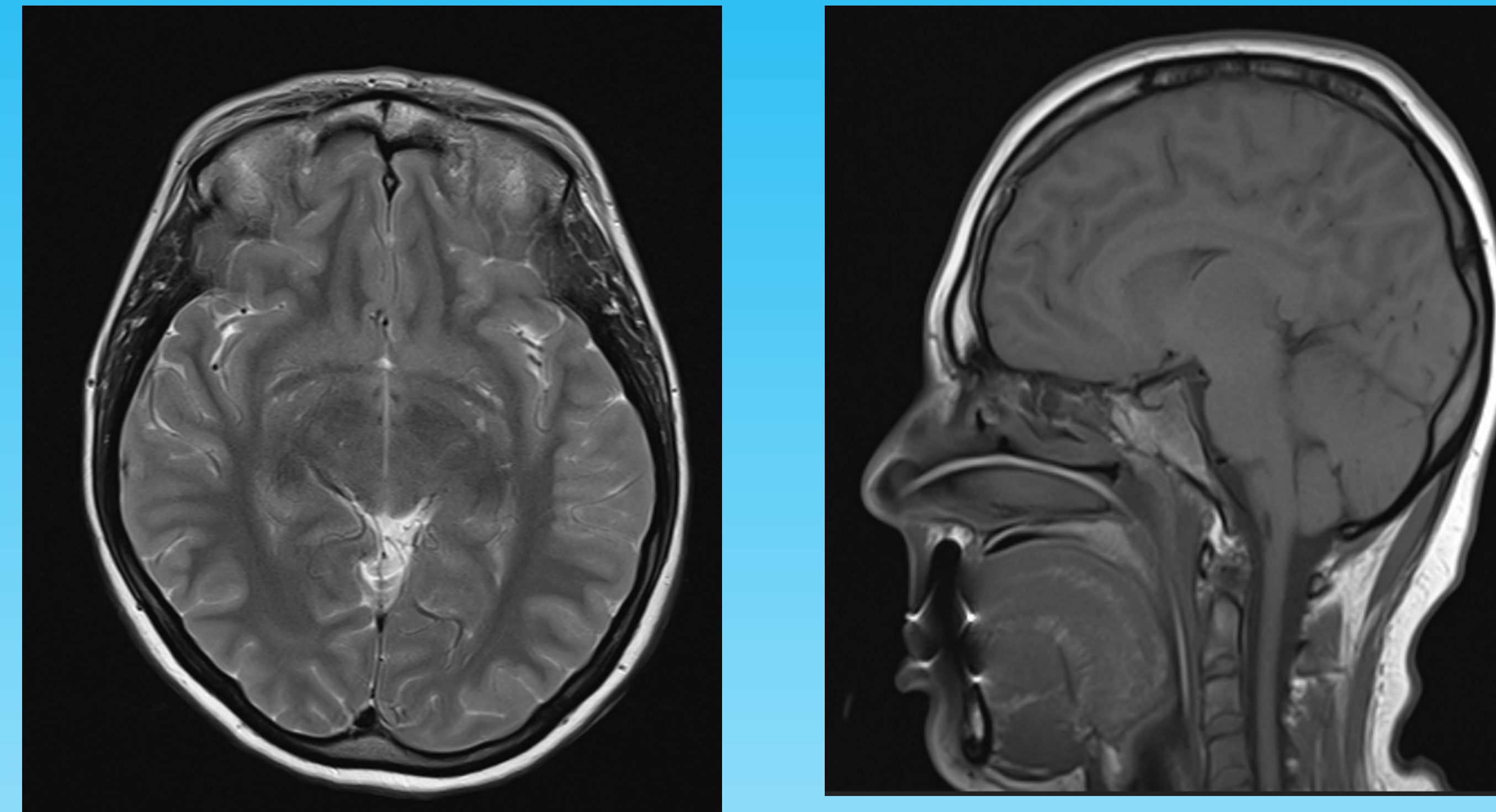


Figure 2: MRI head from Patient X, demonstrating generalised cerebral swelling & sulcal effacement. In some cases, demyelination is also seen.

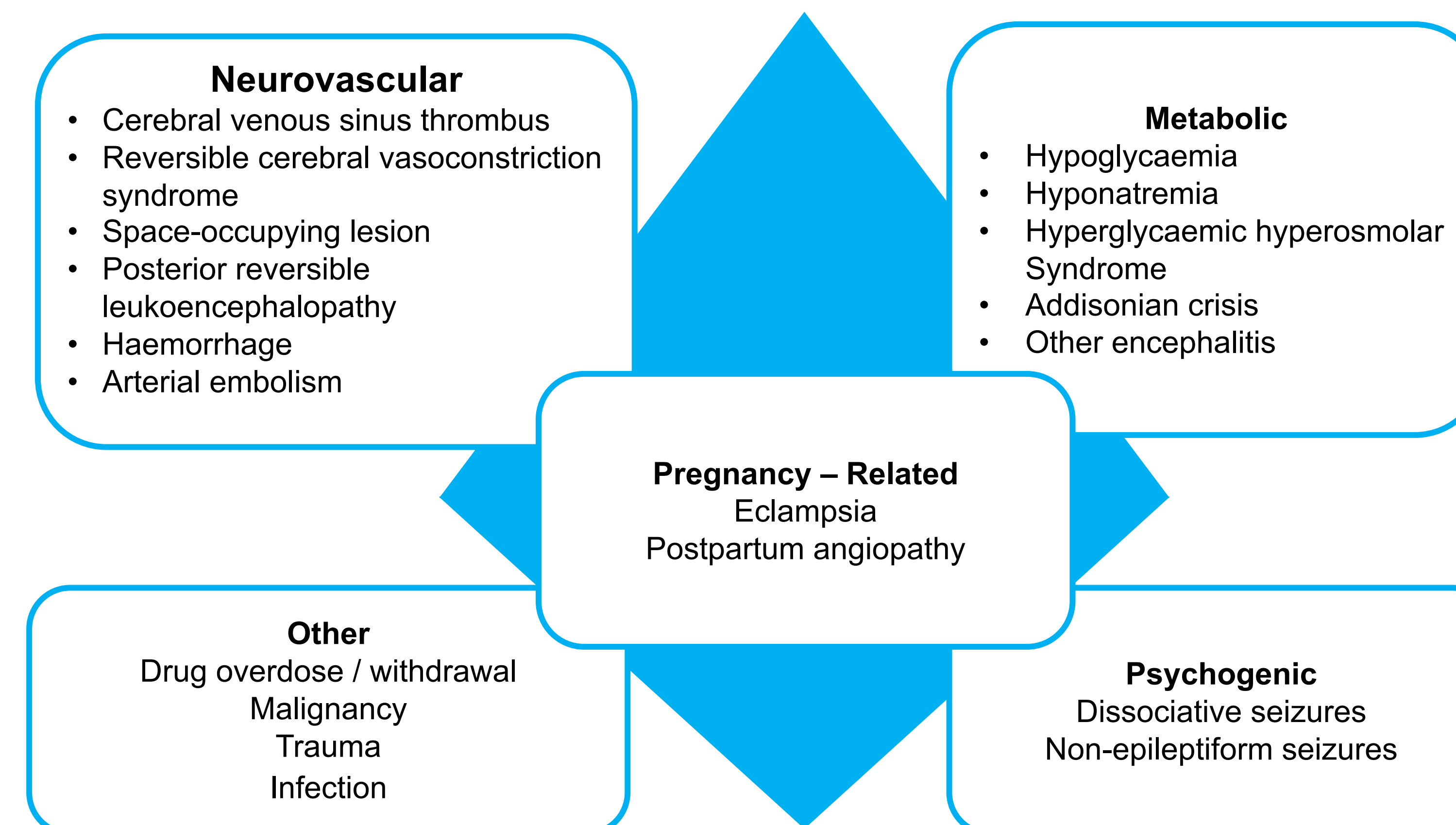


Figure 3: Differential diagnosis for seizures in pregnancy. (Adapted from Bollig et al³)

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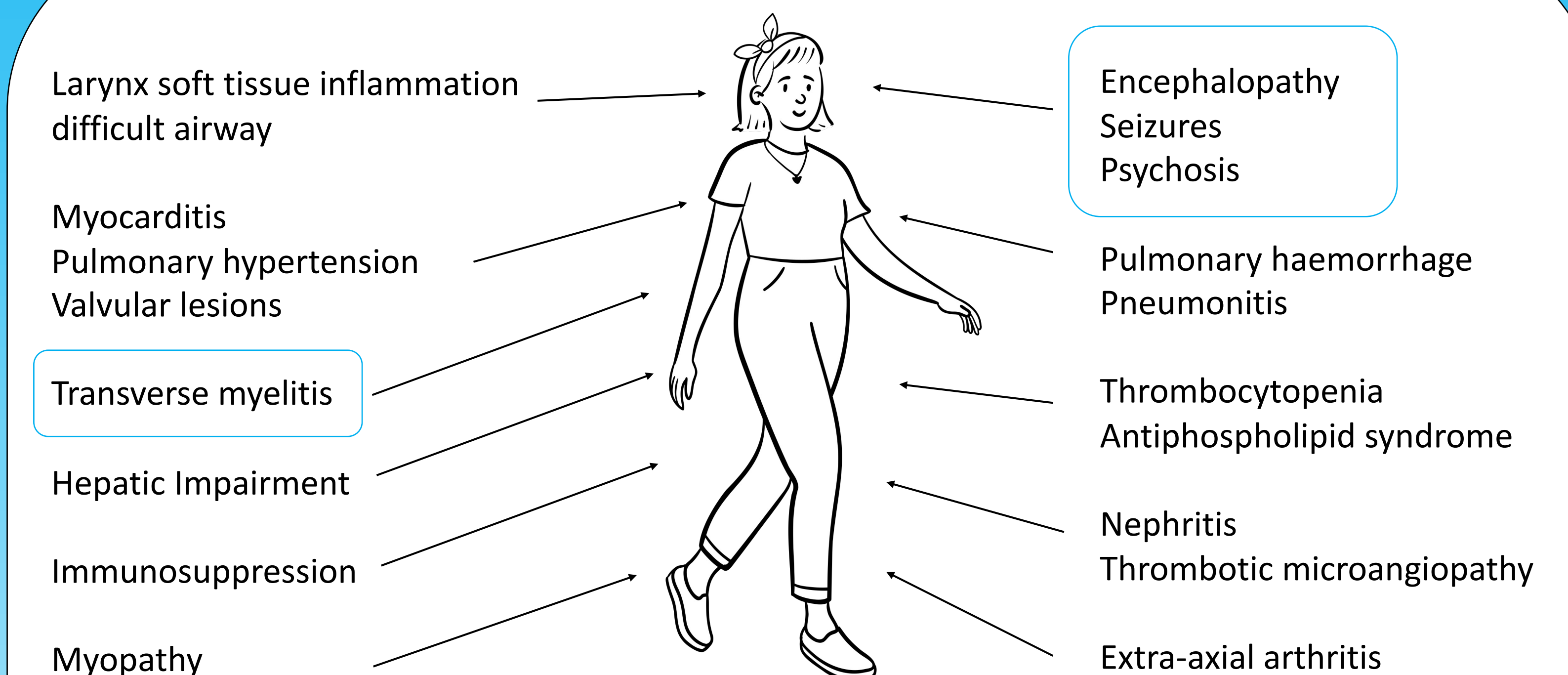


Figure 4: Multiorgan system impact of SLE.
Blue Boxes denote the possible presentations of Neuropsychiatric Lupus (NL).

DISCUSSION

SLE can affect any organ system (see Figure 4) & is therefore of huge relevance to anaesthetists. In pregnancy, it increases the risk of maternal & foetal death, pre-eclampsia, thrombosis & preterm labour¹. In those with established SLE, thorough monitoring for flare-ups is key. Although rare, NL should be considered amongst a broad range of differentials for parturients presenting with seizure activity &/or reduced GCS (Figure 3).

The key to the successful management in this case & delivery of a healthy baby was a huge degree of multiple multidisciplinary team (MDT) working; Intensive Care (initially), Radiology, Rheumatology, Neurology, Midwives, Maternal Medicine Team (Obstetricians & Obstetric Physicians), Anaesthesia, Neonatology.

General anaesthesia & central neuraxial techniques are recognised options in parturients with SLE. Full assessment & MDT discussion of the severity of disease & systems involved will inform choice. In this case, the absence of spinal cord inflammatory processes & thrombocytopenia, along with the history of seizures, guided the decision towards central neuraxial anaesthesia.

This case report emphasises the importance of **collaborative multidisciplinary teamwork** in assessing a patient with rare but severe disease & developing an individualised patient pathway.