



BROKEN SPINE, UNSHAKEN SPIRIT – TIVA IN EARLY PREGNANCY FOR TRAUMATIC SPINAL INJURY FIXATION IN RURAL SRI LANKA

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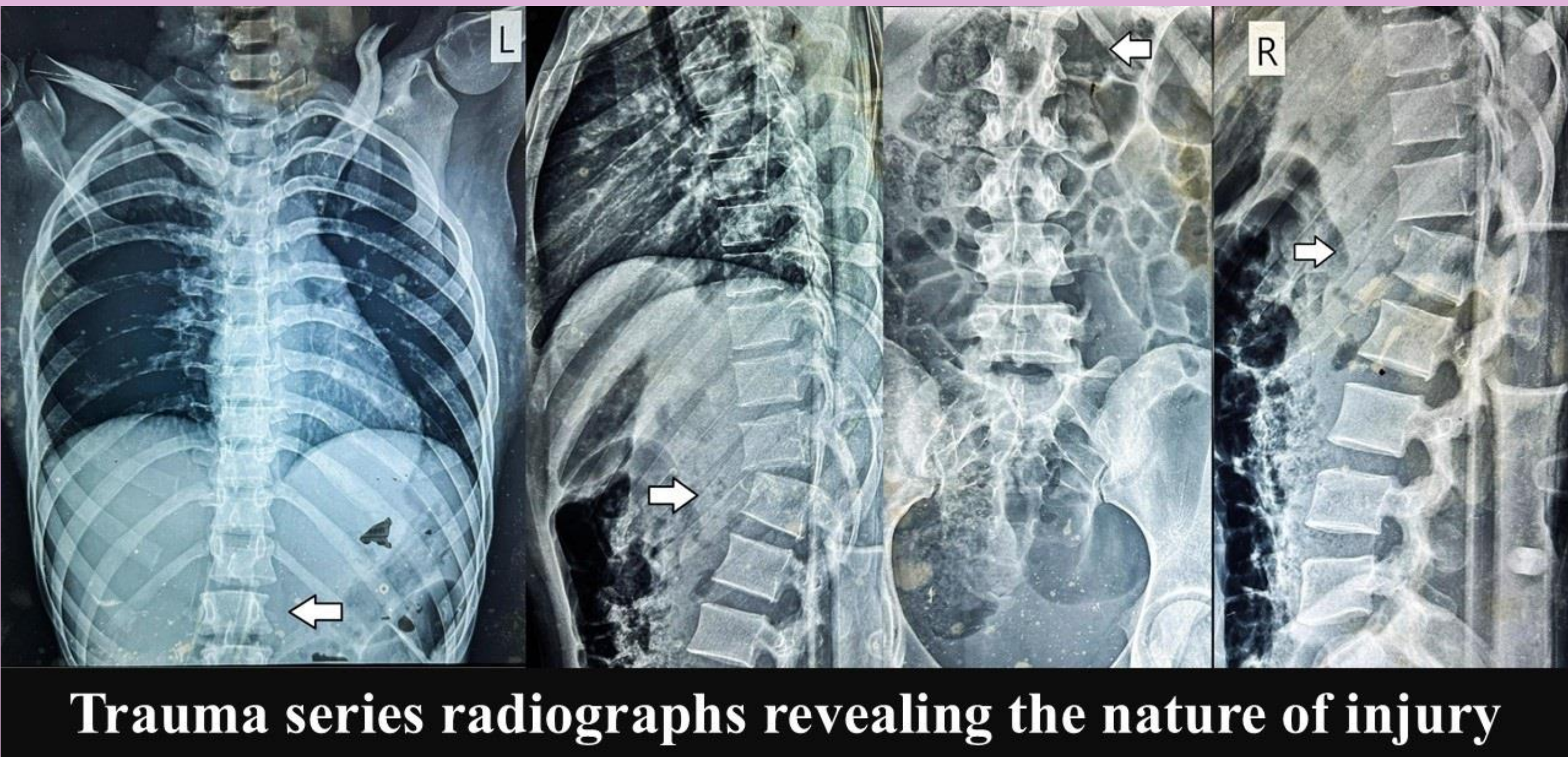


Introduction

- Traumatic spine injury with compromised neurology necessitate early operative intervention as the injuries are time critical.
- We describe a successful spinal injury fixation under Total Intravenous Anaesthesia (TIVA) in first trimester of a parturient leading to a successful pregnancy and delivery in a rural hospital in Sri Lanka.

Case Report

- A 24 year old G3P2C2 with a POA of 9 weeks was transferred to a rural peripheral hospital following a road traffic accident. She had complete loss of left lower limb motor power with intact sensation. Right limb was unaffected. Radiographs revealed T12 & L1 vertebral fracture dislocation. A transabdominal ultrasound revealed a normal viable foetus.
- A multi-disciplinary team recommended urgent fixation of the spine in prone position.
- Invasive arterial monitoring was established. The hospital had only one TIVA capable syringe pump and BIS monitoring was unavailable.
- Patient was anaesthetized via a fixed dose Remifentanyl infusion 20-40mcg/kg/hr and target-controlled Propofol infusion (2.5-4 mcg/ml) with effect-site monitoring using Schnider model.
- She was intubated with a 6.5mm reinforced endotracheal tube. Patient was proned carefully with the abdomen allowed to hang freely.
- Blood pressure was maintained with IV Phenylephrine infusion.



Trauma series radiographs revealing the nature of injury

- T11/T12 & L1/L2 Transpedicular fixation & L1 relocation was performed under image intensifier guidance and bilateral Erector-spinae (ESP) catheters were placed for analgesia. Post-operative period was uneventful.
- Left leg motor function improved postoperatively. Foetal viability was confirmed.
- She gave birth to a healthy baby girl at 37 weeks through vaginal delivery.

Discussion

- General anaesthesia in first trimester carries a high miscarriage risk and can adversely affect foetal neurodevelopment.^{1,2} Pregnancy augments haemodynamic effects of prone position which were less pronounced in this patient due to lower gestational age.
- Although Schnider model is not licensed in pregnancy, careful observation of effect-site concentration at loss of verbal response helped maintain an adequate depth of anaesthesia. Phenylephrine was used to support placental perfusion due to favourable foetal acid-base profile.¹
- ESP catheters improved postoperative analgesia and reduced opioid requirement. NSAIDs were avoided due to possible adverse foetal effects.¹
- This case report underscore the importance of improvising anaesthetic approach when making time-critical decisions in a resource limited setting.

References

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