Dodging bullets: Emergency spinal anaesthesia in a patient with a bullet spinal fragment

Case report

Dr Oscar Atkinson, Dr Alexander Bennett, Dr Dan Growcott, Portsmouth Hospitals University NHS trust

NHS Portsmouth Hospitals University NHS Trust

Introduction

- Retained spinal bullet fragments are rare
- No clear guidance or much experience on neuraxial anaesthesia safety
- Obstetric anaesthesia frequently requires time-critical decision-making
- Management therefore depends on individualized risk–benefit assessment in the absence of clear guidance

Case summary

- 33-year-old, primigravida, 37+4 weeks, gestational diabetes
- Limited English language proficiency
- Not referred for anaesthetic assessment
- Presented in spontaneous labour
- Foetal distress → category 2 emergency LSCS called
- History obtained via telephone translator: gunshot wound to her back 16 years prior, with a retained bullet in her spine (no records available)
- No neurological signs / symptoms

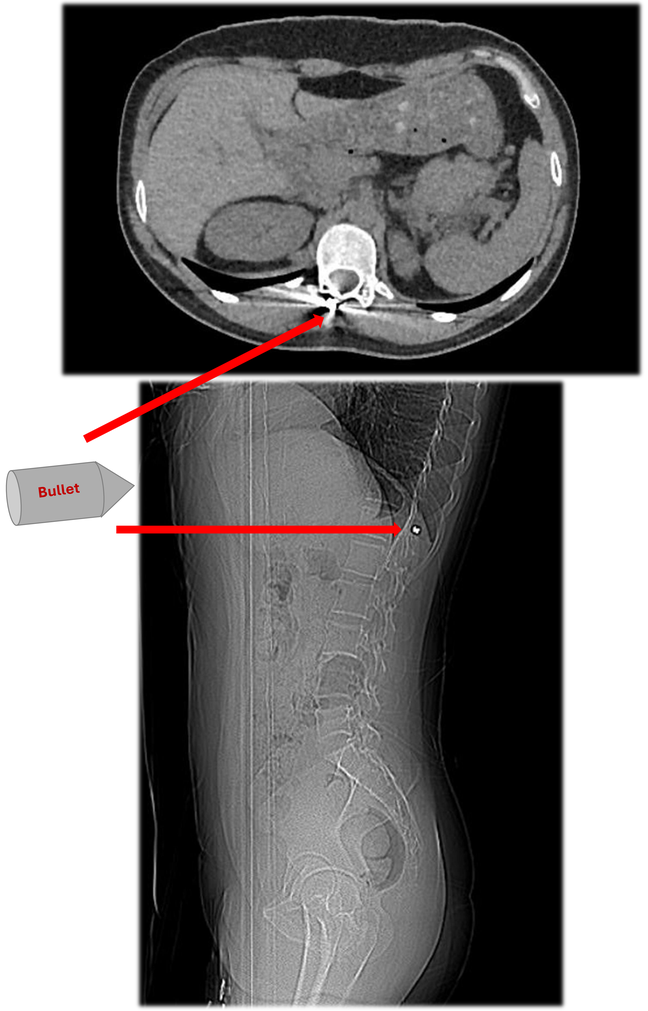
Key Decision Point – Spinal vs general?

Why spinal anaesthesia?

- Imaging available and reviewed: CT KUB on our system from 1 year previously – with no mention of the bullet in the report
- Bullet located outside spinal canal at T12, lateral to the spinous process
- No neurological deficit

Risks

- Unpredictable block spread
- Potential need for conversion to general anaesthetic
- Theoretical risk of needle contact with the bullet



Outcome

- 1st pass spinal with 2.4 mL of 0.5% bupivacaine in glucose (12 mg) + 300 mcg of diamorphine
- Block spread was normal, surgically uncomplicated LSCS
- No intraoperative pain, healthy baby born

Discussion

- Risks explained and shared decision making over language line without delaying surgery
- Imaging review was critical to risk assessment – we were fortunate to have it
- Extra-canal location reduced theoretical risk
- Neuraxial anaesthesia may be safe if spinal canal not involved, and vertebral level distant from needle insertion point
- If available, imaging should guide decision-making in uncertain anatomy
- Complex histories may lack documentation, especially if history of medical care from overseas

Learning points

1. Before neuraxial anaesthesia, **review imaging**
2. Extra-canal **fragments are not an absolute contraindication to spinal anaesthesia**
3. Although **discussing risk through a translator** in a time-critical situation is **challenging**, **this case shows it is possible**
4. Antenatal **anaesthetic assessment improves safety**

Written consent gained by patient for presentation and publication