

Failed epidural top-up due to a kinked epidural catheter

Arvind Karthikeyan & Lisa Stevens

Introduction:

Epidural catheter kinking is a rare complication of lumbar epidural analgesia. There have been few previous reports of the epidural catheter kinking in the subcutaneous tissue or dermis after initial successful functioning[1]. The rate of failed epidural anaesthesia ranges from 13% to 47%[2].

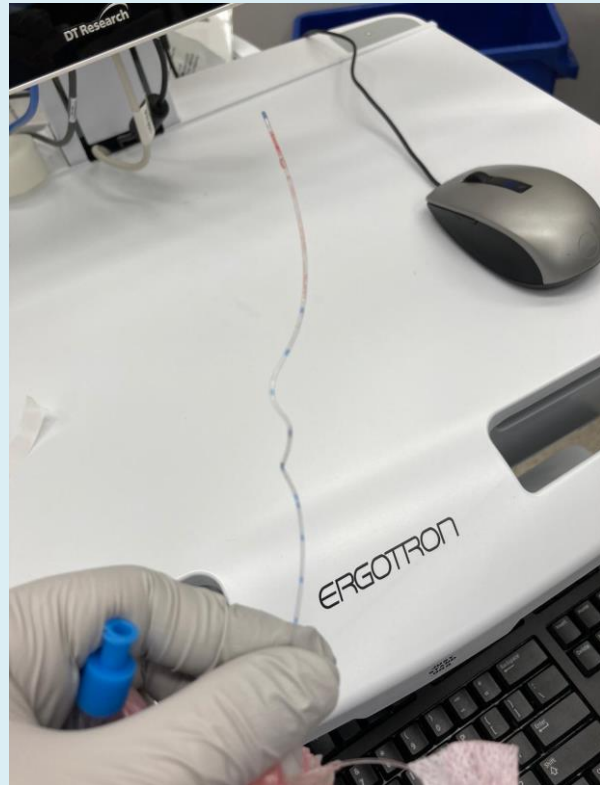


Figure 1:
Kinked epidural
catheter

Case Report:

- 30yo female, G1P0, 39/40 gestation
- Epidural inserted for analgesia
 - Loss of resistance 5.5cm, secured 10cm at the skin
 - Worked well during labour
- Cat 2 caesarean called for non-reassuring CTG
- Epidural block assessed: patient pain-free and block to T6 bilaterally with ice test
- Epidural top up:
 - 100mcg fentanyl and 5mLs 2% lignocaine with 1:200 000 adrenaline via epidural with no issues
 - A further dose of lignocaine with adrenaline attempted to be administered, met with resistance and the plunger on the syringe was unable to be advanced
 - No kinks or disconnections external part of the catheter
 - Catheter pulled back 1cm and a further 2x doses of lignocaine with adrenaline were given with no resistance
- Epidural block assessed as adequate for surgical anaesthesia
- Surgery commenced and patient initially tolerated surgery well
- When surgeon was deep in the abdomen, patient felt intense pain and had to convert to GA
- At the end of the case, firm traction was required to remove the epidural catheter
- It was found that the epidural catheter was completely kinked at the 9cm mark beneath the skin (See figure 1)

References:

- [1] Journal of Anaesthesiology, *Epidural catheter kinking: an appalling experience*, 2023 Jan-Mar; 39(1): 142-143. [hps://www.ncbi.nlm.nih.gov/pmc/arcles/PMC10220175/](https://www.ncbi.nlm.nih.gov/pmc/arcles/PMC10220175/)
- [2] Saudi Journal of Anaesthesia, *A kinked epidural catheter*, 2019 Apr-Jun; 13(2): 158-159. [hps://www.ncbi.nlm.nih.gov/pmc/arcles/PMC6448422/](https://www.ncbi.nlm.nih.gov/pmc/arcles/PMC6448422/)
- [3] Hippokraa Medical Journal, *Management and visualisaon of a kinked epidural catheter*, 2010 Oct-Dec; 14(4): 294- 296. [hps://www.ncbi.nlm.nih.gov/pmc/arcles/PMC3031330/](https://www.ncbi.nlm.nih.gov/pmc/arcles/PMC3031330/)