Overall, more than half (74) of the 129 patients with arachnoiditis attributed to LA neurotoxicity experienced a complicated needle or catheter insertion, including memorable paresthesia, pain, or multiple attempts, irrespective of the type of neuraxial block.

Conclusions The aggregate evidence attributing arachnoiditis to LA neurotoxicity is largely outdated, incomplete, or both, and insufficient to characterize the strength of association. However, there appears to be an association between complicated or traumatic insertion and arachnoiditis.

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**OP026** NRFIT EPI DURAL KIT EVALUATION

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Please confirm that an ethics committee approval has been applied for or granted: Not relevant (see information at the bottom of this page)

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**Background and Aims** UK safety alerts recommend the exclusive use of non-luer connectors for neuraxial and regional procedures. We recently transitioned from Luer to NRFit Portex/Smiths epidural kits. Following 2 successive cases of retained epidural catheter tip, we investigated alternative kits, aiming to review the commonly available brands of NRFit epidural kit and comparatively assess their design, utility and function.

**Methods** 1. Desktop analysis- Over 4 weeks in September 2022, obstetric anaesthetists performed an unblinded non-clinical desktop assessment of 4 NRfit epidural kits - Portex/Smiths (24-1300-22), Pajunk (0331166-49), B.Braun 20G (4517309N-01) and Vygon (5191.601). The survey focused on needle, loss of resistance (LOR) syringe, catheter and filter/connector.

2. Medical physics analysis- A laboratory assessment comparing the physical properties of the kits (packaging, needle, stylet, needle wings, LOR syringe, catheter, filter/connector, ease of catheter shearing, and line pressures). 3. Clinical analysis- Based on the previous phases, 4 products including B. Braun 19G (4514025N-01) had each been clinically trialled for 4 weeks in obstetrics by January 2023 and were assessed on a follow up survey.

**Results** 17 anaesthetists were surveyed in phase 1 and 9 anaesthetists in phase 3 of the project (figure 1). In the desktop (figure 2) analysis Portex/Smiths scored highly overall. Pajunk scored best overall in the medical physics analysis. Portex/Smiths and B.Braun 19G scored highly overall and were the preferred brands in the clinical (figure 3) analysis.

**Conclusions** No first generation NRfit kit is optimal, and all have design issues. Some issues are more tolerable than others and iterative design changes from all brands are eagerly anticipated.