

Challenges with peripheral nerve block catheters
Overcoming barriers to improve effectiveness

 Kai H.W. Lange, Christian Rothe, Martin Wraber, Jakob Schlünsen, Tore V.C. Allerup

INTRO

- Peripheral nerve block catheters have unacceptable high failure rates preventing clinical adoption.
- Other barriers need to be identified, analyzed and overcome.
- Secondary displacement is a key problem, but not the only one.

ANALYSIS

- The following barriers were identified
 - Time on task too long
 - High skill level required
 - Sterile draping needed
 - Ultrasound guidance and hydrodissection not possible throughout procedure
 - Initial placement not precise
 - Secondary dislocation rate too high

POTENTIAL SOLUTIONS

- As simple as a single injection nerve block
- Time on task < 5 min
- Preassembled system
- Single-hand operation
- No sterile draping
- Ultrasound guidance and hydrodissection possible throughout the procedure
- Feature preventing secondary dislocation

CONCLUSION

- Peripheral nerve block catheters need to be redesigned to overcome the barriers preventing clinical adoption

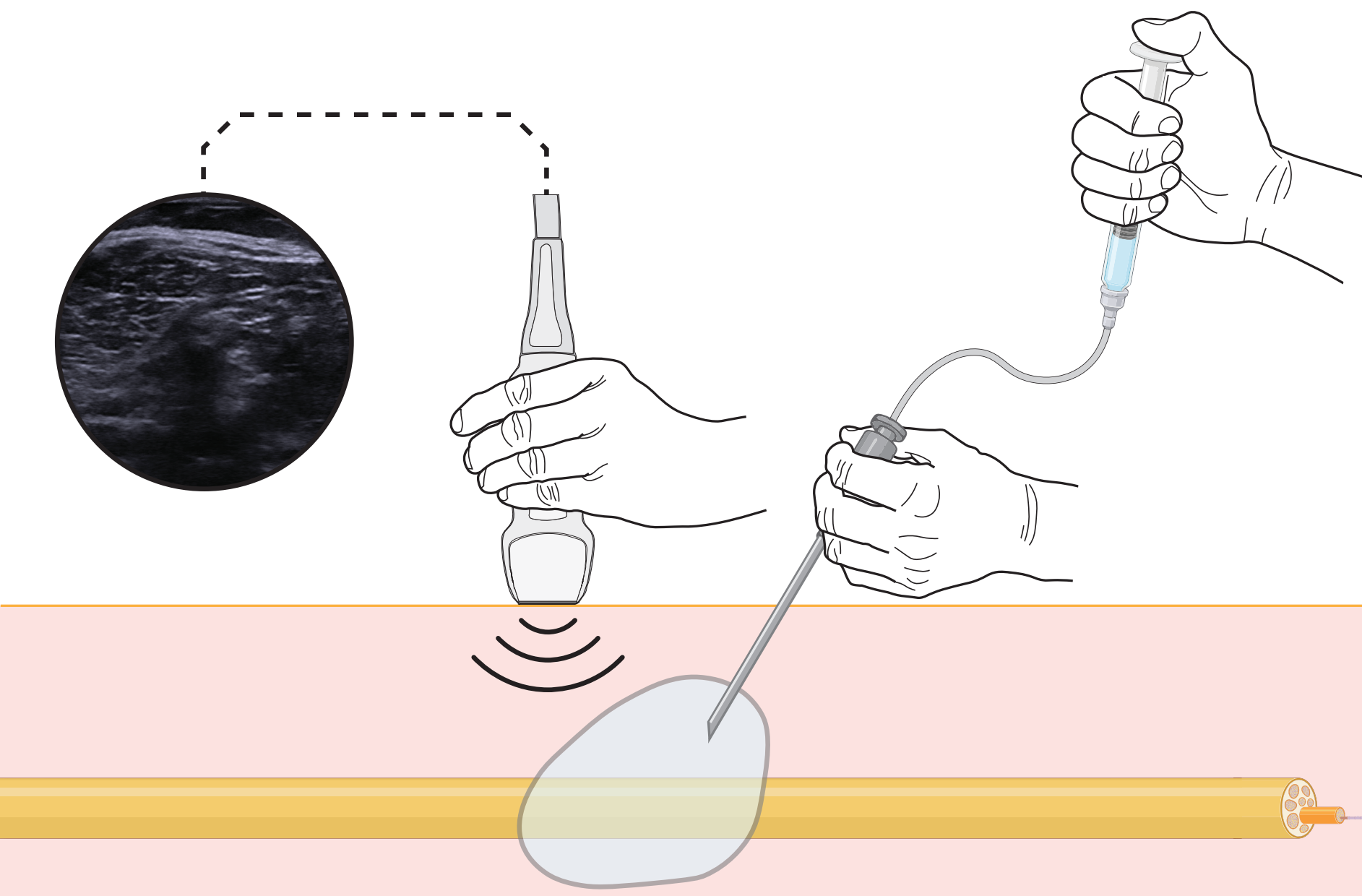
Why peripheral nerve block catheters fail... and possible solutions



Current kit consists of 10-15 parts!



A Insertion phase



B Catheter deployment

