Electromagnetic needle tracking for ultrasound guided nephrostomy

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Purpose:
To assess retrospectively if nephrostomy guided by ultrasound (US) and electromagnetic needle tracking was feasible in mild to moderate hydronephrosis.

Results:
• 30 procedures in mild/moderate hydronephrosis
• In 29/30 cases, needle insertion was correct in first pass
• No complications were observed

Conclusions:
• Electromagnetic needle tracking is a feasible and safe method for US-guided nephrostomy
• Enables other routes of access than parallel with the scan plane

Materials and methods:
Electromagnetic needle tracking works by means of an electromagnetic sensor in the needle tip, sensors attached to the transducer and a magnetic transmitter beside the patient
The needle tip is marked electronically on the screen