

20. Ropivacaine 0.5%, 0.75% and bupivacaine 0.5% as plain spinal anaesthetics. Clinical differences to onset and duration of motor/sensory block

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Background: Aim of the study was to estimate the clinical differences between two spinal local anaesthetics, ropivacaine at 0.5% and 0.75% concentration and bupivacaine at 0.5%.

Material/Methods: Fifty male patients, undergoing urological procedures, were randomized in three groups. In group R0.5 (n=14), ropivacaine 0.5% was administered spinally at doses 18 ± 2 mg, in group R0.75 ropivacaine 0.75% at doses 18 ± 3 mg and in group B0.5 bupivacaine 0.5% at doses 16 ± 2 mg. Sensory (cold-warm and pin-prick sensation) and motor block (modified Bromage Scale) were assessed at intervals 2, 5, 10, 15, 20 min, as well as time for complete regression of sensory and motor block. An index ($I = \text{dose}/\text{maximum sensory level}$) was calculated. Mean arterial pressure and heart rate every 5min and need for vasopressor was noted. Demographic parameters and duration of surgery were recorded in all groups. For statistical analysis, one-way ANOVA and Kruskal-Wallis for multiple comparisons post-test were applied. Level of $\alpha = 0.05$ was considered statistically significant.

Results: There was no difference between groups regarding demographics, duration of surgery, haemodynamic variables and need for vasopressors. At 5 and 10 min, no difference for sensory and motor block was found in all groups. Time to maximum cephalad spread was similar in all groups. Indexes for cold-warm and pin-prick sensation were statistically different between ropivacaine (either 0.5% or 0.75%) and bupivacaine ($p < 0.001$). Duration of sensory and motor block was significantly longer in the bupivacaine group ($p = 0.0007$) with median values (in parentheses 95% CI) in the following table:

	R0.5	R0.75	B0.5
Sensory block (min)	160 (140-180)	160 (135-215)	265 (220-290)
Motor block (min)	155 (140-185)	135 (110-185)	235 (210-260)

Results: Ropivacaine 0.5% and 0.75%, as spinal anaesthetics, show similar profile for onset, extent and duration of sensory/motor block. Bupivacaine 0.5%, dose adjusted, has greater maximum cephalad spread and longer duration of both sensory and motor block.

23. A self-correcting checklist and algorithm for teaching epidural insertion and measuring competency

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Introduction: Dr. Marcia Schofield, Dr. Donald Graham

Methods: A self-correcting checklist was developed after a pilot survey of 52 consultant anaesthetists in the east of England across two deaneries. The checklists were issued to 15 junior anaesthetists (length of training 0-9 months) starting a surgical or maternity teaching 'block.' The checklist was filled in for every epidural inserted. The checklist was accompanied by a five-item algorithm. Simple guides to insertion level and basic trouble-shooting tips were provided. The study material was used to assist them in learning the principles and pitfalls of epidural insertion. Information was fed back monthly to enable the teachers to assess the level of competency the trainee had reached and to highlight areas of difficulty for the trainees.

Results: The results are being gathered from 3 pilot sites across the East of England. A learning curve for each trainee was constructed. CUSUM, split-half and ANOVA are being used to assess differences in trainees and difference by site. Trainees' feedback on the usefulness of the checklist and the algorithm is presented alongside trainers feedback.

Conclusion: Preliminary results have demonstrated that this method of reflective learning is effective in teaching and assessing competency in junior doctors. The format gives trainers valuable information for early intervention as it highlights areas of difficulty early in the training process. It is cheap, easily implemented, compliance is good if it is introduced early in training and made a mandatory part of assessment. We also suggest that this method may be useful to teach and assess other professionals such as midwives, operating department practitioners and anaesthetic nurses in this technique.