

293. Evaluation of different factors influencing the success of regional anaesthesia (RA)

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Background & Aims: Successful RA depends on many factors. The aim of this study is to evaluate those factors and define the role of patient and doctor comfort levels during various RA techniques.

Methods: 29 experienced anaesthetologists from 18 hospitals in Latvia, France and the UK were asked to evaluate the 15 factors influencing the RA. The 10-point scale was used (1 - unimportant to 10 - very important). Patient and doctor comfort levels during RA were rated using a similar rating (1 - unpleasant to 10 - very comfortable).

Results: From 15 parameters 5 were considered very important (rating of 8-10): knowledge of topographical anatomy (9.7), neurostimulator (9.1), patient comfort (8.2), comfort of anaesthesiologist - ease of accessing work area (8.2) and ease of accessing instruments (8.2). Six factors (rated from 6-8) were considered important: quality of needle (7.9), static patient positioning (7.6), no pressure from surgeon (6.8), echograph (6.6), good handbook (6.3) and choice of anaesthetics (6.1). At average (rating of 4-6) were considered: manufacturer of needle (5.4), the presence of nurse (4.8), experience of nurse (4.5) and time of day (3.9). Patient comfort level was rated as average for arms (7.4), legs (7.0) and spinal anaesthesia (7.1), but only satisfactory (6.8) for epidural anaesthesia. The comfort ratings of the doctor while positioning the patient were: arm 8.4, leg 8.2, epidural 8.5, spinal 8.6, work with neurostimulator 8.5 (all very comfortable), but with the echograph 7.0 and during injection anaesthetics 7.6 (average).

Conclusions: Three of the most important factors governing RA (rated above 8 points) are related to patient-doctor comfort. These can be greatly improved.

375. A case of paradoxical breathing after upper arm surgery

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Background and Aims: Our patient was 78 years old, ASA IV and was scheduled for osteosynthesis of the humerus. Due to the severity of his health condition [obstructive lung disease, chronic renal failure, lung cancer and radiation therapy, hypertension] and the findings from his physical examination we decided to perform a interscalene block for surgical anaesthesia.

Methods: We used for the block a short-bevel 22G, 50mm needle and a nerve stimulator [0,5mA,2Hz]. We injected 28 ml ropivacaine 0,5% plus 0,15 mg clonidine, where the stimulator would produce movement, at each of three following nerves: radial, musculocutaneous, axillary. Adequate sensory block [VAS<3] was achieved 15 minutes after the block and the operation started 30 min from the block [VAS=0].

Results: 45 minutes after the block our patient demonstrated paradoxical breathing, mild tachypnoea [23breaths/min] and tachycardia [120beats/min]. The physical examination of the lungs showed no evidence of pulmonary edema, wheezing or any new pathological sounds, only reduced breathing sounds at the bases of the lungs. The spO₂ was reduced from 94% (with face mask and FiO₂:35% at 8lt/min) to 91%. We increased the FiO₂ to 50% [12lt/min]. All this time the patient was responsive and didn't complain of dyspnoea, while his saturation was improving. We decided not to intubate and the paradox breathing stopped 45 min later [180min from the block].

Conclusions: One of the common complications of the interscalene block is the paralysis of the frenic nerve, which happens even if someone uses a nerve stimulator, due to diffusion. In that case the patient remains asymptomatic or it complains of short breath, while his aerometric status is mildly affected. Paradoxical breathing is uncommon explicated in this case only by bilateral paralysis of the diaphragm.