

PD-41. COMBINING BUPIVACAINE WITH MEPIVACAINE FOR INTERSCALENE BLOCK FOR SHOULDER ARTHROSCOPY

Kahn, R.L.; Jules-Elysee, K.; Urban, M.K.; Liguori, G.; Ya Deau, J.; Kelsey, W.T.

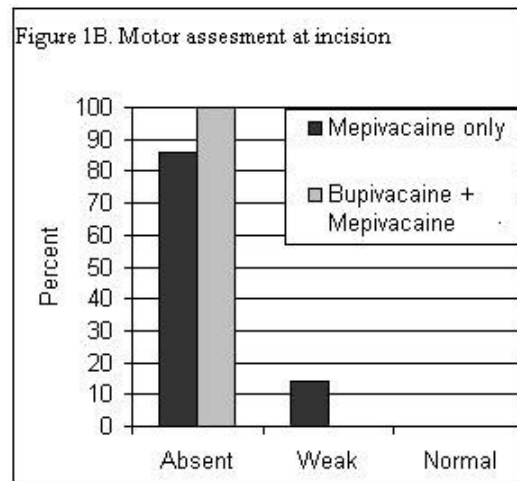
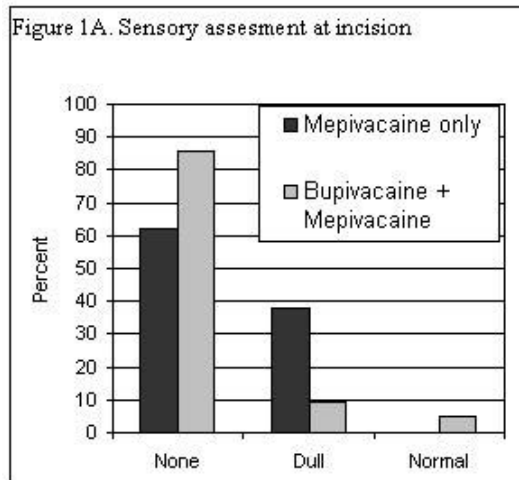
Anesthesiology, Hospital for Special Surgery, New York, New York

Background and Objectives: The optimal characteristics for interscalene block include rapid onset, complete anesthesia and prolonged post-operative analgesia. We examined whether diluting mepivacaine 1.5% with a relatively small amount of bupivacaine would enhance post-operative analgesia without adversely impacting intra-operative effects.

Methods: Following IRB approval and written informed consent, 45 patients undergoing outpatient shoulder arthroscopy under interscalene block utilizing a paresthesia technique were enrolled. In a randomized, double blinded design, each patient received 0.67 cc/kg of either mepivacaine 1.5% with NaHCO₃ 1.5 meq /30 cc, or a 4:1 mixture mepivacaine 1.5% with NaHCO₃: bupivacaine 0.75%; all with epinephrine 1:300,000. Patients were telephoned on post-op day 1 to assess block duration and pain characteristics.

Results: Demographics were similar between groups, except for a 12 year age difference. (Table 1) The paresthesia site was similar, with 48% in the shoulder overall. There was no difference in sensory or motor block at incision time (Figure 1), nor in surgeon's or anesthesiologist's rating of overall anesthetic quality as assessed at the end of arthroscopy (Figure 2). Sensory block was prolonged by 79% with the addition of bupivacaine (252±77 vs. 452±126 min, p<0.0001). Time to initial pain treatment with oral narcotic was also prolonged (294±103 vs. 472±208 min, p=0.002). Overall, 49% rated their overall post-op pain as moderate or severe, with no difference between groups.

Conclusions: This combination, resulting in mepivacaine 1.2% plus bupivacaine 0.15% with epinephrine for interscalene block has an onset and anesthetic quality that is indistinguishable from mepivacaine 1.5%. In contrast, the duration of analgesia is prolonged from about 4 to 7 hours. Approximately half the patient's characterized the overall severity of post-op pain as moderate or severe, highlighting the need for additional analgesic modalities.



	Mepivacaine only	Bupivacaine + Mepivacaine
N	22	23
Male (n)	18	16
Age (yrs)	35 ± 15	46 ± 12
Height (cm)	177 ± 9.0	170 ± 19
Weight (kg)	87 ± 23	84 ± 22
ASA Status (I/II/III)	12/ 8/ 1	12/ 11/ 0
Duration of Surgery (min)	60 ± 27	68 ± 31
Site of Paresthesia (Shoulder/ Upper arm/ Elbow and distal)	12/ 4/ 5	9/ 5/ 9

Table 1. p>0.05 for all data (except age, p<0.01) *No data for one patient

