Intraarticular local anesthetics: *primum non nocere*

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Dear Sir,

We are following with interest that the papers concerning the use of intraarticular local anesthetics during arthroscopic procedures in Knee Surgery Sports Traumatology Arthroscopy [2, 4]. The study by Campo et al. [2] re-ignites the debate on the safety of intraarticular local anesthetics. The authors claim that, “If the effect of the intra-articular anaesthetic is proven not clinically relevant this would be a definite argument to stop the administration of these agents”. Their results show small improvement on patient comfort; therefore, they advise to use systemic anesthetic instead of intraarticular bupivacaine or ropivacaine for pain relief after knee arthroscopy. We appreciate Campo et al. [2] for their efforts for better patient safety. However, we have substantial concerns on the issue and feel very strongly to ask what was the need for further research when some evidence is so obvious?

Firstly, as Campo et al. [2] state there is no level 1 evidence in current literature about the effectiveness of intra-articular local anesthetic administration on postoperative pain in patients undergoing arthroscopy. Secondly, the safety of intraarticularly administered local anesthetics is a major concern. Farkas et al. [3] report that bupivacaine is cytotoxic, because it induces almost 100% cell necrosis after 24 h of exposure in cultured human chondrocytes. Likewise

the two distinct steroid preparations, betamethasone and prednisolone show similar characteristics in inducing cell death, reaching 20% of cell death by 24 h. Finally, in the clinical setting, concern has been raised following reports of dramatic chondrolysis following shoulder arthroscopy in which infusion of the local anesthetic was employed [1].

We are in the opinion that, bearing in mind the risk of cell necrosis, intraarticular local anesthetics should only be used for circumstances like arthroplasty and grade IV osteoarthritis in which the hyaline articular cartilage has been destroyed considerably. Until further evidence, we should think twice before using bupivacaine for arthroscopic procedures or designing such research.

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