

Comparison of ropivacaine and bupivacaine toxicity in human articular chondrocytes

Piper SL, Kim HT

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Ropivacaine is said to be as effective as bupivacaine for intraarticular analgesia. Bupivacaine, the most commonly used local anesthetic for post-operative intra articular use has been shown to be cytotoxic to bovine articular chondrocytes. These authors tested viability of human articular cartilage, harvested from the femoral head or tibial plateau of five patients. After exposure to bupivacaine, ropivacaine and saline solution, the viability of the cartilage explants was significantly greater after ropivacaine compared to bupivacaine. There was no difference in cartilage viability after ropivacaine and saline. The authors conclude that 0.5% bupivacaine is significantly more chondro-toxic than 0.5% ropivacaine.

Diabetes and fragility fractures: a burgeoning epidemic?

Editorial

Bone (2008) 43: 3–6

Individuals with diabetes mellitus have an increase in bone fragility. It is speculated that this may be due to bone quality, i.e. micro architectural bone composition being deficient. A recent meta-analysis showed an increase in hip fracture risk in both type 1 and 2 diabetes, but BMD was increased in type 2 and decreased in type 1. The discrepant relationship of fractures to BMD suggests that bone quality rather than density may be a critical factor. Fractures are more common in type 1 diabetes than the general population occurring frequently in the lower limbs. Other risk factors such as neuropathy, age, previous stroke increased the likelihood of fracture. In type 1 diabetes, it is speculated that its abrupt onset in childhood or adolescence may adversely alter BMD in adolescence and later, in the course of the disease, bone quality. The combination of diabetes and increased fragility fractures is considered to represent emerging disease entities which require ongoing research to address several unanswered questions at the present time.

Acute and overuse injuries correlated to hours of training in master running athletes

Knobloch K, et al.

Foot Ankle Int (2008) 29: 671–676

The objectives were to get detailed data, which the authors state is currently unavailable on acute and overuse injuries among elite athletes based on cumulative running distance. Over an eight month period the average runner covered 65.2 ± 28.3 km per week with an overall distance of 34,416 km per athlete. The overall injury rate was 0.08/1000 km (2.93/athlete). Overuse injuries were more common than acute injuries. Achilles tendinopathy, anterior knee pain, shin splints, and plantar fasciitis were the most frequently encountered injuries in descending order. Mid portion Achilles tendinopathy was more common than insertional. Running on sand increased mid-Achilles tendinopathy 10-fold while running on asphalt decreased it. The authors conclude that Achilles tendinopathy is the most common running associated tendinopathy followed by runner's knee and shin splints.

Metastatic skeletal diseases of the foot

Maheshwari AV, et al.

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Metastases to the bones of the feet and hand are known to be rare although the prevalence, sources of the primary malignancy and relationship to imminent death are unclear. Acrometastasis (hand) are usually considered a rare preterminal event and part of disseminated, skeletal metastases. Over a 19 year period from 694 patients with histologically proven metastatic skeletal disease, 14 cases of metastases to the foot bones were identified. This prevalence of 2% is higher than the usually reported figure of 0.3 to 0.9 for foot and ankle metastasis. The mean survival after diagnosis was 14.8 months. The hand, foot (talus and calcaneus) were most frequently involved. Lung, kidney and breast were the most common primary malignancies in this series. In only one patient (bladder cancer) was no metastasis found elsewhere. Solitary foot bone metastasis was slightly more frequently seen than 2 or more bony metastases.

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