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TRIAGE TOOLS FOR DETECTING CERVICAL SPINE INJURY IN PAEDIATRIC TRAUMA PATIENTS

Computed tomography (CT) pan scans in the traumatized adult are commonplace, with evidence to support their use in early diagnosis and management of the polytraumatized adult. However, in children, radiographs and CT scans are used much less frequently, owing to the increased risks with ionizing radiation. Most trauma centres will therefore have locally agreed diagnostic imaging strategies based on clinical findings. These protocols are nonetheless rather variable, with different centres even within the same country having differing protocols, and there is little evidence as to which is best. This diagnostic test accuracy review from **The Netherlands** looked at clinical tests for detecting cervical spine injuries in children who have undergone blunt trauma.[1] The review team used papers reporting both the National Emergency Radiography Utilization Study (NEXUS) criteria and the Canadian C-spine Rule (CCR) as triage tools to assess whether any further imaging is required. The literature review identified three moderate quality studies which reported radiograph, CT, or MRI as the reference standard. All three studies used the NEXUS criteria and described sensitivity values that ranged from 0.57 to 1.00 and specificity that ranged from 0.2 to 0.54. Only one study used the Canadian rule and found sensitivity was comparable at 0.86 and specificity was 0.15. The authors conclude that there is insufficient evidence on the use of the Canadian rule in this instance to draw any conclusions. The NEXUS criteria showed a wide range of sensitivity values and even wider confidence intervals. The authors particularly comment on a total of four false negative results when NEXUS criteria were applied (out of a total of 96 injuries across the studies) and, as such, did not recommend its use as a triage tool in the paediatric population. It seems there is still some work to do on establishing benchmark criteria for diagnosis of cervical spine injuries in the paediatric population and, at present, it may be that clinical acumen is the best there is.

TO BLOCK OR NOT TO BLOCK? PAIN CONTROL AFTER ELECTIVE HIP ARTHROPLASTY SURGERY IN ADULTS

Early mobilization and enhanced recovery after hip arthroplasty surgery is an evidence-based, and now almost routine, procedure. With lower complication rates and costs associated with rapid discharge, there has been a huge shift in clinical practice around the world. Postoperative pain control is pivotal to its success, and this new intervention review from **Canada** assessed the efficacy of nerve blocks compared with other modes of analgesia.[2] The authors identified a surprisingly high 45 randomized controlled trials (RCTs) in the literature to include in a meta-analysis reporting the outcomes of 2491 patients. The main outcome of the meta-analysis is that there is moderate-quality evidence to suggest that peripheral nerve blocks provide better postoperative pain relief than systemic analgesia alone. In the same comparison, the authors found a reduction in the incidence of acute confusional state and length of stay, but this was only supported by very low-quality evidence. The study team also identified and reported comparisons between peripheral nerve blockade and neuraxial blocks. There was moderate-quality evidence suggesting no difference in postoperative pain between the two but the authors found that the neuraxial blocks had a poorer side-effect profile in terms of pruritus. This review highlights the efficacy of the nerve block in postoperative pain control, although it was not able to show any difference in likelihood of patients walking on day one. As we strive for ever better outcomes for our elective hip arthroplasties, we can look forward to a growing body of evidence in this area with an updated review – during the literature search for this study, the authors also found 11 eligible ongoing trials.

LOW-LEVEL LASER THERAPY FOR CARPAL TUNNEL SYNDROME

While surgical decompression is undoubtedly the definitive management for carpal tunnel syndrome, there are a number of nonsurgical treatments available over which there has been some controversy, to say the least. This review from **Aberdeen (UK)** compared the efficacy of low-level laser therapy (LLLT) with placebo and other nonsurgical treatments.[3] The authors identified 22 studies that made comparisons that included LLLT *versus* placebo, ultrasound, steroid injection, transcutaneous electrical nerve stimulation (TENS), tendon gliding, splinting, or a combination thereof. They judged most of the evidence to be of very low quality, with small study numbers and high or unclear bias. Furthermore, they were not able to find evidence to support the superiority or inferiority of LLLT when compared with other nonsurgical treatments. For the time being, it appears that all nonsurgical treatments are equally (in)effective.

NEUROMUSCULAR ELECTRICAL STIMULATION FOR PATELLOFEMORAL PAIN SYNDROME

Patellofemoral pain is a common problem and, traditionally, the mainstay of treatment has been physiotherapy. This review from **Brazil** looked at the efficacy of neuromuscular electrical stimulation (NMES) for this condition and found a surprising eight randomized controlled trials (RCTs)

reporting the outcomes of NEMS.[4] The reported trials included comparisons of NMES *versus* placebo, NMES *versus* exercise, NMES and exercise *versus* exercise alone, and different delivery frequencies of NMES. While the study authors did identify that the results from three trials suggested reduced pain in the short term by using NMES with exercise over exercise alone, they point out that the evidence to support this was of very low quality, and that the confidence intervals were such that the difference may not be clinically relevant. Overall, the authors found no evidence to make a recommendation for routine practice.

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