

Growing Rod In Early Onset Scoliosis

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ABSTRACT

The management of severe spinal deformity in the growing child remains a challenging problem. Non-operative methods range from orthotics to casting to traction, however, in certain circumstances, these techniques cannot effectively prevent deformity progression and surgical methods are required. Current options for surgical management of spinal deformity in the growing child include definitive spinal fusion with or without instrumentation, selective fusion, growth modulation, spinal instrumentation without fusion. All of these methods have a significant complication rate and despite advances in technology and instrumentation, remain controversial.

Physical Examination For K Point Syndrome

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ABSTRACT

Pain or numbness in the neck, upper extremity, low back and/or leg is not infrequently caused by non-spinal conditions, which may be misdiagnosed as a wide variety of diseases: myelopathy, radiculopathy, discopathy, spondyloarthropathy or entrapment neuropathy. K Point syndrome is a symptom combination characterized by positive tenderness at K Point, which is located at the cranial musculotendinous junction of the cleido-occipital (CO) head of the sternocleidomastoid muscle (SCM), and the following signs in members of the K Point muscle group on the same side: tenderness at muscle ends, squeeze pain at muscle bellies, and stretch pain. According to this definition, K Point syndrome covers most non-specific pain including Barre syndrome, repetitive stress injuries, post-whiplash syndrome and myofascial pain or fibromyalgia, and even frozen shoulder and acute low back pain attack. In addition to K Point, tenderness is widely found at the musculotendinous or muscle-to-bone junctions of muscles, for example, at the pectoralis minor, the 1st dorsal interosseous of the hand, the 1st intercostal, the infraspinatus and the 1st dorsal interosseous of the foot. Squeeze pain is positive in the belly of the CO head and those of other muscles near the symptomatic site. For example, in patients with low back pain, a squeeze of the external oblique abdominal causes pain. Similarly, in patients with numbness in the hand or foot, a squeeze of the intrinsic muscles in it causes pain. Active or passive stretch of muscles near the symptomatic site causes pain. For example, in patients with low back pain, side bending of the lumbar spine causes pain in the flank on the opposite side. As for numbness in the hand and foot, passive stretch of the intrinsic muscles such as the abductor pollicis brevis and interosseous in the hand and the flexor hallucis brevis and interosseous in the foot causes pain, respectively. K point block, local anesthesia with 2 ml of lidocaine, at K Point is effective to stop or improve the pain.

Management of Neglected Lateral Condyle Humerus Fracture

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ABSTRACT

Lateral condyle humeral fracture is the second most common fracture of the elbow in children. A displaced lateral condyle fracture has a high risk of nonunion because of its nature as an intra-articular fracture. Furthermore, pulling of the common extensor muscle may overturn the fragment making the articular surface of the fragment to face the fractured metaphysis proximally. Therefore open reduction and internal fixation (ORIF) is the preferred option for most lateral condylar fractures because it prevents complications caused by inaccurate reduction. Nonunion lateral condyle fracture leads to tardy ulnar nerve dysfunction pain, instability, progressive valgus, and loss of motion. However there are controversies regarding treatment of neglected displaced lateral humeral condyle fracture. Although successful open reduction can reduce complication of nonunion, excessive dissection may lead to avascular necrosis (AVN), nonunion, joint stiffness, and premature physal closure. These can be avoided by preserving the posterior soft tissue, lengthening of common extensor tendon and rigid fixation with screw fixation to allow early motion of the joint.

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Assessment of Medical Intern's Ability in Detecting Developmental Dysplasia of Hip in Neonate Babies Using Baby Hippy Model in An Tertiary University Hospital

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ABSTRACT

Background: Developmental dysplasia of the hip (DDH) represents a spectrum of anatomic abnormalities where the femoral head and acetabulum are aligned improperly. Early diagnosis helps improve treatment and decrease morbidity. Prevention of missed or late presentations by careful physical examination is recommended as a screening tool. The objectives of this study were to determine the medical intern's ability in performing Ortolani and Barlow test on newborn babies using Baby Hippy model and to determine the efficiency of Baby Hippy as a teaching model in improving the ability house officer in detection of DDH. **Methods:** A randomized controlled study design was used in this study. The study was carried out in Orthopaedic Department, Universiti Kebangsaan Malaysia. The sampling frame consisted of a list of all medical interns working in the Department of Paediatrics, Obstetrics Gynaecology and Orthopaedics. **Results:** The results indicate that the average medical intern's ability to detect hip abnormalities correctly was poor. Nevertheless after the training, the proportion of those in the intervention group who were able to examine the both the right and left hip correctly increased significantly from 1.7% to 43.1% ($Z=4.90$ $p < 0.001$). The pre-test and post test ability of respondents in detecting developmental dysplasia of hip to examine both the right and left hip correctly in the control group did not differ significantly ($Z=1.89$, $p=0.06$). **Conclusions:** The medical intern's ability to examine correctly for developmental dysplasia of the hip using Ortolani and Barlow test on newborn babies using Baby Hippy model is poor. The use of Baby Hippy as a teaching model is an efficient method in improving the ability of the house officer in detecting physical signs of DDH. Our study is the premier paper describing the actual capability and exposure level of medical interns in detecting DDH in local clinical setting.

Incidence of Sacroiliac Joint Dysfunction Following Instrumented Lumbar or Lumbosacral Fusion Surgery

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ABSTRACT

Background: A cross sectional study was carried out among patients who had undergone instrumented lumbar fusion surgery at a teaching hospital in Kuala Lumpur. **Objective:** To determine the incidence of sacroiliac joint dysfunction and its associated factors in patients who have undergone instrumented lumbar or lumbosacral fusion surgery. **Method:** Thirty-nine patients at the Hospital University Kebangsaan Malaysia, Kuala Lumpur who were operated on from January 2007 till December 2010 were selected to participate in this study. They were examined clinically to determine whether they could be labeled as having sacroiliac joint dysfunction by means of a provocation test of the sacroiliac joints. They were then grouped into 2 groups. For patients of the 1st group, fusion did not extend to the sacrum, and in the case of patients of the second group, fusion had extended to the sacrum. The incidence of SI joint dysfunction was evaluated based on the length and level of fusion. The clinical and functional outcomes of the patients were evaluated using the Oswestry Disability Index (ODI) and the Visual Analogue Scale (VAS). **Results:** The incidence of sacroiliac joint dysfunction was 69.2%, with 14 patients having unilateral and 13 having bilateral SI joint dysfunction respectively. There was a higher incidence of sacroiliac joint dysfunction in patients having fusion extending to the sacrum as compared to those who did not. However, there was no association with the amount of levels fused. Patients' overall ODI and VAS scores improved post-operatively as compared to the pre-operative period. **Conclusion:** There is a high incidence of sacroiliac joint dysfunction occurring in patients who had undergone instrumented lumbar fusion which extended to the sacrum.

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Cannulated Screw Fixation for Femoral Neck Fractures : Five Years Experience in University Malaya Medical Centre

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ABSTRACT

Introduction: Fixation of neck of femur fractures via cannulated screws is widely practised. This mode of fixation is chosen for patients with poor premorbid conditions, minimally displaced fractures and for the very young. **Objective:** Objectives of the study are: i. to determine the success rate of cannulated screw fixation in fracture neck of femur; and, ii. to identify poor prognostic factors that lead to failure of fixation. **Method:** All patients who underwent cannulated screw fixation for femoral neck fracture from January 2006 till 2010 at UMMC were reviewed retrospectively. **Results:** There were a total of 53 patients. Median age of patient was 30.2 years (range: 6-91 years). Intracapsular fractures were found in 37 patients (69.8%) while 16 patients had extracapsular fractures (30.2%). Thirty-six patients (67.9%) had displaced fractures (Garden III & IV) while 17 patients had undisplaced fractures (Garden I & II). All patients underwent cannulated screw fixation in which 37 (69.8%) had surgery within 24 hours of injury while 16 (30.2%) had surgery performed 24 hours after injury. All patients were followed up to union and complications thereafter if any. Forty-one (77.4%) patients achieved good outcomes. There was a small number of patients - 11 (20.8%) with poor outcomes, namely, avascular necrosis (81.8%) and non union (18.2%). Avascular necrosis developed most commonly as a result of displaced fractures. **Conclusion:** Cannulated screw fixation for fractures of neck of femur performed within 24 hours or more does not influence outcome with regards to fracture union and avascular necrosis. The crucial prognostic factor in the development of avascular necrosis in our review, is the initial displacement of fracture.

A New Clinical Approach In Detection Of Hip Prosthesis Infection Using Multi Modality Functional Imaging Technique 18F-FluoroDeoxy Glucose (FDG) PET-CT - Preliminary Data

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ABSTRACT

Objective: This study is meant to highlight the clinical value of 18F-FDG PET-CT in the diagnosis of hip prosthesis infection. **Method:** Nine patients with hip prosthesis were evaluated. Patients presented with clinical features mimicking infection. Whole body functional multi modality imaging using 18F-FDG PET-CT were performed. Both PET images with attenuation-corrected (AC) CT and PET images with non-attenuation-corrected (NAC) CT were analyzed. The PET and CT images were also analyzed separately. A control study was performed on another forty patients who underwent whole body PET-CT using FDG as biotracer for oncology reasons. Semi-quantification value of 18F-FDG were obtained from both hips through the region of interest (ROI) drawn over the area covering the acetabular roof and the femoral tubercles in transaxial images. The mean standardized uptake value (SUVmax) obtained from controls are compared with SUVmax from PET-CT images obtained from all nine patients from similar sites. **Results:** Five patients were concluded as having infected prosthesis based on clinical findings including positive culture. The condition of the remaining four patients were concluded to be the result of aseptic loosening, bursitis or pain of an undetermined cause. The mean SUVmax in the infected prosthesis was 6.78 higher than in the control group. Our study found that the NAC PET-CT was more superior than the AC PET-CT and stand-alone CT in detecting prosthesis infection with sensitivity, specificity and accuracy of 100%, 75% and 88% respectively. **Conclusion:** Multi modality functional imaging using 18F-FDG PET-CT is a useful tool in the investigation of hip prosthesis infection. The technique can serve as an alternative tool to exclude infections

Prospective Study of Commonly Used Prophylactic Anticoagulants In Arthroplasty Patients

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ABSTRACT

Background: Deep vein thrombosis remains a frequent complication following total joint arthroplasty. All patients for elective orthopaedic operations involving the lower extremities are at risk of developing deep venous thrombosis. **Objective:** This study was conducted to look into the adverse effects of commonly used anticoagulants in DVT prophylaxis of patients undergoing arthroplasty of the hip and the knee at HSAH, Sungai Petani. **Method:** Patients admitted to HSAH, Sungai Petani, from September 2010 to February 2011 for TKR and THR were included in the study based on specific inclusion and exclusion criteria. The average age of the cohort was 65 years. On admission, a questionnaire was administered to assess risk factors for DVT. Comorbidities and bleeding indices were assessed before surgery. Anticoagulants (Fondaparinaux, Dabigatran, Enoxaparin) were randomly chosen for all, except Muslim patients, for religious reasons. Arthroplasties were conducted in a standard fashion by a single surgeon. Strict postoperative rehabilitation protocols were used. Anticoagulant was discontinued for patients who developed major bleeding complications. **Results:** A total of one hundred and two patients underwent knee and hip arthroplasties for the duration of the study. Seventy-six patients (74.50%) had moderate risk factors (2-4) and 21 patients (20.58%) had high risk factor (>4). Three groups of 36, 34 and 32 patients received Fondaparinaux, Pradaxa and Clexane respectively. Complications related to haemoglobin level drop from admission to post operative phase, bleeding indices, clinical bleeds and liver enzymes were studied for each group of patients. **Conclusion:** The adverse effects of using any of the three anticoagulants above were comparable. None of the complications warranted discontinuation of anticoagulants nor necessitated the need for a second surgery for any patient in the three groups.

Early Report On Usage Of Synthetic Polyester Implants For Tendon Reconstruction In The Hand

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ABSTRACT

Traditionally, tendon autografts from palmaris longus or plantaris are utilized in extensor and flexor tendon reconstructions of the hand. Due to massive tendon loss and with inadequate length of autografts, we have instead used a polyester textile implant (Orthotape™, Neoligaments UK) for tendon reconstruction of the hand. We report 4 cases of patients, all having undergone severe crush with degloving injuries which had led to extensive loss of tendons. They were between 19 and 43 years of age. Two patients underwent radial forearm flaps. Two had volar wounds with flexor tendon loss; one had extensor tendon loss and another had severe extensor tendon adhesions. Areas of tendon loss measured about 8-10 cm in length. All patients underwent tendon reconstruction as an elective procedure at a later stage. The orthotape was measured to length, starting from the tendinous origin of the muscle till the distal remnant of existing tendon. Appropriate tension was utilized before the orthotape was sutured using the Pulvertaft weave augmented with Prolene 3/0 sutures at both ends. Any pulley or retinaculum was reconstructed along the length of the orthotape. The next day, patients underwent immediate postoperative physiotherapy. One patient obtained excellent recovery of the extensors of index to small fingers. One had moderate recovery of the extensors with an increase of 30 degrees range of motion in finger extension. The other two had poor recovery (one having had extensive bony injuries and the other possibly had adhesions). We recommend usage of synthetic polyester tendon implants as an alternative to tendon autografts in hand reconstruction with massive tendon loss.

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A Comparative Prospective Study of Functional Outcome In Welfare Funded Arthroplasty Patients

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ABSTRACT

Background: Total knee replacement is a common surgery for severe osteoarthritis of the knee and has revolutionized quality of life in patients. **Objective:** The aim of the study was to investigate whether the outcomes of surgery differed between self-funding patients and patients funded by government welfare fund organisations. To our knowledge, this is the first study in evaluating functional outcomes of welfare funded patients. **Method:** Patients with severe osteoarthritis of the knee requiring arthroplasty at the Orthopaedic clinic of HSAH, Sungai Petani, between 2010 and 2011 were included in the study. Fifty were self-funded and 51 welfare-funded. Status of knee of all patients were clinically evaluated using the Knee Society Score (KSS) and WOMAC scoring systems. Standard and semiconstrained prosthesis and patellar resurfacing were used on these patients. Patients were reevaluated postoperatively at three to six months using the same scoring systems to record improvements in function. All patients were operated on by the same surgeon. Results were recorded and analysed using Microsoft Excel and comparisons made between the self-funding group and welfare-funded group. **Results/Conclusion:** Interesting differences between the two groups with respect to preoperative scores and gain in functions postoperatively were observed and recorded and conclusions drawn.