extension of the knees was impossible. The patella on both knees was at a higher position and a gap was palpated below both the patellae. The radiograph showed bilateral patella alta. Ultrasound showed complete rupture of both patellar tendons. Treatment was by surgical sutures tendon completed by a lacing for 6 weeks retained by a removable knee splint for early rehabilitation. The functional outcome after 1 year was very satisfying.

Discussion.– A traumatic forms of rupture of the patellar tendon are very rare and occur on pre-existing lesions (systemic diseases, endocrine disease and chronic renal failure). The diagnosis is essentially clinical helped in case of doubt by ultrasound. Surgical treatment should be with the objective of achieving a solid repair for rapid rehabilitation. Early postoperative rehabilitation has a capital interest and determines the functional prognosis.

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P101-e
Spinal surgery complicated by cauda equina syndrome: A series of 17 recent observations
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Keywords: Cauda Equina; Etiology; Rehabilitation; Dural tear; Spinal extradural hematoma

Objective.– Postoperative neurological complications have been reported in 0–2% [1]. We aim to clarify the context, diagnostic and therapeutic elements to post-surgery cauda equina syndrome.

Methods.– Cauda equina syndrome postoperative identified in CHU Bordeaux, between 1 January 2011 and 30 November 2013.

Results.– Seventeen patients were identified, 61 ±13 years, 5 men. Spinal pathologies motivating surgery: symptomatic lumbar spinal stenosis (9 cases), degenerative scoliosis (5 cases), sciatica hyperalgic on herniated disc (3 cases). An intraoperative dural tear was noted in 12 patients, with 2 rootlets lesions. In secondary neurological deficit, presence of spinal extradural hematoma (8) or material malposition (1), requiring reoperation.

Discussion.– Our data are comparable to those of the literature [2]. Any occurrence of postoperative neurological signs should trigger medical intervention ± imaging exploration.

References

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P102-e
Severe exercise-induced damage in quadriceps muscle
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Keywords: Exercise; Muscle damage; Creatine kinase; Elevated liver enzymes

Introduction.– Exercise-induced muscle damage commonly occurs following unaccustomed physical activity that particularly involves eccentric contractions of greater than normal duration and intensity. We present a case of exercise-induced muscle damage in quadriceps on both side leading to a substantial elevation in liver and muscle enzymes.

Observations.– A 33-year-old male patients presented with anterior thigh pain on both side. His complaints began following a bout of squating exercise comprising 70 squats 3 days ago on a first day of fitness center he had newly registered. His urine turned red the next day. There was a substantial elevation in muscle (creatinine kinase: 54,760 U/L) and liver enzymes (alanine amino-transferase: 344 U/L, aspartate aminotransferase: 1164 U/L) in the blood test. Hematuria and proteinuria was seen in the urine test. T2 weighted MRI of the upper leg showed diffuse increase in signal intensity (indicating oedema) in bilateral quadriceps muscles. The findings were consistent with exercise-induced quadriceps muscles damage. The patient was hospitalized and IV fluids therapy was administered. Abnormality in laboratory tests improved within a week.

Discussion.– Exercise-induced muscle damage may result in important metabolic consequences. Blood tests and MRI of involved muscles can be used for diagnosis.

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P103-e
The effect of acupuncture during post-acute phase of rehabilitation after total knee arthroplasty
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Keywords: Traditional Chinese treatment; Rehabilitation total knee arthroplasty

Introduction.– The purpose of this study was to determine whether traditional Chinese treatment, acupuncture, is effective in reducing pain and swelling and improving range of motion (ROM) during the post-acute phase of rehabilitation after total knee arthroplasty (TKA).

Method.– Following TKA, 40 knees in 40 patients were randomly assigned to either an acupuncture treatment group (GROUP A) or a control group (group C). In group A, the complementary treatment of acupuncture was performed 5 times/week from postoperative day 7 until postoperative day 24. Outcome measures were:

– pain as assessed by a visual analog scale;
– reduction of swelling around the knee as indicated by its circumference at the center of the patella;
– ROM of the affected knee.

Results.– Group A patients had significantly reduced pain and swelling and earlier recovery of ROM than did those in group C.

Conclusion.– Acupuncture provides effective treatment during the post-acute phase of rehabilitation after TKA with respect to pain relief, reduction of swelling around the knee, and early recovery of ROM.

Discussion.– Significant differences between the two groups in the time to achieve preoperative ROM. This is probably because pain and swelling improved in patients in Group A than in those in group C.

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P104-e
Vastus medialis isolated strengthening as a treatment option in persons with patellofemoral pain
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Keywords: Patellofemoral pain syndrome; Vastus medialis; Patellar tilt angle

Introduction.– Patellofemoral pain syndrome (PPS) is a major cause of anterior knee pain. Patellar malalignment due to muscle imbalance can result to PPS.
This study examines the effect of isolated vastus medialis strengthening in pain reduction. 

**Material and methods.**– Fourteen persons with PPS were assessed for patellofemoral joint contact area and the patellar tilt angle by using X-rays. All subjects underwent a specially designed isolated vastus medialis strengthening program for 6 weeks, 3 times/wk. All subjects were given a numeric pain score (1–10) at the beginning and at the end of the strengthening program.

**Results.**– Although all subjects reported pain reduction of the anterior knee pain ($P < 0.001$) no significant changes were observed concerning the patellar tilt angle in the X-ray control.

**Conclusion.**– Isolated vastus medialis strengthening can result in pain reduction in PPS. Radiographic changes in patellar tilt angle may need more time since these changes are due to long established muscles imbalances.

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P105-e

**Effectiveness of back school program in lower back pain**

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**Keywords:** Back school program; Back pain; Disability

**Introduction.**– The aim of this study is to evaluate the effectiveness of a back school program (BSP) to improve pain and disability in patients with low back pain.

**Methods.**– Prospective observational study (January–March 2013) involving 102 outpatients with low back pain classified in: back-school’s group (BSP): kinesitherapy ± electrotherapy + BSP; -control group (CG): kinesitherapy ± electrotherapy. Scales: Visual Analogic Scale (VAS), Oswestry’s disability index (ODQ), Fear-Avoidance Beliefs Questionnaire (FABQ), Statistical analysis (SPSS20).

**Results.**– Median age: 57 years; 94.2% chronic low back pain and 76% taking analgesics (both groups similar). Previous rehabilitation (BSP/CG): 80.4%/61.5%. Surgery (BSP/CG): 13.7%/3.8%. Laboral activity (BSP/CG): 46%/73.1% worked, 36%/17.3% retired, 14%/9.6% sick leave, 4%/0% unemployed.

After treatment, in both groups we found improvement of pain (VAS), disability (ODQ) and a decline in the influence of psychosocial factors in pain (FABQ). However, in BSP these results were statistically significant (FABQ P < 0.05; ODQ P < 0.01). In BSP, 98% of patients were satisfied with BSP, 86% decreased analgesic consumption, 63% modified physical activity (27.4% CG), 78.4% reported that they have decreased the number of visits, 63% of sick leave patients returned to work.

**Discussion.**– Applying back school program together with conservative physical treatment is more effective than only applying the latter in back pain treatment, in terms of pain and disability.

Further reading


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P106-e

**The pachydermoperiostosis: Reeducation care about 2 cases**


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**Keywords:** Pachydermoperiostosis; Rehabilitation

**Introduction.**– The pachydermoperiostosis or primitive hypertrophic osteoarthropathy is a rare hereditary disorder of often autosomal dominant transmission. It is associated with dermatological and rheumatologic events.

We report two new cases.

**Cases report.**– We bring back the cases of two male patients, 20 and 34-year-old, without particular history, stemming from non consanguineous marriages, with an absence of similar cases in their families. Both are followed for a pachydermoperiostosis, whose research of a secondary etiology was negative. The first complained for 3 years of bilateral knee pain resistant to medical treatment and rehabilitation. He had bilateral synovectomy in his two knees, followed by rehabilitation. The second has been complaining for 9 months of bilateral knee pain with outpouring, and limited mobility. He had arthrocentesis of the 2 knees, infiltration with corticosteroids and rehabilitation with pain relief.

**Discussion.**– Pachydermoperiostosis preferentially affects males. Both have the complete form. Evolution is often chronic, with alternating exacerbations and remissions. Functional rehabilitation is an important part of the care.

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P107-e

**Symptomatic accessory navicular bone: A case series**

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**Keywords:** Accessory navicular bone; Symptomatic; Flat foot

**Introduction.**– Accessory navicular bone is a rare cause of acquired flat foot. Diagnosis is often delayed resulting in chronic pain and deformity. Three cases of acquired flat foot that were diagnosed after significant delay are presented. 

**Observation.**– Three young patients from military background presented with 1 year history of progressively increasing pain and swelling in one of the feet after prolonged physical activity and standing. There was no history of trauma or rheumatologic disorder. On examination, they had mild swelling, tenderness in the medial aspect and flattening of medial longitudinal arch. X-rays of the foot revealed an accessory navicular bone (types II, III). MRI revealed partial tear of tibialis posterior tendon in two cases. Rest of their baseline investigations were normal. They were advised rest, NSAIDs and modified footwear. Pain and swelling improved.

**Discussion.**– Accessory navicular bone is present in 40–80% of population but it does not always become symptomatic. Mostly, it remains unnoticed until it causes pain and swelling resulting in chronic foot pain and then to flat foot. It is diagnosed on radiographic evaluation, although CT/MRI scan is also very helpful. Its treatment is both conservative and surgical, later reserved for resistant cases and young.

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P108-e

**Interest of botulinum toxin for preoperative diagnosis test in the piriformis muscle syndrome**

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**Keywords:** Piriformis muscle syndrome; Botulinum toxin; Sciatic nerve neuromyelitis

**Introduction.**– The intramuscular injection of botulinum toxin (TBX) is effective in the treatment of the piriformis muscle syndrome (PMS) [1], but the effect remains passing. We suggest using it in diagnostic aim before proposing a surgical gesture.

**Method.**– Ten patients followed in the CHU of Strasbourg, presenting a PMS, answered initially the injection of TBX, having led secondarily to a surgical care were included.