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## 1- Periosteal chondrosarcoma

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*Am J Roentgenol.* 2009 Jan;192(1):W1-6.

The purpose of this article is to identify the typical imaging features of periosteal chondrosarcoma on radiography, CT, and MRI. Periosteal chondrosarcoma is a rare low-grade malignant cartilaginous tumor arising from the external surface of bone. Imaging features are often specific. Recognizing periosteal chondrosarcoma and differentiating it from other surface tumors is of capital importance because the prognosis is excellent after adequate local surgery alone.

## 2- Tramadol as an adjuvant to lidocaine for axillary brachial plexus block

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*Anesth Analg.* 2009 Jan;108(1):367-70.

### Background

In this prospective randomized study, we evaluated the effect of tramadol as an adjuvant to axillary block.

### Methods

We studied 102 patients scheduled for hand surgery under axillary block with lidocaine 1.5% (epinephrine 1/200,000) and the addition of either 4 mL saline (control group), 100 mg tramadol and 2 mL saline (TL group), or 200 mg tramadol (TH group).

### Results

Onset time was longer in the TH group, 16 +/- 7 min (9 +/- 3 min in control group;  $P = 0.01$ ). Sensory block and time for first rescue analgesia were significantly prolonged in the TH group compared with both TL and control groups (265 +/- 119 min vs 190 +/- 87 min vs 126 +/- 48 min;  $P = 0.018$ ); (734 +/- 434 min vs 573 +/- 516 min vs 375 +/- 316 min;  $P = 0.02$ ).

### Conclusions

The benefit of block prolongation associated with the addition of 200 mg tramadol to lidocaine during axillary block is limited by the slow onset of the block.

## 3- Acute tibial tubercle avulsion fractures in the sporting adolescent

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*Arch Orthop Trauma Surg.* 2008; 128(12):1437-42.

### Introduction

The authors report 7 cases of acute tibial tubercle avulsion fractures. The fracture occurred in 6 out of the 7, after an abrupt tension of the patellar tendon in male sporting adolescents (age 13-17 years). Two patients presented symptoms of homolateral Osgood-Schlatter's disease before the lesion.

### Method

According to Ogden's classification, the tibial tubercle avulsion fracture was not displaced in 3 cases (stage IA) and was treated conservatively by immobilization for 6 weeks. In 4 cases, the fracture was displaced and necessitated an internal fixation with plaster for about 6 weeks. A torn patellar tendon was noted in one adolescent having a stage IIIB avulsion fracture.

### Result

The mean follow-up was of 4.5 years (1.5-7.5 years). The results were satisfactory: complete functional recovery, resumption of sport at the previous level and absence of recurvatum.

## 4- Anthropometric, physiological and performance characteristics of elite team-handball players

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*J Sports Sci.* 2008 Nov 29:1-7.



The objective of this study was to provide anthropometric, physiological, and performance characteristics of an elite international handball team. Twenty-one elite handball players were tested and categorized according to their playing positions (goalkeepers, backs, pivots, and wings). Testing consisted of anthropometric and physiological measures of height, body mass, percentage body fat and endurance (VO<sub>2</sub>max), performance measures of speed (5, 10, and 30 m), strength (bench press and squat), unilateral and bilateral horizontal jumping ability, and a 5-jump horizontal test. Significant differences were found between player positions for some anthropometric characteristics (height and percentage body fat) but not for the physiological or performance characteristics. Strong correlations were noted between single leg horizontal jumping distances with 5-, 10-, and 30-m sprint times ( $r = 0.51-0.80$ ;  $P < 0.01$ ). The best predictors of sprint times were single leg horizontal jumping with the dominant leg and the distance measured for the 5-jump test, which when combined accounted for 72% of the common variance associated with sprint ability. In conclusion, performance abilities between positions in elite team-handball players appear to be very similar. Single leg horizontal jumping distance could be a specific standardized test for predicting sprinting ability in elite handball players.

## 5- Lipoma arborescens of the knee

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*J Clin Rheumatol.* 2008 Dec;14(6):370-2.

## 6- Contribution of exercise and diet in the management of knee osteoarthritis in the obese

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*Ann Readapt Med Phys.* 2008 Nov;51(8):663-70.

### Objective

Our objective was to determine whether exercise and weight loss are more effective either separately or in combination, in improving pain and physical function in obese adults with moderate knee osteoarthritis (OA).

### Patients and methods

Forty-five obese adults, with a body mass index greater than 35 kg/m<sup>2</sup> or 30 < BMI < 35 associated to at least one cardiovascular risk factor, suf-

fering from knee pain with evident radiographic signs of knee OA, were involved in our study. All patients were evaluated at baseline and at the end of the study. The assessment parameters were weight loss, the bioelectric impedance analysis, pain, six-minute walk distance, cardiovascular parameters, and muscular strength. The physical function was measured with the Womac and the Lequesne indexes. Patients were randomized into four groups, a control group (G1), exercise only group (G2), diet plus exercise group (G3) and diet only group (G4).

### Results

There was no difference between the four groups at baseline. Significant improvement of function (Womac) was noticed in groups performing exercise only (G2) (26%), diet plus exercise (G3) (37.89%) and diet only (G4) (18.34%). We also noticed an improvement in pain in G2 ( $p=0.04$ ), G3 ( $p<0.001$ ) and G4 ( $p=0.02$ ). The improvement of quadriceps strength was noted only in G2 ( $p=0.01$ ) et G3 ( $p=0.001$ ) without any change in control group and diet only group (G4). The improvement of cardiovascular parameters was observed only in G2 and G3. Weight loss, decreased BMI and waist circumference was more important in diet plus exercise group (G3).

### Conclusion

The combination of weight loss and exercise provide better improvements in physical function and pain in obese adults with knee OA compared with either intervention alone. Exercise used alone or associated to dietary provides better improvements in physical capacity and muscle strength.

## 7- Study of the postural profile and spinal static for menopausal-women with chronic low back pain

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*Ann Readapt Med Phys.* 2008; 51(8):619-29.

### Objectives

To study postural and spinal static modifications associated with chronic low back pain in menopausal women. METHODS: Clinical appreciation of static spinal profile in sagittal plane; postural evaluation on the Balance Master Neurocom force platform by the modified clinical test for the sensory interaction on balance (modified CTSIB test); Radiological evaluation of spinal and pelvic parameters as well as the sagittal profile according to the Roussouly classification.



## Results

Spinal curves clinical measurement and the sway velocity of the pressure center on the Balance Master Neurocom do not show significant difference between the two groups. While the pressure center position in the anteroposterior axis shows significant difference between the two groups ( $p=0.02$ ) with a more backwards projection found in chronic low back pain subjects. Radiological evaluation shows sagittal shelter significantly superior, sacral slope significantly lower and the type 1 of lumbar lordosis more frequent in chronic low back pain women compared to healthy women.

## Discussion-conclusion

In menopausal women, chronic low back pain seems to be associated with lower sacral slope, the type 1 of lumbar lordosis more frequent and behindly projection of pressure center.

## 8- Coxa vara in chondrodysplasia: prognosis study of 35 hips in 19 children

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*J Pediatr Orthop.* 2008 Sep;28(6):599-606.

### Background

To better understand anatomical and functional outcomes of coxa vara in chondrodysplasia according to the initial presenting hip morphology, disease type, and impact of surgery.

### Methods

Clinical and radiographic records of 19 children (35 hips) diagnosed with coxa vara and with osteochondrodysplasia were reviewed. We classified the hip radiographic findings into 2 groups: (a) group I, coxa vara with a fragmented and/or nonossified head; and (b) group II, coxa vara with a regular femoral head. Surgical indications in coxa vara included decreased range of hip motion (usually diminished abduction, extension, and internal rotation), coxa vara with progression documented on regular follow-up hip radiographs, and/or severe coxa vara with a Hilgenreiner epiphyseal angle (HEA) of 60 degrees or more. Follow-up was until the completion of growth and, for some patients, into early adulthood. Mean follow-up was 8 years.

### Results

Twenty-five hips were operated on in 13 patients. In 23 hips, the procedure was a valgus osteotomy fixed by pins and wire. A pelvic extension osteotomy without valgus osteotomy was performed in

one patient (2 hips). Coxa vara recurred in 7 hips. In 4 of these hips, repeat surgery with hypervalgus osteotomy was indicated to stop epiphyseal slipping (3 hips) or to improve the arc of motion (1 hip). Functional outcomes were poor in coxa vara associated with poor epiphyseal development (nonossified or fragmented epiphysis) as seen in spondyloepiphyseal dysplasia congenita, spondyloepimetaphyseal dysplasia, Kniest disease, and multiple epiphyseal dysplasia. Coxa vara with physeal instability as observed in spondylometaphyseal dysplasia resulted in deformity recurrence postoperatively during growth. In contrast, outcome was better in cases of coxa vara with nonphyseal/nonepiphyseal involvement, that is, good femoral head morphology, stable physis, and good articular cartilage, as seen in cases of metaphyseal dysplasia and cleidocranial dysplasia.

### Conclusions

Coxa vara with physeal and epiphyseal involvement and severe impairment of the articular cartilage has a poor prognosis even after reconstructive surgery. In coxa vara with an abnormal physis, there were numerous postsurgical recurrences of the deformity during growth if the physis was not stabilized at the time of valgus osteotomy. In these cases, we should delay osteotomy until an HEA greater than 60 degrees. Coxa vara in which only the metaphysis of the femoral neck is involved, the deformity is milder and often requires no treatment. Indications for surgery in this group are increasing coxa vara, Trendelenburg gait, or an HEA greater than 60 degrees.

## 9- Association of spinal deformities with heavy metal bioaccumulation in natural populations of grass goby, *Zosterisessor ophiocephalus Pallas, 1811* from the Gulf of Gabès (Tunisia)

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*Environ Monit Assess.* 2008 Aug 16.

The present study illustrates an analysis of spinal deformities associated with metal accumulation in natural populations of *Zosterisessor ophiocephalus* derived from polluted (S1) and unpolluted (S2) areas in the Gulf of Gabès in Tunisia. Three basic types of spinal deformities were detected: kyphosis, scoliosis and lordosis. These basic deformities frequently co-occur. Spinal deformities were observed in 10.72% of the total examined fish ( $n = 494$ ). Deformed fish were 3.85 times

(IGF-1), insulin-like growth factor binding protein-3 (IGFBP-3), growth hormone (GH) and the total testosterone were measured.

## Results

The BMD and BMC for whole body, lumbar spine, femoral neck, pelvis and lower limbs were higher in soccer players than in controls ( $p < 0.001$ ). In early puberty, the soccer players also exhibited significantly greater BMD and BMC in the whole body and in weight-bearing bones compared with the controls ( $p < 0.001$ ). However, there was no intersubject variability due to puberty in either BMD or BMC. The pubescent soccer players had significantly higher hormonal concentrations of IGF-1 and IGFBP-3 than their counterparts controls ( $p < 0.05$ ). Moreover, the whole body BMD was significantly ( $p < 0.001$ ) correlated with GH, IGF-1 and IGFBP-3 but not with the testosterone concentrations.

## Conclusion

The soccer participation of boys is generally associated with the improvement of their bone mass which is mainly marked at early and late puberty. The relationships between somatotropic axis hormones and BMD of the players may be linked to the parallel development of these two parameters during puberty.

## 12- Rare location of a chondromyxoid fibroma: the os calcis

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*J Radiol. 2008; 89(7-8 Pt 1):897-9.*

## 13- Intraosseous capillary hemangioma of the radial bone

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*Rev Chir Orthop Reparatrice Appar Mot. 2008 Jun;94(4):413-6.*

Hemangioma is a rare benign vascular tumor composed of dysplastic capillaries, preferentially located in the spinal region (70%). Bony localizations are exceptional, less than 1% of cases in large series of bone tumors. We report the case of a 35-year-old male who complained of pain in the right forearm for two months. The pain was of an inflammatory type and was triggered by palpation and mobilization. The plain x-ray revealed a bony defect involving the posterior cortical of the mid-third of the radius. Magnetic resonance imaging revealed a defect of the shaft cortex with

more frequent in S1 than in S2. In both sexes, the highest occurrence of deformities was observed in the 111-120 mm class decreasing thereafter with fish length. Hepatic concentrations of cadmium (Cd), copper (Cu) and zinc (Zn) were significantly higher in *Z. ophiocephalus* from S1 than those from S2. Comparisons between fish in each site showed that liver concentrations of Cd and Zn were significantly higher in deformed fish than in normal fish. The relationship between metals accumulation and observed spinal deformities as well as the suitability of this kind of studies for environmental monitoring are discussed.

## 10- Spinal brucellosis: a review

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Brucellosis is a zoonosis of worldwide distribution, relatively frequent in Mediterranean countries and in the Middle East. It is a systemic infection, caused by facultative intracellular bacteria of the genus *Brucella*, that can involve many organs and tissues. The spine is the most common site of musculoskeletal involvement, followed by the sacroiliac joints. The aim of this study was to assess the clinical, biological and imaging features of spinal brucellosis.

## 11- Bone mineral density of young boy soccer players at different pubertal stages: Relationships with hormonal concentration

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*Joint Bone Spine. 2008 Aug 14.*

## Objectives

To examine the effects of soccer in relation with the hormonal concentration, on the bone mass of young Tunisian players at different pubertal stages.

## Methods

Two groups of 152 young boys (age: 13.3±/0.9 years) participated in this study: (1) 91 soccer players, and (2) 61 non-athletic boys used as control subjects. The bone mineral density (BMD) and the bone mineral content (BMC) were measured by dual-energy x-ray absorptiometry (DXA). Pubertal stages were assessed, and serum concentrations of insulin-like growth factor-1



thout involvement of the central part of the bone, the endostium or the soft tissue. Surgical resection was limited to the tumor. Histology reported intraosseous capillary hemangioma. The course was favorable with bone healing and gap filling, with normal elbow and wrist function. The patient resumed occupational activities three months after surgery. This case illustrates a rare localization of this tumor rarely reported in major series.

## 14- Fibrous dysplasia of the rib. Ten case reports

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*Rev Chir Orthop Reparatrice Appar Mot.* 2008; 94(3):301-7.

### Purpose of the study

Fibrous dysplasia is a rare sporadic disease accounting for 0.8% of primary bone tumors. This benign pseudotumor results from proliferation of fibrous tissue in bone and the production of immature bone tissue without an osteoblastic crown. The disease can involve one or more bones, ribs are rarely involved. We report a series of 10 cases of costal fibrous dysplasia.

### Case reports

This series of 10 cases was collected over a period of 10 years (1996-2005). There were five men and five women, mean age 38.4 years, range 27-52 years. One rib was involved in eight patients, two ribs in two. Pain was the most frequent symptom. Plain X-rays showed signs suggestive of fibrous dysplasia. To confirm the diagnosis, rib resection was performed in all ten patients. Pathology examination provided the diagnosis. The postoperative period was uneventful in all patients and all are recurrence free at mean 50 months follow-up.

### Discussion

Management of fibrous dysplasia can be simple surveillance in the majority of patients. Nevertheless, in the event of a single focus, particularly in a rib, fibrous dysplasia can raise a difficult problem of differential diagnosis with malignant tumors. Surgical resection is therefore required in selected cases.

## 15- Giant cell tumour of a phalanx in the foot: a case report

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*Acta Orthop Belg.* 2008; 74(2):273-5.

Giant cell tumours are uncommon benign osseous neoplasias with an obscure origin. They mostly occur in the epiphyses of long bones after skeletal maturity. Phalangeal bones are a very rare primary site of involvement. The authors report a case of giant cell tumour involving a phalangeal bone in the foot and review the presentation, distinctive features and treatment of this tumour when occurring in this location. A 28-year-old female patient was seen with an aggressive giant cell tumour of the first phalangeal bone of the third ray of her left foot. En bloc resection of the third ray was performed without bone grafting. The patient has now been free from disease for 12 years. When giant cell tumour occurs in such a location, it appears to represent a distinct, more aggressive form of tumour. Because of the higher risks for local recurrence, treatment should be aggressive.

## 16- Multifocal tuberculous dactylitis: a case report

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*Chir Main.* 2008 Apr-Jun;27(2-3):122-5.

### Introduction

Tuberculous dactylitis (TD) is a rare disorder. It is the source of a diagnostic hardship as it is difficult to distinguish from other lesions. We report an unusual case with multiple affected sites both in hands and the right big toe. CASE REPORT: A 42-year-old female initially presented with two painful tumefactions affecting the left third finger and the right middle finger. These tumefactions had been present for two months. Conventional radiography and computed tomography of the hand revealed soft tissue swelling with bone expansion and cortical destruction in the proximal, middle and distal phalanx of the third finger, the proximal phalanx of the middle finger in the left hand, the proximal and middle phalanx of the middle finger of the right hand. Bone scintigraphy showed additionally infraradiologic localisation in the proximal phalanx of the first right toe. Pathology examination of a biopsy specimen revealed granulomatous osteitis with caseous necrosis. Antituberculosis treatment led to initial clinical remission followed by a recurrence and lesion spreading due to bacteria resistance. The second line treatment with Rifampicine, Ciprofloxacin, Ethambutol and Clarithromycine induced favorable outcome. CONCLUSION: Tuberculosis dactylitis is well tolerated for a long time leading to a late diagnosis which may favour its spreading.



Antituberculosis treatment is effective but the functional outcome depends on early diagnosis.

## 17- Rare osteochondritis dissecans of the knee in children. A tibial and patellar cases report and literature review

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### Abstract

Osteochondritis dissecans is a rare condition and often involves the medial femoral condyle. We are here reporting two uncommon localizations in children involving the lateral portion of the tibial plateau in one and the patella in the other. They were two fourteen-year-old boys with respectively 4 and 3 months history of a right knee pain and locking. No previous trauma had been noted. X-ray studies and MR images provided definitive diagnosis. However, in the tibial localization, osteochondritis was associated to a damaged lateral discoid menisci and in the patellar localization, the osteochondral fragment was detached in the joint. Regularization of the lateral menisci and removal of a loose body were respectively performed under arthroscopy in the two knees. Literature is reviewed with an emphasis particularly on pathogenesis of these rare localizations.

