CO11-003-e  
Bracing for osteoarthritis
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Bracing for osteoarthritis involves the use of splint, tapes, sleeves, and unloading knee braces. It is part of recommended nonpharmacological treatments for thumb base and knee osteoarthritis. Evidence of splint effectiveness in patients with thumb base osteoarthritis is now provided. Splints for thumb base osteoarthritis improve pain and disability. Weaker evidence appears for knee bracing including taping, sleeves and unloading braces. Observance and safety results are to be considered before using unloading knee braces for knee osteoarthritis. Whatever it is, bracing has to be checked by a health professional to insure the suitability of the device. Patients using bracing should also be educated. Patient education includes knowledge of the aims and modalities of the treatment, and encouragement to contact the therapist if need of adjustment, side effect or question about the device.  

Keywords  
Osteoarthritis; Braces  

Disclosure of interest  
The author has not supplied his/her declaration of conflict of interest.  

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Evidence-based medicine in the diagnosis and management of hand osteoarthritis
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Objective  
To outline the Diagnosis and Management of HOA depending essentially on the recent Evidence-Based Recommendations (EBR) and literature.  

Method  
EBR for the Diagnosis of HOA, according to: risk factors, clinical, subsets, differential diagnosis, images and laboratory tests, is mentioned in details with Levels of Evidence. Also EBR for the Management of HOA developed through three Delphi rounds, according to: general, non-pharmacological, pharmacological, invasive, surgical, with levels of evidence is given through the lecture.  

Results  
The results of 3 Delphi rounds, for Diagnosis: 108, for Management of HOA: 309 literature depending on Evidence-Based Medicine and Hierarchy with Levels of Evidence is presented.  

Conclusion  
Pain relief, restoration of function remain the primary treatment objectives. These are best achieved by a combination of pharmacological & nonpharmacological treatment especially by application of PROM procedures. Surgery remains the last resort for restoration of function if all else fails.  

Keywords  
Evidence-based; Hand osteoarthritis  

Disclosure of interest  
The author has not supplied his declaration of conflict of interest.  

Further reading  

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CO11-005-e  
Effectiveness of physiotherapeutic interventions for adhesive capsulitis of the shoulder
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Introduction  
Adhesive capsulitis, also termed ‘frozen shoulder’, is a common cause of shoulder pain which is estimated to affect between 2% and 5% of the population. Many treatments have been advocated for the management of adhesive capsulitis and physiotherapeutic techniques were among the most common. The aim of this study was to determine the efficacy of physical treatments in adhesive capsulitis of the shoulder.  

Material and methods  
It was a retrospective descriptive study which included 114 patients (66 females, 48 males; mean age: 54 years). Patients were evaluated on the first, second, third and sixth months. Analogue visual scale (AVS) was used to measure pain and shoulder range of motion was determined using a goniometer.  

Results  
Dominant side was affected in 60 patients (52.6%). At the beginning of treatment, the mean flexion was 100° (50°–130°), the mean abduction was 70° (50°–130°) and the mean external rotation was 10° (0°–35°). After 6 months of physical treatments, the mean flexion was 145° (70°–180°), the mean abduction was 120° (50°–180°) and the mean external rotation was 45° (10°–90°). All patients described an improvement in pain, 60 patients maintained a slight residual pain.  

Conclusion  
The findings of this study suggest that physiotherapeutic interventions are beneficial in the treatment of adhesive capsulitis in terms of improving shoulder disability, pain and range of movement.  

Keywords  
Adhesive capsulitis; Physical treatment  

Disclosure of interest  
The authors have not supplied their declaration of conflict of interest.  

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Neer maneuver associated with a countertest in lateral rotation: A predictive test for response to dynamic humeral centering
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Objective  
Dynamic humeral centering (DHC) is a physiotherapy modality that aims at preventing subacromial impingement. Clinical tests of subacromial impingement may be predictive of response to DHC in degenerative rotator cuff disorders (DRCD). The objective of the study was to assess the predictive value of Neer test and a countertest by passive antero-lateral elevation, the arm in lateral rotation (LR), with response to DHC as reference.  

Patients and method  
Patients suffering from DRCD were prospectively included. Neer and RL tests were performed before RHD. Neer test was positive if painful (Neer +). LR maneuver was
positive if the pain disappeared during passive antero-lateral elevation with the arm in lateral rotation (RL+). RHD was performed in ambulatory setting for 2 months. Response to RHD was expressed as percentage of variation and responder meaning variation $\geq 20\%$, using SPADI and Constant scores.

**Results** 53 patients were included: age 59 $\pm$ 11 yr, ratio F/M 37/16, pain duration 27 $\pm$ 55 mo. Baseline clinical profiles were as follows: 36 patients Neer+, 17 Neer-, 20 LR+, 33 LR-. Neer test was not associated with outcomes after DHC. Conversely, LR+ patients had higher improvement than LR- patients (SPADI 43% vs. $-15\%$, $P = 0.02$; Constant 37 vs. 10, $P = 0.01$). LR+ patients were more frequently responders to RHD (SPADI 67% vs. 28, OR 5,1 [IC95: 1,5-17,8], $P = 0.01$; Constant 63 vs. 30, OR: 3.9 [1,2-13], $P = 0.02$). Baseline LR maneuver categorized responders and non-responders with following accuracy: 70% [IC95: 57-83] for SPADI score and 67% [54-80] for Constant score.

**Discussion** This study demonstrates variability of response to DHC according to simple baseline clinical profiles. LR+ patients showed better response to DHC, LR maneuver may be a predictive test of response to RHD. It could be useful in therapeutic decision making in DRCD.

**Keywords** Dynamic humeral centering; Subacromial impingement; Rotator cuff disorders; Test of subacromial impingement; Prognosis

**Disclosure of interest** The authors have not supplied their declaration of conflict of interest.

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CO11-007-e Clinical and radiological results of arthroplasty in avascular necrosis of the femoral head: A study of 88 cases

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**Objectives** The aim of this retrospective study was to evaluate the long-term clinical and radiological results in a continuous series of total hip arthroplasties performed for aseptic necrosis of the femoral head and discuss the therapeutic indications.

**Patients and methods** The series included 88 arthroplasties performed between January 1992 and December 2008 in 79 patients with a mean age of 43.5 years. Functional evaluation was made according to the Postel-Merle d’Aubigné (PMA) score. The preoperative PMA score averaged 8. According to the classification of Ficat and Arlet, 60 hips were classified as stage IV and 28 hips as stage III. The implants used were a total hip prosthesis in 90.9% of cases; cemented in 55 cases, uncemented in 22 cases and hybrid in 3 cases. Bipolar hemiarthroplasty was made in 8 patients. Postoperative analysis and at follow-up was looking for local or systemic complications. Radiographic analysis radiolucent lines around the implants. Finally, the causes of re-interventions were studied.

**Results** Functional and radiological results were established 5.1 years mean follow. The mean PMA score was of 15.8. Radiographic inspection showed that the loosening rate was 3.4% of acetabular implants and 2.2% of the stems. The rate of periarticular ossification was 9%, of which 1.5% were in stage 3 or 4 of Brooker’s score.

**Discussion-conclusion** Some pathologies (haematological disorders, renal failure) have received considerable therapeutic progress resulting from both an increase in the life of patients and an increase in the prevalence of osteonecrosis of the femoral head. Necrosis may also be the result of the treatments themselves (corticosteroids, immunosuppressants, allografts). The results of arthroplasty in this indication are demonstrative in terms of level of activity and PMA score. The results of this series conclude that arthroplasty remains the treatment of choice for advanced stages of necrosis.

**Keywords** Arthroplasty; Avascular necrosis; Femoral head

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

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CO17-001-e Comparison of epidemiological and clinical characteristics of shoulder musculoskeletal disorders between diabetic and nondiabetic populations

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**Goal** The non-traumatic shoulder pains are frequent. These diseases include preferentially tendinitis of the rotator cuff and retractile capsulitis described with diabetes. Our study aims to analyze musculoskeletal disorders by comparing the characteristics of these disorders between diabetics and non-diabetics patients.

**Material and method** It is a cross-sectional, descriptive, analytical study comparing diabetic ($n = 34$) and non-diabetic patients ($n = 48$) seen from January to December 2013 at the Department of Physical Medicine and Rehabilitation of University Hospital Ibn Rochd, Casablanca, Morocco.

**Results** The average age of our patients was 56.4 in diabetic vs. 54.1 years in non-diabetic patients, mostly women, 70.6% vs. 81.3% respectively. Pain was chronic in diabetic and acute in non-diabetic subjects. In both groups, the dominant member was significantly affected. Tendinitis of the rotator cuff was higher (65.2%) in non-diabetic patients while partial ruptures, calcified tendinitis and apsulitis were predominant in the diabetic group. These disorders generated an important functional limitation.

**Discussion-conclusion** We conclude that musculoskeletal disorders of the shoulder evolve and spread differently in diabetic patients compared to non-diabetic persons with consequent restriction of capabilities and limitations of participation.

**Keywords** Musculoskeletal disorders; Shoulder; Diabetic patients; Non-diabetic subjects; Morocco

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