P1008

DETERMINANTS OF CERVICAL PROGRESSION IN INDIVIDUALS WITH AXIAL SPONDYLOARTHRITIS

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Objective: The assessment of cervical, lumbar spinal structures, and hip joints holds significant importance, as reflected in variables within scoring systems for patients with axial spondyloarthritis (axSpA). This study aimed to investigate the factors contributing to cervical spinal progression in patients with axSpA.
Methods: Patients diagnosed with axSpA, whose cervical modified Stoke Ankylosing Spondylitis Spinal Score (mSASS) was evaluated through cervical X-rays, were included in the study. Demographic, clinical, and laboratory characteristics were recorded. The relationship between the presence of cervical structural damage and other factors was assessed through both univariate and multivariate analyses.
Results: Among the 115 patients in the study, 65.22% were male, and the median age at diagnosis (IQR) was 33 (14). Additionally, 65.22% of the patients had radiographic axSpA. Demographic, clinical, and laboratory characteristics were comparable in the study groups. Cervical involvement was identified in 21 patients (18.26%). The presence of cervical structural damage was associated with symptom duration (p=0.004), age at symptom onset (p=0.011), age at diagnosis (p<0.001), the presence of total ankylosis in sacroiliac joint X-ray (p<0.001), cervical mSASS score (p<0.001), the presence of cervical syndesmophyte (p<0.001), and baseline lumbar mSASS score (p<0.001). Cervical progression did not show associations with HLA-B27, smoking, the presence of either extramusculoskeletal or peripheral involvement, nor with disease activity scores (BASDAI, ASDAS-CRP). In multivariate analysis, age at diagnosis (p<0.001), the presence of cervical syndesmophyte (p=0.014), and sacroiliac joint score (p=0.004) were identified as factors associated with cervical progression.
Conclusion: It is essential to consider age at diagnosis, the presence of spinal involvement, and sacroiliac joint score as potential predictors of cervical spinal progression during the follow-up of axSpA patients.

P1009

COST-EFFECTIVENESS ANALYSIS OF PHARMACEUTICAL-GRADE CHONDROITIN SULFATE IN THE TREATMENT OF KNEE OSTEOARTHRITIS: A POST HOC ASSESSMENT DERIVED FROM INDIVIDUAL PATIENT DATA FROM A RANDOMISED CLINICAL TRIAL

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Objective: In a previously published randomised, placebo-controlled trial, 800 mg/d of pharmaceutical-grade chondroitin sulfate (CS) was shown to be superior to placebo in reducing pain and improving function over 6 months in patients with symptomatic knee osteoarthritis (OA) (Reginster J-Y, et al. Ann Rheum Dis 2017;76:1537). The aim of the current post hoc analyses is to evaluate the cost-effectiveness of CS compared to placebo in a European perspective using individual patient data from this clinical trial.
Methods: Patients with knee OA randomised to CS or placebo were followed up at 1, 3 and 6 months. The algo-functional Lequesne index was used to derive the EQ-5D-5L score based on a validated formula. The EQ-5D-5L scores at each time point were used to calculate the changes in quality-adjusted life years (QALYs) with the area-under-the-curve (AUC) method. Costs were assessed using the average price of CS in the countries where (1) the original study took place and (2) CS is currently marketed. The costs of CS in 3 countries were then used (i.e., Czech Republic, Italy and Switzerland). The incremental cost-effectiveness ratio (ICER) threshold for CS to be considered cost-effective was set at 91,8705 EUR per QALY (equivalent to the usually recommended threshold of US $100,000). The study used an intention-to-treat (ITT) population, i.e., patients who received one dose of the study drug, and imputed missing values using the basal observation carried forward method.
Results: No significant differences in baseline characteristics were observed between the CS group (N=199) and the placebo group (N=205). The mean cost of CS for 6 months of treatment was 179 EUR. After 6 months of treatment, CS showed a mean ICER of 31,415 EUR per QALY gained, indicating cost-effectiveness compared to placebo.
Conclusion: These results highlight the role of CS as a cost-effective therapeutic option in the management of OA. However, further studies taking into account the use of other health care resources are warranted for a more complete understanding.
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P1010

MAPPING THE LEQUESNE FUNCTIONAL INDEX INTO THE EQ-5D-5L UTILITY INDEX IN PATIENTS WITH KNEE OSTEOARTHRITIS

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Objective: To map the Lequesne Index onto the EuroQol 5 Dimension (EQ-5D-5L) utility index in patients with knee osteoarthritis (OA).
Methods: The baseline data from a previously published randomized controlled trial were used to develop mapping functions. All patients diagnosed with knee osteoarthritis (OA) completed both the EQ-5D-5L and Lequesne questionnaires. Out of all patients in-

cluded at baseline, 461 were used for the mapping development phase and 230 for the validation phase. For the development phase, various modelling techniques, including general linear models (GLM), Tobit and beta regression models, were employed to derive several mappings functions. Factors such as age, sex, and BMI were also taken into account. The selection of preferred models was based on the Akaike information criteria (AIC), the Bayesian information criteria (BIC), the adjusted R^2, the mean absolute error (MAE), and root mean squared error (RMSE). For the validation phase, the pre-selected derived functions were assessed through MAE, RMSE, and the intraclass correlation coefficient (ICC). This study follows the MApping onto Preference-based measures reporting Standards (MAPS) statement.

Results: Five models were developed by means GLM, Tobit and Beta regressions. Two models including the effect of age, sex and/or BMI and the Lequesne Index as explanatory variables presented the best goodness-of-fit indexes whatever the type of regression. For the validation phase, the predictive performance of these models was similar for the three types of regression. They also showed similar MAE and RMSE values., although the ranges obtained using the Beta regression models were wider and closer to those of the validation dataset. ICC values were also better for the Beta regression models. At last, both models tented to overpredict for lower EQ-5D-5L values while they tended to underpredict for better health status, whatever the type of regression.

Conclusion: To the best of our knowledge, these mapping functions represent the very first attempts to translate the Lequesne Index to EQ-5D-5L values in patients with knee OA. These functions demonstrated a satisfactory fit and precision, offering valuable tools for clinicians and researchers, particularly in situations where cost-effectiveness studies are required, and generic preference-based health-related quality of life instruments for utility derivation are not accessible.

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P1011

COMPARISON OF REGENERATIVE METHODS IN TREATMENT OF OSTEOCHONDRAL LESIONS: EVALUATION IN AN ANIMAL MODEL

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Objective: To evaluate by morphologic studies and compare results of treatment of the osteochondral lesions with use of different regenerative methods (filling with collagen-fibrin matrix, BMDCT, PRP) in experimental study on 32 rabbits.

Methods: The study included 4 series of experimental animals which were given different regenerative treatment and no treatment after artificial surgical standard osteochondral defects (SOD) had been performed. SOD was reproduced in the medial part of the femur of a critical size with a diameter of 3 mm in a depth of 5 mm. The defect was not filled (1st series, control group), filled with collagen-fibrin matrix (2nd series), collagen-fibrin matrix with PRP (3rd series) or with BMDCT (4th series). On 41st day after damage we performed histologic evaluation of the regenerate's tissue (integration into the surrounding tissues, structure, content of cellular structures, noncellular elements, which formed in the defect) was using scale recommended by the Committee of the International Cartilage Regeneration Union (SCRS) with our modifications.

Results: Analysis of the results of treatment using a modified histological evaluation scale showed that hyaline cartilage was present only in the samples from experimental animals of series No. 3 and No. 4 and they did not show significant stratification of the surface of the cartilage. In regenerates samples from group No. 3, the formation of hyaline cartilaginous tissue with chondroblast, chondrocytes and fibrochondrocytes, which densely filled the bone and cartilage defects, was found in the area of the bone and cartilage defect. In the experimental group of animals No. 4, defects located in the articular cartilage were filled with a dense, well developed hyaline cartilaginous tissue with a high degree of integration with the edges of the defect. The comparison of the regenerates histology in the control animals (1st series) and experimental groups was performed and significant difference was found in all parameters between controls and samples from PRP and BMDCT groups, the latter demonstrated better quality of the regenerate tissue and its cellular composition.

Conclusion: Use of the regenerative techniques in treatment of the osteochondral artificial defects in experiment demonstrates better outcomes then natural healing, with the most promising results proved by morphology study in case of BMDCT application.

P1012

ASSESSMENT OF MENISCAL EXTRUSION IN PATIENTS WITH DEGENERATIVE MEDIAL MENISCUS ROOT TEAR FOLLOWING SURGICAL TREATMENT

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Objective: Compare of medial meniscal extrusion (MME) in patients with degenerative medial meniscal root tear (MMRT) after partial meniscectomy and transtibial medial meniscal root repair (without additional augmentation).

Methods: Observed pre- and postoperative (12 months) MRI scans of 55 patients with symptomatic degenerative medial meniscus root tear who underwent arthroscopic surgery. MME was evaluated as the distance between a vertical line passing by the outer edge of medial tibial plateaus and another vertical line tangential to the outer margin of the medial meniscus. Patients were divided into two groups. In the main group (n_m=18) the repair of medial meniscus root tear was performed under arthroscopic control using transtibial fixation. In the comparison group (n_c=37), a partial meniscectomy was performed, which consisted of the removal of the damaged posterior horn and part of the body of the