Objectives: To assess inflammation and angiogenesis biomarkers in IVD among young patients with chronic LBP, associated with DDD.

Methods: Human IVD tissue from 25 patients was obtained from discectomy surgery. Patients were divided into three groups: 13 women, 12 men, age 36.7 ± 3.77, and 30% in healthy control group (n=5, age 37.8 ± 2.52). The grade of DDD was verified by magnetic resonance (MRI) by the classification of C.W. Pfirrmann. Four-micron serial sections of the tissue blocks were stained with hematoxylin and eosin (H-E), than examined by immunohistochemistry staining on the automated VENTANA Benchmark ULTRA platform. Anti-IL-1β, anti-IL-6, and anti-IL-17 were used to study expression of inflammation cytokines; anti-VEGF-A and anti-CD31 were used as markers of angiogenesis. All slides were visualized using a Axio Imager.Z2 microscope with EC Plan-Neofluar 40X objective.

Results: In 64% of patients IVD hernias were localized at the level of L5-S1, in 36% - L4-L5. The average Pfirrmann DDD stage at the operated level was 4.4±0.57. 72% of patients had Modic changes (MC). 52% of patients had a combination of hernia with endplate erosion (EP) and MC. There were identified evidence of DD on H-E-stained sections, including clusters of cells of the nucleus pulposus (NP), inflammatory cell infiltration and blood vessels in the absence of them in the fissures of the NP and annulus fibrosus (AF). Immunostaining was mainly limited to the cytoplasm of native NP chondrocyte-like cells and AF fibroblast-like cells. IL-1β expression was considerably higher in degenerate samples than in controls for both NP (p < 0.05) and AF (p < 0.01). Staining for IL-17 was more pronounced in the cytoplasm of chondrocyte-like cells of degenerative NP compared to the control (p < 0.01), and statistically lower in AF cells (p < 0.05). The number of IL-6 immunopositive cells was similar in NP and AF degenerate tissue, but a greater proportion of IL-6 immunopositive cells was seen in NP tissue (p<0.05). The percentage of cells immunopositive for VEGF-A and CD-31 was significantly increased in NP DD cell clusters compared to controls (p < 0.001) (88% and 36%, respectively) and was weakly expressed in the extracellular matrix (p < 0.05). This suggests that the PU cells trigger angiogenesis. Blood vessels in native sections were confirmed by CD31 detection in 64% of patient specimens versus 10% of control cartilage specimens (p < 0.001). The number of CD31 immunopositive cells had a tendency for decrease in severe DD (p=0.05), which indicates the extinction of vascularization in the terminal stage of DD. Fissures in the disc did not stained for CD31, which excludes the ingrowth of vessels directly in the area of mechanical damage and proves the immunogenic cause of vascularization. This is confirmed by the synergistic high level of expression of IL-1 and -17 in perivascular, endotheliocytes and intravascular pathological samples versus weak expression in the disc matrix (p<0.01). The high level of expression of all interleukins was in the hyaline cartilage of EP patients versus the absence in the controls (p<0.001). It indicates their association with aseptic inflammation of EP with the formation of EP erosions and reactive spondylitis (MC) development, detected by MRI in young adults with DD.

Conclusion: Local immune inflammation is a component of the degenerative cascade in IVD, it initiates angiogenesis in cartilage and EP, as well as the development of reactive osteitis of adjacent vertebræ with the formation of inflammatory-erosive lesions and vertebræ collapse, leading to chronic back pain. The results obtained will help to identify molecular targets and form a new direction of anti-inflammatory therapy of LBP among young people.

Disclosure of Interests: None declared


POS1293

ULTRASONOGRAPHIC GUIDED INTRA ARTICULAR STEROID AND HYALURONIC ACID IN ADHESIVE CAPSULITIS WITH AND WITHOUT SUPRASACRAL NERVE BLOCK

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Background: Adhesive capsulitis (AC), often known as frozen shoulder, is a common musculoskeletal condition characterised by shoulder pain and reduced active and passive mobility. Intra-articular injections is an effective treatment option and can provide faster pain relief in patients with AC.

Objectives: Compare the effectiveness of intra articular injection (IAI) of steroid and HA with or without Suprascapular nerve block (SSNB) in the management of AC.

Methods: Randomized control trial involved 80 patients (62 women and 18 men) clinically diagnosed as having adhesive capsulitis divided into 2 main groups; intra articular injection with SSNB (40 cases) and without SSNB (40 cases), each group divided into 2 subgroups; Twenty patients were treated with ultrasound guided intra articular injection of steroid (4ml of 2% lidocaine and 2ml of 40mg/ml triamcinolone) and another twenty patients were treated with ultrasound guided intra articular injection of hyaluronic acid (4ml of 2% lidocaine and 2ml hyaluronic acid). Intra articular shoulder injection with SSNB has higher significant visual analogue scale (VAS) score at baseline and lower significant VAS score at 1st and 3rd week (p < 0.001). However, there was no significance between both groups regarding disability score at 3rd week (p=0.316). In contrast, there was a high significance between them considering disability score at baseline, 1st, 6th week (p=0.001 and 0.08, respectively).

Conclusion: In patients with adhesive capsulitis, both a combination an IAI alone or with SSNB dramatically improved pain and functional results. The use of an SSNB in conjunction with an IAI especially with steroid enhanced therapeutic effectiveness.

REFERENCES:

Disclosure of Interests: None declared

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Paediatric rheumatology

POS1293

TEN-YEAR EFFICACY DATA FROM THE CLIPPER STUDIES: OPEN-LABEL, LONG-TERM ETANERCEPT TREATMENT IN CHILDREN AND YOUNG ADOLESCENTS WITH EXTENDED OLIGOARTICULAR, ENTHESITIS-RELATED, OR PSORIATIC JUVENILE IDIOPATHIC ARTHRITIS

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Background: CLIPPER2 was an 8-year, open-label extension of the phase 3b, 2-year CLIPPER study of the safety and efficacy of etanercept (ETN) in patients (pts) with juvenile idiopathic arthritis (JIA), categorized as extended oligoarticular JIA (eojIA), enthesis-related arthritis (ERA), or psoriatic arthritis (PsA).

Objectives: Evaluation of the efficacy of ETN and its effect on health outcomes over 10 years of follow-up were secondary objectives and are reported here.

Methods: Pts (n=127) were included in the Active Treatment Period (i.e., they discontinued ETN, either by meeting pre-specified criteria, with ≥30% improvement in <2/6 remaining components and ≥2 components with ≥50% improvement in ≥3/6 ACR Pediatric (ACR Pedi) remission criteria, and sustained clinical remission (ACR criteria) or JADAS ≤1 2). Pts could enter the Withdrawal Period from the Active Treatment Period (i.e., they discontinued ETN, either by meeting pre-specified criteria, with ≥30% worsening in ≥3/6 ACR Pedi components, with ≥30% improvement in ≥2/6 remaining components and ≥2 active joints), and time to re-treatment with ETN.

Results: A total of 109/127 (86%) CLIPPER participants entered CLIPPER2 (n=55 eojIA, n=31 ERA, n=33 PsA), with 99 (78%) pts continuing in the Active Treatment Period. Overall, 84 (66%) pts completed 120 mths of follow-up (27% 21%) while actively taking ETN. Thirty (24%) pts entered the Withdrawal Period from the Active Treatment Period, on September 17, 2023 by guest. Protected by copyright.http://ard.bmj.com/ Ann Rheum Dis: first published as 10.1136/annrheumdis-2022-eular.4688 on 23 May 2022. Downloaded from http://ad.bmj.com/