AMG tolerability was good. 15-25% patients had mild dyspepsia. Discontinuation of therapy due to side effects was only in 6 patients (0.9%). The development or worsening of arterial hypertension, as well as other cardiovascular complications, was not observed.

**Conclusion:** AMG is an effective, well-tolerated NSAID, which is appropriate for long-term treatment of OA, RA and AS.

**Disclosure of Interests:** None declared

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**AB0794**

**PATIENTS GENOTYPE AND OA TREATMENT EFFICACY**

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**Background:** It is known that some genes (FDPS, LCT, VDR) determine the calcium, vitamin D and lactate metabolism that may have impact on osteoarthritis (OA) development and course, and thus, has a possible influence on OA treatment efficacy.

**Methods:** To determine the influence of genetic factors (genotyping of FDPS, LCT, VDR) on the efficacy of standard and modified treatment (with use of the platelet autologous plasma (PAP) in the early stages of knee OA.

**Results:** The earliest age (37.2 ± 2.01 years) of clinical manifestation of knee OA was connected to homozygous genotype variants: LCT (relative risk 6.31), FDPS (relative risk 6.51) and VDR (relative risk 6.81). The best positive WOMAC changes was determined in patients with the CC genotype of LCT both in first and second groups. The WOMAC changes showed lower treatment efficacy in patients with CC genotype of FDPS and VDR in both groups, but results of patients who received PAP were better and their remission was longer (in 1.7 times) than in the standard treatment group.

**Conclusion:** Age of knee OA clinical manifestation and the treatment efficacy (both standard and with the use of platelet autologous plasma) has genetic predisposition.

**Disclosure of Interests:** None declared

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**AB0795**

**IMPACT OF PRIMARY HAND OSTEOARTHRITIS ON MICROSTRUCTURE AND BIOMECHANICS IN FINGER JOINTS**

David Simon1, Koray Tasclar2, Sarah Unbehend2, Sara Bayat1, Timo Meinderink1, Andreas Berlin1,2, Jürgen Rech1, Axel Hueber1,3, Georg Schett1,2

**Background:** Primary hand osteoarthritis (HOA) is a heterogeneous disease that is associated with erosive and osteoproliferative changes of the finger joints and progressive functional impairment. Despite these severe changes the effect of HOA on bone mass, microstructure and biomechanics in the affected skeletal regions is largely unknown.

**Objectives:** To study the effect of HOA on bone microstructure, density and biomechanical properties using high-resolution peripheral quantitative computed tomography (HR-pQCT) of the finger joints and radius.

**Methods:** HOA patients and healthy controls (HC) underwent HP-QCT scans of the distal radius and 2nd metacarpal (MCP 2) head. Total, trabecular and cortical volumetric bone mineral densities (vBMD) as well as microstructural and biomechanical properties (failure load) were determined. Failure load and scaled multivariate outcome matrices from distal radius and 2nd metacarpal (MCP 2) head measurements were analyzed using multiple linear regression adjusting for age, sex and functional status and reported as adjusted z score differences for total and direct effects.

**Results:** 105 subjects were included (76 HC/29 HOA). After adjustment, HOA was associated with significant changes in the multivariate outcome matrix of the MCP 2 head (p < 0.001) explained by an increase in cortical vBMD (z = -1.07, p = 0.02) and reduction in the trabecular vBMD (z = 0.7, p = 0.09). Distal radius analysis did not show an overall effect of HOA however there was a gender-study group interaction explained by reduced trabecular vBMD in males (z = 1.23, p = 0.02). HOA was associated with lower failure load [-514 N (95%CI:1025.2), p=0.05].

**Conclusion:** HOA is associated with reduced trabecular and increased cortical bone mineral density and a reduction in radial bone strength. Impaired mobility might be an explanation for this reduction. These results underline the clinical importance of HOA-related functional impairment and indicate that HOA patients should be treated with awareness of increased fracture risk and antosteoporotic treatment.

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**AB0796**

**DIFFERENCES AND SIMILARITIES OF THE BONE-CARTILAGE UNIT IN PATIENTS WITH PRIMARY OSTEOARTHRITIS AND SECONDARY OSTEOARTHRITIS CAUSED BY RHEUMATOID ARTHRITIS**

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**Background:** Despite distinct aetiologies of joint diseases, the osteoarthritic end-stage of primary osteoarthritis and rheumatoid arthritis are described using similar radiological features. However, primary and secondary osteoarthritides may be different at the bone-cartilage unit depending on the pathogenesis.

**Objectives:** The main purpose was to investigate the histological differences in the bone-cartilage unit of the hip joint in patients with primary osteoarthritides and patients with secondary osteoarthritides due to rheumatoid arthritis.

**Methods:** Femoral heads were obtained during arthroplasty from 12 patients with primary osteoarthritis and six patients with secondary osteoarthritides due to rheumatoid arthritis. Twelve femoral heads from healthy age- and sex-matched subjects were obtained post-mortem. Femoral heads were investigated using stereological methods to provide unbiased quantitative data. The femoral head, articular cartilage, calcified cartilage, subchondral bone, and osteophytes were measured.

**Disclosure of Interests:** None declared

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Table 1: Volume and thickness of the bone-cartilage unit, femoral head volume and osteophyte area in healthy subjects (HS), osteoarthritis (OA) and rheumatoid Arthritis (RA) patients.

<table>
<thead>
<tr>
<th></th>
<th>Healthy subjects (n = 12)</th>
<th>Osteoarthritis (n = 12)</th>
<th>Rheumatoid Arthritis (n = 6)</th>
<th>ANOVA OA vs RA</th>
<th>HS vs RA</th>
<th>HS vs OA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>Mean [95%CI]</td>
<td>Mean [95%CI]</td>
<td>Mean [95%CI]</td>
<td>P - value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (MF)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Femoral head volume (cm³)</td>
<td>52.0 [39.6;64.3]</td>
<td>43.6 [37.3;50.0]</td>
<td>41.1 [33.6;48.7]</td>
<td>0.084</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Articular cartilage volume (cm³)</td>
<td>7.4 [6.9;8.9]</td>
<td>5.1 [4.6;6.1]</td>
<td>2.9 [2.6;3.3]</td>
<td>&lt;0.001</td>
<td>0.012</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Articular cartilage thickness</td>
<td>1413</td>
<td>1134</td>
<td>721 [403;1040]</td>
<td>&lt;0.001</td>
<td>0.029</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Subchondral bone thickness</td>
<td>227 [172;282]</td>
<td>406 [285;527]</td>
<td>409 [186;632]</td>
<td>0.021</td>
<td>1.000</td>
<td>0.099</td>
</tr>
<tr>
<td>Osteophyte area (mm²)</td>
<td>8.6 [2.2;35.7]</td>
<td>70.9 [41.4;121]</td>
<td>49.2 [4.7;513]</td>
<td>0.0081</td>
<td>1.000</td>
<td>0.073</td>
</tr>
</tbody>
</table>

Data are presented as mean [95%CI]. Statistical significance was found using one-way ANOVA. The Post hoc Bonferroni test was used to identify intergroup differences. *Data not normally distributed was log-transformed and presented as geometric mean [95%CI].

Conclusion: Patients with secondary osteoarthritis due to rheumatoid arthritis had thinner articular cartilage and calculated cartilage but were otherwise not significantly different from patients with primary osteoarthritis. Thus, the inflammatory joint in rheumatoid arthritis was associated with a more pronounced loss of cartilage than the degenerative joint disease in primary osteoarthritis. The thicker calculated cartilage in primary osteoarthritis has been attributed to endochondral ossification; this does not seem to be the case in rheumatoid arthritis.

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AB0797

GRANULYSIN MEDIATED CYTOTOXICITY AND ITS SERUM CONCENTRATION IN PATIENTS WITH KNEE OSTEARTHRITIS

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Background: In OA joint, synovial membrane contain immunocompetent cells (1-4), which produce predominantly pro-inflammatory cytokines (2,5), justifying the name “ostearthritis” and directing the development of disease towards mild systemic inflammatory condition (6). Granulysin (GNLY) is mediator of cellular immunity expressed in T and NK cells in 15 kDa and 9 kDa cytotoxic forms (2). It is regulated by interleukin 15.

Methods: In lymphocytes of OA patients GNLY expression and NK cell-mediated apoptosis of K-562 cells did not differ significantly from the healthy control. In OA patients only, RC8 antibody against cytotoxic GNLY molecule significantly decreased apoptosis of K-562 cells. RF10 anti-15 kDa GNLY did not show such effect. Anti-perforin antibody completely abolished apoptosis in both groups tested and the effects of additionally added RC8 or RF10 anti-GNLY antibodies were not observed. Serum IL-15 concentration in healthy controls and OA patients was low and did not show statistically significant difference. GNLY expression in lymphocytes, and particularly in NK subset, positively correlated with VAS pain of 0-10 and 6-minutes walking distance.

Conclusion: In OA patients, GNLY mediated apoptosis is involved in apoptosis of NK sensitive K-562 cells in vitro and might be involved in the killing of damaged joint cells in vivo after direct contact.

REFERENCES

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AB0798

GENDER DIFFERENCES IN DURATION OF SYMPTOMS AND PREOPERATIVE EXPECTATIONS IN TOTAL KNEE ARTHROPLASTY PATIENTS

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Disclosure of Interests: Daisy Latinhouwers: None declared, Claudia Leichtenberg: None declared, Rob Nelissen: None declared, Willem Jan Marijnissen: None declared, Pieter-Jan Damen: None declared, Theo Vliet Vlieland: None declared, Maaike Gademann: None declared.

Background: The literature suggests that women with knee osteoarthritis (OA) perceive greater disability and a lower functional level before total

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