suspended in the 27.3% of patients, the main reason for suspension was inefficacy. A higher percentage of suspension was found in patients who had received a greater number of previous biological treatments. Adverse effects were reported in 8 patients, the most serious being one episode of tachycardia and one episode of herpes zoster, and the most frequent adverse effect being headache.  

**Conclusion:** 70% of patients with ankylosing spondylitis who received upadacitinib for a median time of 8.7 months experienced subjective improvement in their symptoms.  

**Acknowledgements:** Acknowledgements to all collaborators.  

**Disclosure of Interests:** None Declared.  

**DOI:** 10.1136/annrheumdis-2023-eular.6197

### AB0952 COMPARISON OF THE EFFECT BETWEEN BISPHOSPHONATE AND DENOSUMAB ON BONE MINERAL DENSITY AND RADIOGRAPHIC PROGRESSION IN PATIENTS WITH ANKYLOSING SPONDYLITIS: A PILOT STUDY

**Keywords:** Spondyloarthritis

M. Y. Kim1, K. Y. Kang1, Y. S. Hong1. The Catholic University of Korea, Incheon St. Mary’s Hospital, Department of Rheumatology, Incheon, Korea, Rep. of (South Korea)

**Background:** Osteoporosis is a frequent complication of ankylosing spondylitis (AS). Although there are no clear guidelines for the treatment of this secondary osteoporosis in AS, antosteoporotic agents including bisphosphonate were used according to the same guidelines for primary osteoporosis. Also, approved by European Medicines Agency (EMA) in 2010, denosumab is being widely used.

**Objectives:** To compare the effect between bisphosphonate and denosumab on bone mineral density and radiographic progression in patients with AS for one year.

**Methods:** Among twenty-four patients with AS, sixteen patients were treated with bisphosphonate and nine patients with denosumab. BMD in the lumbar spine and right femur was measured by dual energy x-ray absorptiometry (DEXA) at baseline and one year after treatment. Radiographic progression was scored using the modified Stoke AS Spinal Radiograph Score (mSASSS). Bath Ankylosing Spondylitis Functional Index (BASFI), Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Ankylosing Spondylitis Disease Activity Score (ASDAS), and bone markers (bone-specific alkaline phosphatase (ALP), Collagen type 1 cross-linked C-telopeptide) were used to assess disease activity.

**Results:** Mean BMD values in the lumbar spine and total hip at one year increased when compared to those at baseline in both the bisphosphonate and denosumab groups (P=0.006 and 0.007 in bisphosphonate group, 0.015 and 0.036 in denosumab group). The increment was greater in denosumab group. The mean BMD in L-spine and total hip increased by 11.0% and 4.9% in denosumab group, while 9.0% and 2.7% in bisphosphonate group. There were no differences in disease activities such as BASDAI, ASDAS-CRP, ESR, and CRP between two groups, mSASSS and number of syndesmophytes also revealed no significant differences, suggesting that denosumab does not adversely affect disease activity and radiographic scores compared to bisphosphonate.

**Table 1. Comparisons of the changes of clinical measure and radiographic scores between bisphosphonate and denosumab**

<table>
<thead>
<tr>
<th></th>
<th>Basphosphate (n=15)</th>
<th>Denosumab (n=9)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASDAI</td>
<td>1.5 ± 2.4</td>
<td>2.9 ± 2.8</td>
<td>0.215</td>
</tr>
<tr>
<td>ASDAS-CRP</td>
<td>0.9 ± 1.2</td>
<td>1.7 ± 1.3</td>
<td>0.174</td>
</tr>
<tr>
<td>ESR, mm/h</td>
<td>17.2 ± 24.8</td>
<td>31.0 ± 36.9</td>
<td>0.519</td>
</tr>
<tr>
<td>CRP, mg/l</td>
<td>13.7 ± 31.5</td>
<td>24.5 ± 44.0</td>
<td>0.446</td>
</tr>
<tr>
<td>Bone-specific ALP, µg/l</td>
<td>-0.7 ± 1.4</td>
<td>4.2 ± 4.3</td>
<td>0.379</td>
</tr>
<tr>
<td>C-telopeptide, ng/ml</td>
<td>0.128 ± 0.1</td>
<td>0.4 ± 0.4</td>
<td>0.411</td>
</tr>
<tr>
<td>mSASSS in C- and L-spine</td>
<td>0.7 ± 0.9</td>
<td>0.4 ± 0.4</td>
<td>0.411</td>
</tr>
<tr>
<td>Number of syndesmophytes in C- and L-spine</td>
<td>0.1 ± 0.3</td>
<td>0.2 ± 0.4</td>
<td>0.558</td>
</tr>
</tbody>
</table>

Changes are calculated as base value subtracted from one year value. BASDAI: Bath Ankylosing Spondylitis Disease Activity Index. ASDAS: Ankylosing Spondylitis Disease Activity Score. ALP: alkaline phosphatase, mSASSS: modified SASSS. C-: cervical. L-: lumbar.

**Conclusion:** Both bisphosphonate and denosumab increase L-spine and total hip BMD, while not affecting disease activity and spinal new bone formation. Further prospective studies with larger subject numbers are needed.

**REFERENCES**


**Disclosure of Interests:** None Declared.

**DOI:** 10.1136/annrheumdis-2023-eular.s299

### AB0953 THE EFFECTIVENESS OF IL-23 INHIBITORS ON AXIAL SPONDYLOARTHRITIS AND AXIAL PsORIATRIC ARTHRITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

**Keywords:** Psoriatic arthritis, Spondyloarthritis

S. Al Nokhatha1, S. Maguire2, K. Ainaaqbi3. Tawam Hospital, Rheumatology, Abu Dhabi, United Arab Emirates; 2St James’s Hospital, Rheumatology, Dublin, Ireland

**Background:** Axial spondyloarthritis (axSpA) is an immune-mediated systemic chronic inflammatory arthritis involving the axial skeleton that may involve peripheral joints. Nonsteroidal anti-inflammatory drugs are first line therapy in the management of axSpA, however for many patients NSAID monotherapy is not sufficient to induce disease remission. Given the known efficacy of biologics in spondyloarthritis and the heterogeneity of these conditions, treatment choices should take into account all relevant disease domains. Interleukin-23 has been identified as a promising therapeutic target in SpA and PsA based on a significant body of evidence. Interleukin 23 inhibitors have produced inconsistent results when used to treat axial spondyloarthritis and axial psoriatic arthritis (1,2) Thus, there is a need for a holistic understanding of the use of IL23 inhibitors in axSpA in conditions in particular spondyloarthritis and psoriatic arthritis to provide appropriate evidence-based management and mitigate the growing burden of these diseases.

**Objectives:** To explore the latest reported literature on the effectiveness of IL 23 inhibitors in axial spondyloarthritis and psoriatic arthritis.

**Methods:** A systematic literature review was conducted. The following databases were searched: PubMed, Medely EMBASE, MEDLINE (OVID), CINAHL, Cochrane Library (central) and Web of Science. The search strategy included terms related to the axial spondyloarthritis and axial psoriatic arthritis and specifying the medications of study interest Unekstenum, Risanikuzumab, Gusekumab or Tildakizumab. The search was restricted to studies published in English from inception until June 2022. Randomized controlled trials, observational studies, or systematic reviews were eligible. Screening of titles, abstracts, and subsequent full text assessment were conducted independently by two independent reviewers. Outcomes assessed were BASDIA, BASDAB, modified BASDA, BASFI and ASDAS.

**Results:** Total of 4456 studies were identified, 9 studies of which 5 studies examining axial spondyloarthritis (Four RCTs and 1 prospective study) and 4 studies examining axial psoriatic arthritis (two prospective observational studies and two post hoc analysis) were deemed suitable for inclusion. In contrast to one prospective observational study, 4 RCT (3 ustekinumab, 1 risankizumab) did not support the use of IL23 inhibitors in axSpA based on the analyzed outcome measures of interest. Pooling of results for the three ustekinumab trials (BASDA50, BASFI, and ASDAS) (figure 1) demonstrated that the drug was not efficacious in treating axSpA. However, trials in axial PsA investigations showed an improvement in BASDAI, modified BASDAI, BASFI and ASDAS.

**Conclusion:** The results of this meta-analysis would support the use of IL-23 inhibiting medications in the treatment of axial PsA. However, this is not the case for axSpA, as these drugs failed to demonstrate a significant improvement in patient outcomes in axSpA patient populations. This meta-analysis raises several interesting questions regarding differences in pathogenesis of axSpA and axial PsA. It also supports the need for ongoing drug development in axSpA, as biologic options remain limited compared to other forms of inflammatory arthritis.

**REFERENCES**


**Disclosure of Interests:** None Declared.

**DOI:** 10.1136/annrheumdis-2023-eular.1162

**Figure 1.**