association between periodontal disease and ankylosing spondylitis are still relatively limited.

**Objectives:** The current systematic review and meta-analysis was conducted with the aims to identify all published studies that investigated the risk of ankylosing spondylitis among patients with periodontal disease versus individuals without periodontal disease and summarize their results together to better characterize this relationship.

**Methods:** Two investigators independently searched for published studies indexed in MEDLINE and EMBASE database from inception to October 2018 using the search strategy that included the terms for periodontal disease and ankylosing spondylitis. The inclusion criteria are as follows: (1) Case-control or cohort studies that compared the risk of ankylosing spondylitis between patients with periodontal disease versus individuals without periodontal disease (2) Individuals without periodontal disease were used as comparators in cohort studies while individuals without ankylosing spondylitis were used as controls in case-control studies and (3) Effect estimates and 95% confidence intervals (CI) of the association of interest were reported. Point estimates and standard errors from each study were extracted and combined together using the random effect, generic inverse variance technique of DerSimonian and Laird.

**Results:** Of 554 retrieved articles, a total of 7 case-control studies with 41,575 participants met the eligibility criteria and were included into the meta-analysis. The risk of ankylosing spondylitis among patients with periodontal disease was significantly higher than individuals without periodontal disease with the pooled odds ratio of 2.16 (95% CI, 1.48–3.16). The statistical heterogeneity was low with an I² of 45%. The forest plot of this meta-analysis is shown as figure 1. Funnel plot was created for evaluation of publication bias. The plot was relatively symmetric which did not suggest the presence of publication bias in favor of studies with positive results.

**Conclusion:** A significantly increased risk of ankylosing spondylitis among patients with periodontal disease was demonstrated in this study. This observation may provide more understanding of the pathogenesis of this chronic inflammatory arthritis.

**REFERENCES**


**Disclosure of Interests:** None declared


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**CHANGES IN HEIGHT AND BODY MASS INDEX OVER TIME IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS, TREATED WITH TUMOR NECROSIS FACTOR-Α INHIBITORS**

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**Background:** Monitoring of height and body mass index (BMI) is an important for patients with axial spondyloarthritis (axSpA). Reduction of height not only reflects spine remodeling, but affects various indexes, such as BMI (fig.1). However, BMI calculations assume that the adult patient’s height is a constant. Therefore these calculations may be inaccurate in patients whose height is susceptible to decrease.