AB0073

INTESTINAL PERMEABILITY IN SPONDYLOARTHRITIS: A SYSTEMATIC REVIEW OF THE LITERATURE

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Background: Growing evidence argue for a role of the gut in the pathophysiology of various chronic rheumatic diseases such as spondyloarthritis (SpA). This so-called "gut-joint axis" involves dysbiosis, bacterial translocation, intestinal inflammation and increase in intestinal permeability. Recent data from clinical and basic research suggested that the integrity of the intestinal barrier might be a key determinant in translating autoimmunity to inflammation, making intestinal permeability a potential marker or a target for future therapies.

Objectives: To analyse the available data on intestinal permeability in SpA patients and the effects of drugs such as non-steroidal anti-inflammatory drugs (NSAIDs) on intestinal permeability.

Methods: A systematic review was conducted. Without date restriction, the following databases were searched through September 1, 2020: Medline, Embase and Cochrane. Studies with patients with SpA assessing the intestinal permeability were selected. Some of the included studies have assessed the effect of NSAIDs on intestinal permeability.

Results: A total of 12 studies were included in the final analysis. The 12 studies involved a total of 268 SpA patients, including 240 ankylosing spondylitis (AS). Among the studies included, four studies used the lactulose/mannitol test, four studies used the 51Cr-ethylenediaminetetraacetic test and two studies used the polyethylene glycols test. Nine of the 12 studies reported increased intestinal permeability regardless on the method used for intestinal permeability evaluation. Four studies evaluated the link between disease activity, assessed by CRP and ESR levels, and intestinal permeability and showed no correlation between increased intestinal permeability and markers of disease activity in AS patients. As regards the effects of NSAIDs on intestinal permeability, data are controversial. Two studies, including one evaluating indomethacin, did not show any influence of NSAIDs in AS patients, one study showed an increase in intestinal permeability under NSAIDs in only 60% of the patients, another study reported increased intestinal permeability. When comparing the effect of NSAIDs in patients with AS to healthy subjects, one study reported a comparable NSAIDs-induced increase in intestinal permeability in both groups.

Conclusion: The results of our review suggest that increased intestinal permeability is present in SpA patients even in the absence of NSAIDs use and regardless of the method used to assess intestinal permeability. The effects of NSAIDs on intestinal permeability in SpA patients is more controversial and further studies are needed to clarify them.

Disclosure of Interests: None declared

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NO DIFFERENCE BETWEEN THE SEROLOGIES OF DENTAL GERMS AND THE PHENOTYPES OF SPONDYLOARTHRITIS WITHIN THE DESIR COHORT

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Background: Porphyromonas gingivalis (PG) and Prevotella Intermedia (PI) are two oral pathogens involved in the pathophysiology of chronic periodontopathies. Several studies have determined a role of these periodontal pathologies in the pathophysiology of rheumatoid arthritis (1) while the link with spondyloarthritis is not clearly established with currently contradictory studies (2,3,4).

Objectives: The purpose of this work is to investigate a link between spondyloarthritis and the presence of chronic periodontopathy evaluated by PG and IP serologies.

Methods: The positivity and quantity of anti-PG and anti-PI antibodies were determined by ELISA method in patients from the DESIR cohort with one of the spondyloarthritis phenotypes compared to patients with common low back pain (n=50) (population control). Patients with spondyloarthritis were classified according to the following phenotypes (diagnosis chosen at 3 years in the DESIR cohort): axial spondylarthritis (n=126), psoriatic rheumatism (n=101), spondyloarthritis associated with chronic inflammatory bowel disease (n=36), undifferentiated spondylitis (n=241), reactive arthritis (n=2), SAPHO (acronym for Synovite, Acne, Pustulose, Hyperostosis and Osteitis. Correlations between patients' serological status, and smoking status, body mass index and age were sought.

Results: According to the general characteristics, the control group was significantly older than the axial spondylarthritis (p<0.001), and the psoriatic rheumatism group had a higher body mass index than the control population (p<0.05). The positivity and concentration of anti-PG and anti-PI antibodies were similar

between different groups of spondyloarthritis compared to the control group. However, the subgroups "reactive arthritis" and "SAPHO" could not be analyzed due to insufficient staffing. Smoking status and body mass index were not related to antibody concentrations, however there was a statistical correlation between anti-PG antibody concentrations and age. After adjusting on age, there was no difference between the axial spondylarthritis and control groups.

Conclusion: Our results therefore suggest the absence of a link between periodontal germs involved in chronic periodontopathies and spondyloarthritis, provided that the two phenotypes involving germs in their pathophysiology could not be analyzed. Our results from a population of beginner spondylitis are therefore not in favour of the involvement of oral flora in the pathophysiology of spondyloarthritis, as is the case in rheumatoid arthritis (1). The associations found previously could therefore be favoured by a systemic inflammatory phenomenon. In conclusion, our study suggests no link between chronic periodontopathy and the occurrence of spondyloarthritis. However, the effect of chronic periodontopathy on the evolution of spondylarthritis remains to be explored.

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AB0075

HSA_CIRC_0012732, HSA_CIRC_0008961, HSA_CIRC_0405239 AND HSA_CIRC_0068784 MIGHT BE INVOLVED IN THE PATHOGENESIS AND DEVELOPMENT OF ANKYLOSING SPONDYLITIS

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Background: CircRNAs have been found to be involved in the occurrence and development of many rheumatic diseases[1-2]. Are circRNAs involved in the pathogenesis of ankylosing spondylitis (AS)? How do these circRNAs participate in the pathogenesis of AS? This all needs further study.

Objectives: This study is to clarify the expression levels of hsa_circ_0012732, hsa_circ_0008961, hsa_circ_0405239 and hsa_circ_0068784 in the peripheral blood of AS patients, and to explore whether these circRNAs are involved in the pathogenesis of AS.

Methods: To collected 60 cases of AS (30 cases of active AS (ASA): BASDAI> 6 or 6> BASDAI> 4, ESR> 22mm / h or 6> BASDAI> 4, hsCRP> 9mg / L; 30 cases of stable AS (ASS): BASDAI<4) and 30 health control (HC) peripheral blood samples, related clinical and laboratory indicators. The relative expression levels of hsa_circ_0012732, hsa_circ_0008961, hsa_circ_0405239 and hsa_circ_0068784 in each group were detected by real-time quantitative polymerase chain reaction (qPCR). The relationships between the 4 circRNAs and clinical and laboratory indicators were explored by correlation analysis.

Results: 1. The qPCR results suggested that the expression of hsa_circ_0012732 between the ASA and ASS groups was statistically significant (p<0.05), and the expression of hsa_circ_0008961 was statistically significant between the ASA and HC groups (p<0.05). However there was no statistical significance among other groups (p>0.05)Figure 1. Similarly, the expression level of hsa_circ_0405239 was not statistically significant among the groups (p>0.05), and the same was true for hsa_circ_0068784 (p>0.05).

2. Correlation analysis results (Figure 2) showed that hsa_circ_0012732 is positively correlated with lymphocyte count (LY), mean corpuscular volume (MCV), albumin (ALB), and negatively correlated with Bath ankylosing spondylitis disease activity index (BASDAI), Bath ankylosing spondylitis functional index (BASFI), high sensitivity C-reactive protein (hsCRP), Globulin (GLOB) (p<0.05); hsa_circ_0008961 is negatively correlated with platelet (PLT) (p<0.05); hsa_circ_0405239 is negatively correlated with BASDAI and BASFI; hsa_circ_0068784 was negatively correlated with BASDAI (p<0.05); and there was no statistically significant (p>0.05) between these 4 circRNAs and other indicators.