

CO-ORGANIZED EVENT

# **13<sup>th</sup> International Conference on Clinical Gastroenterology & Hepatology & 2<sup>nd</sup> International Conference on Digestive Diseases**

December 07-08, 2017 Madrid, Spain

## **Periodontal and inflammatory bowel diseases: Is there evidence for complex pathogenic interactions?**

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Periodontal disease and inflammatory bowel disease (IBD) are both chronic inflammatory diseases and their pathogenesis is mediated by a complex interplay between a dysbiotic microbiota and the host immune-inflammatory response, influenced by genetic and environmental factors. This review aimed to provide an overview of the evidence dealing with a possible pathogenic interaction between periodontal disease and inflammatory bowel disease. The prevalence of periodontal disease seems to be increased in patients with IBD when compared to healthy controls, probably due to a changed oral microbiota and a higher inflammatory response. Moreover, the induction of periodontitis seems to result in gut dysbiosis and altered gut epithelial cell barrier function, which might contribute to the IBD pathogenesis. Considering the complexity of periodontal and inflammatory bowel diseases, and the coexistence of both, it is very challenging to comprehend the possible pathways involved in both diseases. In conclusion, this review points out to a complex pathogenic interaction between periodontal and inflammatory bowel diseases, in which one disease might alter the composition of the microbiota and increase the inflammatory response related to the other. However, we still need more data derived from human studies to confirm results from murine models. Thus, mechanistic studies are warranted to clarify this possible bidirectional association.

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