

Oral Health in Patients with Chronic Hepatitis B Infection vs Chronic Hepatitis B

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Aims

- To investigate the oral health in asymptomatic and non-cirrhotic hepatitis B virus (HBV) carriers.
- To understand the role of oral/dental parameters in relation to the general, virological and liver parameters in patients without clinical signs of liver damage.

Background

Periodontal diseases and dental caries are the most common oral diseases worldwide. Alterations in salivary microbiome (oral dysbiosis), poor dentition and systemic endotoxemia is also linked to sensitisation and further liver injury in patients with severe liver diseases. Periodontal therapy in cirrhotic outpatients with periodontitis improved endotoxemia, as well as systemic and local inflammation. Oral cavity therefore appear to be an important source of inflammation attributing the progression of CHB.

In spite of the growing link of oral-gut-liver axis and liver diseases, data on oral health or oral microbiota in healthy HBV carriers without clear liver damage is lacking.

Objective

To compare the oral health in CHB patients without clinical signs of liver damage.

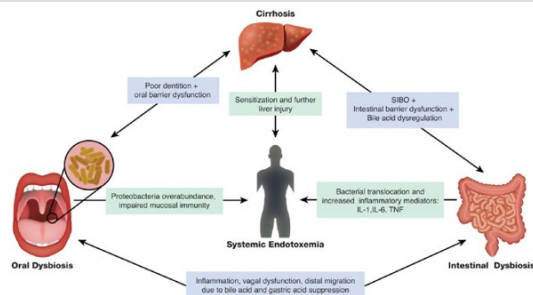


Figure 1. Oral-gut-liver axis (figure from Chathur Acharya et al. JCI Insight. 2017)

Methods

A standardized full-mouth dental examination was used, that includes measurement of:

- periodontal pocket depth (PD),
- decayed-missing-filled teeth (DMFT),
- the mucosa condition
- oral disease experience
- lifestyle and oral hygiene habits

Saliva, subgingival plaque, blood and faecal samples were also collected under standardized condition.

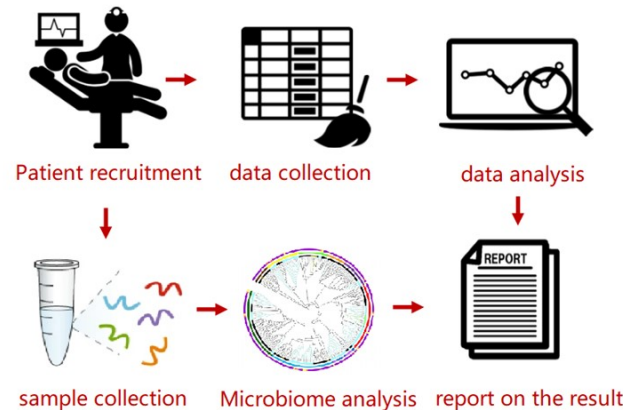


Figure 2. Workflow of the study (figure modified from McDougallScientific.com)



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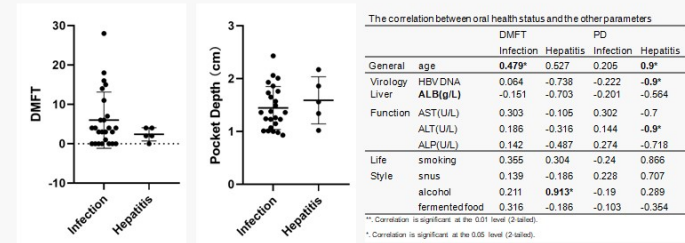


Figure 3. Oral health parameters of HBV-infected patients with or without liver inflammation

Table 1. Correlation analysis on oral health parameters against virological, liver and life-style parameters.

Results

- Compared with patients with liver inflammation, HBV-infection without signs of liver inflammation is associated with higher DMFT-scores and slightly low PD-scores, e.g. better oral health.
- Moreover, the oral health parameters show no significant association with liver or virological parameters that are HBV-related, unlike those with liver inflammation.
- The food/drink and dental hygiene habits are not correlated with any oral disease scores in patients without liver inflammation.

Future directives

Only oral health parameters have been investigated here, oral microbiota analysis will shed more insights on the relationship with HBV infection.



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