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Correlation between Clinpro™ Cario Diagnosis and Clinical Parameters

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Introduction

Individual risk assessment of patients is necessary to select optimal regimens for the prevention, diagnosis and management of caries. Currently, the recent history of carious activity is regarded as the best predictor for future caries increment. Plaque bacteria produce lactate, the most important agent for generating caries. Therefore, the detection of lactate in dental plaque may be an appropriate tool to determine the site specific caries risk.

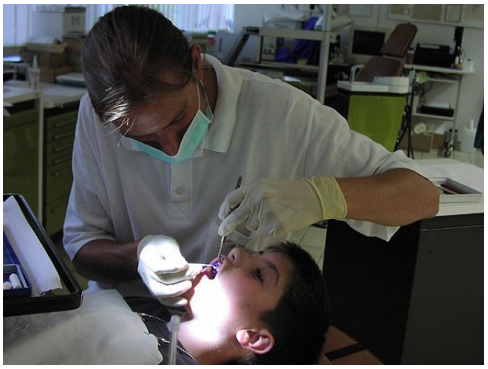
Objectives

The aim of the study was to determine the correlation between the new site-specific lactate test (Clinpro™ Cario Diagnosis) and the site-specific caries prevalence as well as oral hygiene indices.

Material und Methods

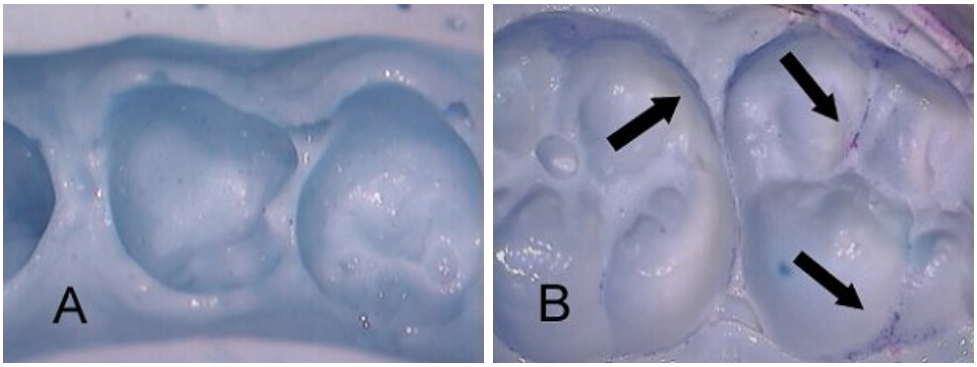
31 subjects (11-13 years old)

- Caries diagnosis (D1-4MFS)
- Gingivitis index (PBI)
- Plaque index (QHI)
- Approximal plaque index (API)



Tooth brushing
after 5 minutes

Clinpro™ Cario Diagnosis



A: no discoloration (lactate negative)

B: blue discoloration of smooth surfaces and fissures (lactate positive)

Results

Parameter	Kappa value
$D_{1-4}MFS$	0,013 (poor)
$d_{1-4}mfs$	0,014 (poor)
QHI	0,3 (fair)
API	0,15 (poor)

Tab.: Correlation between Clinpro™ Cario Diagnosis discoloration and caries on permanent teeth, primary teeth, QHI, and API respectively

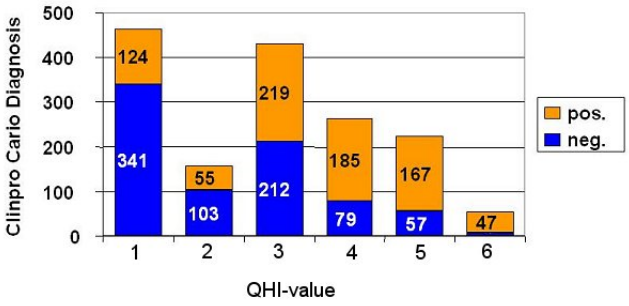


Fig.: Distribution of different QHI-values and their matching with positive or negative signals of Clinpro™ Cario Diagnosis. Higher QHI values do correlate better with a positive signal than lower values

Discussion and Conclusions

- There was only a fair or poor agreement between Clinpro™ Cario Diagnosis and QHI, API, and caries respectively. In addition, the QHI and API are also very poor measures for caries risk assessment (Powell 1998).
- To determine if Clinpro™ Cario Diagnosis is appropriate for caries risk assessment it is necessary to establish its correlation to the caries increment over time.

In this study, we did not find any good correlation between oral hygiene indices and Clinpro™ Cario Diagnosis nor betwen Clinpro™ Cario Diagnosis and caries. Judgment of reliability of Clinpro™ Cario Diagnosis to determine site specific and general caries risk respectively requires additional research.

The study was supported by 3M ESPE.

Bibliography

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This poster was submitted by Dr. Mozhgan Bizhang.

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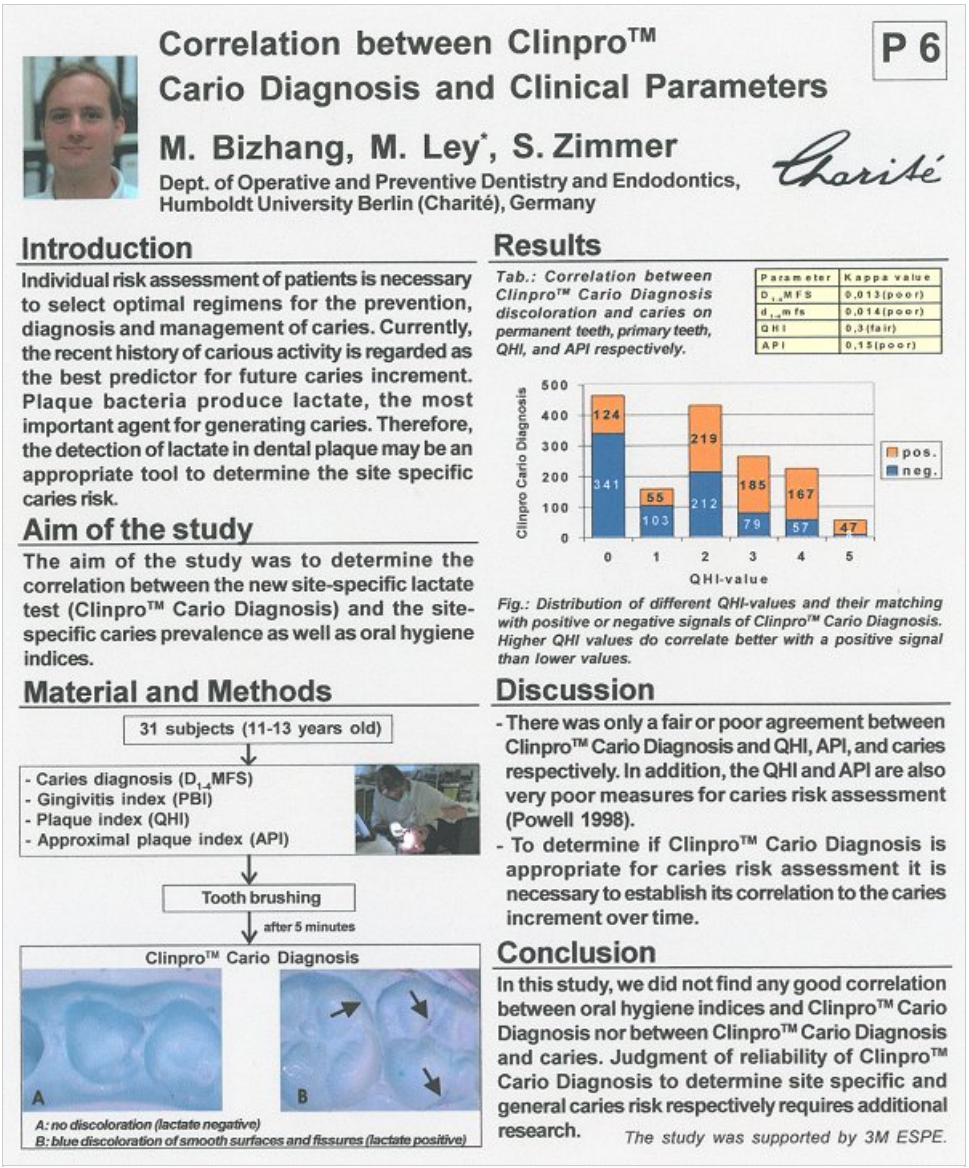
Poster Faksimile:



Correlation between Clinpro™ Cario Diagnosis and Clinical Parameters

P 6

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