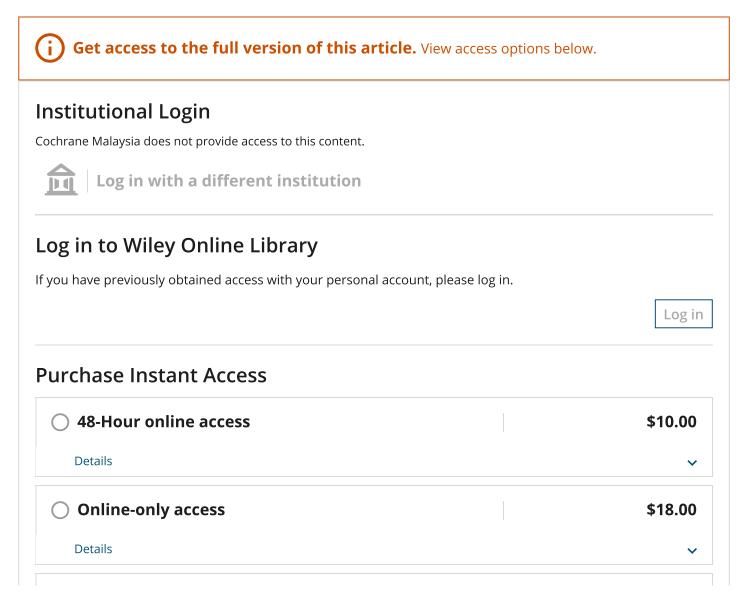


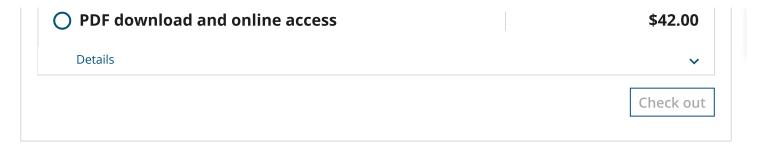
RESEARCH ARTICLE

Evaluation of TNF- α and IL-6 in saliva among diabetic retinopathy patients in East Coast Malaysia

First published: 19 January 2022 https://doi.org/10.1111/tmi.13724

Sustainable Development Goal:: Good Health and Well-being.





Abstract

Objective

To compare tumour necrosis factor-alpha (TNF) and interleukin (IL)-6 levels in saliva between different stages of diabetic retinopathy (DR).

Methods

This comparative cross-sectional study was conducted between January 2018 and November 2020. This study included diabetes mellitus (DM) patients with no DR, non-proliferative DR (NPDR), and proliferative DR (PDR). None of the patients with DM were included in the control group. Unstimulated saliva samples were then collected. TNF- α and IL-6 levels were measured.

Results

Altogether, 120 patients were included in the study (DM without DR, 33 patients; DM with NPDR, 30 patients; DM with PDR, 32 patients; non-DM, 25 patients). The mean IL-6 level in saliva was significantly higher in the DM group (0.033 \pm 0.005 pg/ml) than in the non-DM group (0.027 \pm 0.001 pg/ml) (p < 0.001 after adjusting for covariates). There was no significant difference in the mean salivary TNF- α between patients with DM and those without DM after adjusting for covariates. The mean IL-6 in saliva was significantly higher in the NPDR (0.036 \pm 0.003 pg/ml) and PDR (0.093 \pm 0.023 pg/ml) groups than in the no DR group (0.027 \pm 0.001 pg/ml) (p < 0.001 and p < 0.001, respectively). Mean TNF- α in saliva was significantly higher in the NPDR (0.086 \pm 0.022 pg/ml) and PDR (0.093 \pm 0.023 pg/ml) groups than in the no DR group (0.049 \pm 0.011 pg/ml) (p = 0.015 and p = 0.003, respectively).

Conclusion

There is an association between inflammatory biomarkers in saliva (IL-6 and TNF- α) and severity of DR among patients with DM, suggesting that these salivary biomarkers are potential biomarkers for screening, monitoring, and predicting the progression of DR.

Download PDF

About Wiley Online Library

Privacy Policy
Terms of Use
Cookies
Accessibility
Publishing Policies

Help & Support

Contact Us
Training and Support
DMCA & Reporting Piracy

Opportunities

Subscription Agents
Advertisers & Corporate Partners

Connect with Wiley

The Wiley Network Wiley Press Room

Copyright © 1999-2022 John Wiley & Sons, Inc. All rights reserved