Blood Flow Alterations in the Anterior Maxillary Mucosa as Induced by Implant-Retained Overdenture.

Abstract

PURPOSE: Blood flow disturbance from functional pressure may lead to ischemia and accumulation of metabolites leading to residual ridge resorption (RRR) underneath complete dentures. The purposes of this study were to determine the effect of mandibular complete denture (CD) and implant-retained overdenture (IRO) on blood flow disturbance in the opposing denture bearing-mucosa of maxillary CD and to compare the blood flow disturbance to RRR of the anterior maxilla.

MATERIALS AND METHODS: The test group included 9 participants rehabilitated by maxillary CD opposing mandibular IRO, while the control group consisted of 4 participants with CDs. Blood flow was measured by laser Doppler flowmetry (LDF) after denture removal for 0, 30, 60, and 90 minutes. RRR was quantified as reduction in bone volume a year post-treatment. The measurement of blood flow was then...