Clinical application of the activity index to parameter for evaluation of electromyographic activity of the masticatory muscles

The periodontal pain paradox: Difficulty on pain assessment in dental patients
(The periodontal pain paradox hypothesis)

Prevalence of hypodontia in Chinese orthodontic patients

The fractographic analysis of three dentin bonding agents on tooth surface

The transverse strength of acrylic resin after Coleus amboinicus, Lour extract solution immersion

The effect of mastication muscular tone on facial size in patients with Down syndrome

Prevalence of oral habits in homeless children under care of Yayasan Bahtera Bandung

Effectivity of blunt end with side hole irrigation needle to eliminate root canal bacteria

Roles of secretory leukocyte protease inhibitor amniotic membrane in oral wound healing

The potential application of stem cell in dentistry

Faculty of Dentistry Airlangga University
Indonesia

Surabaya Oct – Dec 2006

Accredited No. 48/DIKTI/Kep/2006
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Effectivity of blunt end with side hole irrigation needle to eliminate root canal bacteria</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Prevalence of oral habits in homeless children under care of Yayasan Bahtera Bandung</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>The effect of mastication muscular tone on facial size in patients with Down syndrome</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Prevalence of hypodontia in Chinese orthodontic patients</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>The periodontal pain paradox: Difficulty on pain assessment in dental patients (The periodontal pain paradox hypothesis)</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Clinical application of the activity index to parameter for evaluation of electromyographic activity of the masticatory muscles</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>The fractographic analysis of three dentin bonding agents on tooth surface</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>The transverse strength of acrylic resin after Coleus amboinicus, Lour extract solution immersion</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>The potential application of stem cell in dentistry</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>Roles of secretory leukocyte protease inhibitor amniotic membrane in oral wound healing</td>
<td>172 - 176</td>
</tr>
</tbody>
</table>
Clinical application of the activity index to parameter for evaluation of electromyographic activity of the masticatory muscles

Abstract

The purpose of this study was to evaluate the relationship between the intended direction of clenching and changes in the applied activity index of the masticatory muscles. The subjects consisted of twelve male volunteers (average age of 26.3 years). The surface electromyographic activities of the anterior and posterior parts of the temporal muscles, the deep posterior part of the masseter muscle and the superficial central part of the masseter muscle were recorded during the intended clenching in vertical, anterior and posterior directions. The changes of the applied activity index (the relative different value between the examined muscle activity and the superficial central part of the masseter muscle activity) were evaluated. The applied activity indexes of the anterior and posterior parts of the temporal muscles and the deep posterior part of the masseter muscle decreased significantly during the intended clenching in the posterior direction. Those of the anterior and posterior parts of the temporal muscles increased significantly during the intended clenching in the anterior direction. Each applied activity index changed corresponding to the differences of the running directions in the sagittal plane between the superficial masseter muscle and these three muscles. The applied activity indexes of the anterior and posterior parts of the temporal muscles and the deep posterior part of the masseter muscle significantly changed during clenching in anteroposterior direction. Therefore, it was suggested that the applied activity indexes of these three muscles could be used as a parameter to indicate the anteroposterior direction of force on the lower jaw.

Keyword: electromyographic, activity, index, direction, clenching,

Daftar Pustaka:
Dental Restoration