Tabriz University of Medical Sciences

<table>
<thead>
<tr>
<th>ID: 3534</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congress: 12th International Congress of Iranian Academy of Restorative Dentistry 24-26 October 2012 Tabriz-Iran</td>
</tr>
<tr>
<td>Title: PHOTODYNAMIC THERAPY IN RESTORATIVE DENTISTRY</td>
</tr>
</tbody>
</table>

**Authors:** Dr. Saeede Asdagh1, Dr. Abolfazl Bagery2, Dr. Sara Nouroliyuny3
1-assistant professor of restorative department, Ardebil university of medical sciences, faculty of dentistry.
2-assistant professor of department of oral pathology, Ardebil university of medical sciences, faculty of dentistry.
3-post graduate student of pediatric dentistry, Tabriz university of medical sciences, faculty of dentistry.

**Abstract:**

**Aim:** Photodynamic therapy (PDT) has been advocated as an alternative to antimicrobial agent and conventional mechanical treatment. In this literature reviewed the applications, advantages and disadvantages, of this method in restorative dentistry was investigated.

**Content:** Photodynamic therapy (PDT) can be defined as eradication of target cells by reactive oxygen species produced by means of a photosensitizing compound and light of an appropriate wavelength. In dentistry photodynamic therapy has various applications: it can be used in the treatment of periodontitis, peri-implantitis, to sterilize root canals during endodontic therapy and disinfection of cavity.

**Advantages:**
- Painless treatment
- Less need for anesthetic
- Less invasive cavity preparation
- Less risk of pulpal exposure in treating deep decay
- Less likelihood of recurring caries
- Less risk of losing a tooth
- Less likelihood of failed root canal treatment
- Less time to complete root canal treatment

**Conclusion:** Improvement in Photo-Activated Oral Disinfection restorative causes success in prophylaxis, periodontics, endodontic and restorative dentistry as well as in the field of implantology e.g. peri-implantitis. Eliminating all species of oral bacteria on demand by PDT is very effective in stopping decay, in saving demineralised tissue and in encouraging natural remineralisation. In this method necessity for flap operations may reduce, patient comfort may increase and treatment time may decrease.

**Photodynamic Therapy, Photosensitizes, reactive oxygen species**

**Presentation:** Poster