

## CO<sub>2</sub> laser tonsillectomy: a comparison with conventional technique

### Abstract

**Objective:** To define the advantages and disadvantages of CO<sub>2</sub> laser tonsillectomy compared with conventional method.

**Study design:** Retrospective review.

**Setting:** Department of Otolaryngology & Head and Neck Surgery, Apollo Hospitals Dhaka.

**Materials and Methods:** This study included fifty two patients with tonsillectomies from October 2007 to May 2008. The patients were diagnosed with history and clinical examination. Preoperative investigations have been done for general anaesthesia. Patients were intubated with laser reinforced endotracheal tube and fire precautions were taken. Laser tonsillectomy has been avoided below 10 years in our centre. 52 patients aged 10-35 years underwent tonsillectomy in a period of 10 months. Out of them 12 patients underwent laser tonsillectomies. The data of each patient included intra-operative blood loss, operation time, postoperative pain and postoperative healing.

**Results:** All Patients were admitted for 24 hours. Intra operative blood loss was dramatically less with the use of CO<sub>2</sub> laser than that of conventional method (5ml vs. 18ml). Profuse bleeding did not prolong this time especially in laser technique. The incidence of postoperative reactionary hemorrhage were not significantly different between two techniques. 2 patients suffered with secondary haemorrhage in conventional technique and in laser technique one patient had secondary haemorrhage. There was statistically significant difference in duration of operating time (15 vs. 40 min). Both methods of surgery had non-identical effect on post operative pain. Postoperative pain was less in laser technique than that of conventional technique in 7 days postoperative follow up. Leukocytic membrane formation and separation and final

healing were earlier in laser technique than in conventional technique.

**Conclusion:** CO<sub>2</sub> laser is a safe and acceptable method for tonsillectomy. CO<sub>2</sub> laser tonsillectomy reduces operation time and intraoperative blood loss. Postoperative pain is less than conventional technique and healing is also earlier in laser technique.