

NATIONAL INSTITUTE FOR CLINICAL EXCELLENCE

INTERVENTIONAL PROCEDURES PROGRAMME

Interventional procedure overview of laser assisted serial tonsillectomy

Introduction

This overview has been prepared to assist members of the Interventional Procedures Advisory Committee (IPAC) advise on the safety and efficacy of an interventional procedure previously reviewed by SERNIP. It is based on a rapid survey of published literature, review of the procedure by Specialist Advisors and review of the content of the SERNIP file. It should not be regarded as a definitive assessment of the procedure.

Date prepared

This overview was prepared by Bazian Ltd in October 2002.

Procedure name

Laser assisted serial tonsillectomy (LAST)

Specialty society

British Association of Otorhinolaryngologists

Indication(s)

Recurrent or chronic tonsillar infection, chronic sore throat, airway obstruction or chronic halitosis. About 45,000 people had a tonsillectomy in 2000/2001 in England. About 60% of procedures were carried out in children under the age of 15 (Source: Department of Health Hospital Episode Statistics 2000/2001, unadjusted for missing or incomplete data. Statistics do not reliably separate LAST from other procedures).

Summary of procedure

LAST is an outpatient procedure performed under local anaesthetic. A carbon dioxide laser is swept eight to ten times over the tonsil. During each sweep, the patient exhales and smoke is mechanically extracted to prevent inhalation. The entire procedure takes about 20 minutes. However, the procedure is repeated over the course of several visits, especially in patients with deep crypts or large tonsils.

Literature review**Appraisal criteria**

All identified studies that examined tonsillar surgery requiring repeated passes of a laser on one or more outpatient visits as required were included.

List of studies found

No controlled studies were found. One case series was identified.¹ One book chapter was identified, which appears to be a narrative review.² The text could not be obtained before the IPAC meeting.

Summary of key efficacy and safety findings

Study details	Key efficacy findings	Key safety findings	Key reliability and validity issues
<p>Case series (over 48 months)</p> <p>Krespi YP¹ New York, USA Date not stated (published 1994)</p> <p>n=86 adults with chronic recurrent tonsillitis, chronic sore throat, severe halitosis or airway obstruction (mean age 26 years, range 18-63)</p> <p>No inclusion/exclusion criteria</p> <p>Follow up at 1 and 4 weeks postoperatively</p>	<p>52 (60%) required 1 session 32 (37%) required 2 sessions</p> <p>84 (98%) 'relieved of symptoms' (time to outcome not specified)</p> <p>'Minimal' postoperative pain (time to outcome not specified)</p> <p>'Patients returned to work/school immediately or within 12 to 48 hours'</p>	<p>No peri-operative or anaesthesia-related complications No early or delayed bleeding</p>	<p>Two patients refused second session and elected for conventional tonsillectomy.</p> <p>Proportions of patients with each indication not provided. Baseline severity of symptoms not presented</p> <p>No information on how outcomes were measured</p>

Validity and generalisability of the studies

Only one published report of LAST was found. The study demonstrates feasibility of the technique. However, the report does not describe how patients were selected for the treatment, or give an assessment of outcome validity. The study is small, so the researchers may not have detected important complications.

No studies were found comparing LAST with more established tonsillectomy techniques.

Bazian comments

A Cochrane systematic review (search date 1998) concluded that the evidence for tonsillectomy (of any description) is inadequate.³

Specialist Advisors' opinion / advisors' opinions

Specialist advice was sought from consultants who have been nominated or ratified by their Specialist Society or Royal College.

- technique appears to be restricted to private practice in the UK
- pain following LAST may be greater than with other outpatient techniques
- technique demands repeat procedures
- the procedure may be offered for financial rather than clinical reasons
- there is now good evidence for one stage laser tonsillectomy, harmonic scalpel tonsillectomy and beginning to be some reasonable evidence concerning coblation tonsillectomy
- 'far from convinced'

References

1. Krespi YP, Edgar EH. Laser-assisted serial tonsillectomy. *J Laryngol Otol* 1994;23: 325-7
2. Krespi YP, Khosh MM. Laser-assisted serial tonsillectomy. In: Office based surgery in Otolaryngology. Blitzer A, Pillsbury H, Jahn A, Binder W (eds). *Thieme, New York. NY.* 1998:429-32
3. Burton MJ, Towler B, Glasziou P. Tonsillectomy versus non-surgical treatment for chronic/recurrent acute tonsillitis (Cochrane Review). In: *The Cochrane Library*, Issue 3, 2002. Oxford: Update Software.