ARBenefits	Medical Policy
ARBenefits Approval: 10/12/2011	Title: Laser Assisted Tonsillectomy
Effective Date: 01/01/2012	Document: ARB0332
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Code(s): 42825 Tonsillectomy, primary or secondary; younger than age 12 42826 Tonsillectomy, primary or secondary; age 12 or over	
Administered by: QualChoice®	

Public Statement:

Use of a laser as a surgical tool in a standard tonsillectomy procedure has not been shown to improve outcomes, and may increase post-operative pain. Use of a laser to sequentially destroy the tonsils over several outpatient visits has not been demonstrated to have advantages over standard techniques. Partial laser tonsillectomy has not been adequately studied. None of these techniques are covered.

Medical Policy Statement:

Laser-assisted total tonsillectomy performed in either a single sitting or by serial surgery or a subtotal or partial tonsillectomy (cryptolysis) is considered investigational and is not covered.

Background:

A laser-assisted tonsillectomy may describe the following procedures:

- Use of a laser as a surgical tool in an otherwise standard tonsillectomy procedure;
- Use of the laser to sequentially vaporize the tonsils in a series of outpatient visits; and
- Use of the laser to vaporize the surface of the tonsils, i.e.., a cryptolysis or a subtotal tonsillectomy.

Either a hand-held CO2 laser, a potassium-titanyl-phosphate (KTP/532), or an ND:YAG laser may be used.

One study was a randomized within-subject double-blind comparison of tonsillectomy performed with laser, blunt dissection, electrocautery, or radiofrequency coblation (Magdy et al, 2007). For each of the 60 adult patients, tonsillectomy was performed with coblation on one randomly chosen side; for the other tonsil one of the other 3 "standard" techniques was used. Pain ratings were higher for laser and electrocautery than for blunt dissection and coblation. Both operative time and blood loss were higher for laser than coblation. Laser and electrocautery resulted in more histopathological thermal tissue injury than coblation. Healing, determined by a blinded evaluator, was slower for electrocautery, but similar for blunt dissection, laser, and coblation. No evidence was found to suggest that use of a laser improves health outcomes in comparison with other methods.

Guidance from the United Kingdom's National Institute for Health and Clinical Excellence considers safety and efficacy data to be adequate to support the use of this technique. Efficacy data indicate slower wound healing and increased pain between 24 hours and 2 weeks after surgery compared with cold-steel dissection. It was also noted that although intraoperative blood loss may be less, the risk of postoperative hemorrhage may be greater. There is also a risk of damage to the patient's face and upper airway.

One study prospectively compared partial tonsillectomy (tonsillotomy) by laser with blunt dissection tonsillectomy in 113 children (Reichel et al, 2007). The authors noted that a randomized study could not be conducted since (in Germany) tonsillotomy is strictly contraindicated in patients with recurrent throat infections. Therefore, children who had obstructive problems (snoring, sleep apnea, mouth breathing, and eating problems; and no history of infection were treated with tonsillotomy, while those who had recurrent tonsillitis underwent tonsillectomy with blunt dissection. For the tonsillotomy group, no postoperative hemorrhage occurred; the mean time to discharge was 3 days. In the tonsillectomy group, 3 children had postoperative hemorrhage; the time to discharge was 6.9 days. Follow-up contact was achieved for parents of 40 children in the tonsillotomy group. Two of the 40 had regrowth of tonsillar tissue and required a subsequent tonsillectomy; none of the children with tonsillotomy were reported to have had recurrent tonsillitis. Follow-up contact was achieved for parents of 57 children in the tonsillectomy group, who only reported on postoperative analgesic use. Additional studies with longer follow-up are needed to evaluate rates of postoperative hemorrhage, regrowth, and recurrent tonsillitis with partial tonsillectomy.

A prospective, randomized, clinical study (n=80, males=35), conducted in Egypt, sought to compare the advantages and disadvantages of potassium titanyl phosphate (KTP) laser with those of bipolar radiofrequency techniques in pediatric patients aged between 10 and 15 years with tonsillectomy planned for chronic tonsillitis(Hegazy et al, 2008). Patients were prospectively randomized into 2 equal groups: KTP laser tonsillectomy and bipolar radiofrequency tonsillectomy . The outcome measures included; operative time, intra-operative blood loss, postoperative pain, and rate of postoperative complications. Follow-up visits were scheduled during the first, second,

and fourth postoperative weeks. Patients were asked to record their pain and discomfort on a standardized visual analogue scale (VAS).
The authors concluded that both KTP and the bipolar radiofrequency techniques were safe and easy to use for tonsillectomy. Conclusions need to be tempered by the small size of the study groups, lack of inclusion of cold steel dissection technique (considered the gold standard technique), and need for long-term follow-up.

References:

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Application to Products

This policy applies to ARBenefits. Consult ARBenefits Summary Plan Description (SPD) for additional information.

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