

Corporate Medical Policy

Electrothermal Arthroscopic Capsulorrhaphy

File Name:	electrothermal_arthroscopic_capsulorrhaphy
Origination:	7/1998
Last CAP Review:	7/2011
Next CAP Review:	7/2012
Last Review:	7/2011

Description of Procedure or Service

Shoulder instability is a relatively common occurrence, reported in between 2% and 8% of the population. The condition may arise from a single traumatic event (i.e., subluxation or dislocation), repeated microtrauma, or constitutional ligamentous laxity, resulting in deformation and/or damage in the glenohumeral capsule and ligaments. Shoulder instability may be categorized according to the movement of the humeral head, i.e., either as anterior, posterior, inferior, or multidirectional instability. Multidirectional instability most frequently consists of anterior and inferior subluxation or dislocation. Inferior movement is also classified as multidirectional. Initial treatment of shoulder subluxation or dislocation is conservative in nature followed by range of motion and strengthening exercises. However, if instability persists, either activity modifications or surgical treatment may be considered. Activity modification may be appropriate for patients who can identify a single motion that aggravates instability, such as overhead throwing motions. Surgical treatment may be considered in those who are unwilling to give up specific activities (i.e., related to sports) or when instability occurs frequently or during daily activities.

Surgery consists of inspection of the shoulder joint with repair, reattachment, or tightening of the labrum, ligaments, or capsule, performed either with sutures or sutures attached to absorbable tacks or anchors. While arthroscopic approaches have been investigated over the past decade, their success has been controversial due to a higher rate of recurrent instability compared with open techniques, thought to be related in part to the lack of restoration of capsular tension. Recent reports of arthroscopic techniques have described various suturing techniques for tightening the capsule, which require mastery of technically difficult arthroscopic intra-articular knot tying. Thermal capsulorrhaphy has been proposed as a technically simpler arthroscopic technique for tightening the capsule and ligaments. The technique is based on the observation that the use of nonablative levels of radiofrequency thermal energy can alter the collagen in the glenohumeral ligaments and/or capsule, resulting in their shrinkage and a decrease in capsular volume, both thought to restore capsular tension. Thermal capsulorrhaphy may be used in conjunction with arthroscopic repair of torn ligaments or other structures (i.e., repair of Bankart or superior labrum anterior and posterior [SLAP] lesion). In addition, thermal capsulorrhaphy has also been investigated as an arthroscopic treatment of glenohumeral laxity, a common injury among overhead athletes, such as baseball players, resulting in internal impingement of the posterior rotator cuff against the glenoid labrum. Internal impingement is often accompanied by posterior rotator cuff tearing and labral injury. Thermal capsulorrhaphy has also been proposed as a sole arthroscopic treatment. For example, the technique may be considered in patients with chronic shoulder pain without recognized instability, based on the theory that the pain may be related to occult or microinstability. This diagnosis may be considered when a diagnostic arthroscopy reveals only lax ligaments and is commonly seen among baseball players. Finally, thermal capsulorrhaphy may be considered in patients with congenital ligamentous laxity, such as Ehlers-Danlos or Marfan's syndrome.

While thermal capsulorrhaphy was initially investigated using laser energy, radiofrequency probes

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are now more commonly used. Devices include Oratec ORA-50 Monopolar RF Generator (Oratec Interventions, Menlo Park, CA) and Arthrocare (Arthrocare Corporation, Sunnyvale, CA).

*****Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

Policy

BCBSNC will not provide coverage for Electrothermal Arthroscopic Capsulorrhaphy. It is considered not medically necessary. BCBSNC does not cover procedures that are considered not medically necessary.

Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When Electrothermal Arthroscopic Capsulorrhaphy is covered

Not applicable

When Electrothermal Arthroscopic Capsulorrhaphy is not covered

Electrothermal arthroscopic capsulorrhaphy is considered not medically necessary. BCBSNC does not cover services that are considered not medically necessary.

Policy Guidelines

This policy was updated with a Medline/PubMed database search through June 2011. A review of shoulder instability in patients with joint hyperlaxity indicates that although initial results with thermal capsulorrhaphy seemed promising, subsequent studies with longer follow-up showed "unacceptably high rates of failure and postoperative complications", including cases of postoperative axillary nerve palsy and transient deltoid weakness. Abnormal capsular tissue has also been observed in the areas of previous thermal treatment, with either severe thickening or thin, friable deficient capsule.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: S2300

Nonapplicable codes: 23466, 29806, 29999

CPT Code 23466 describes an open capsulorrhaphy. 29806 is an arthroscopic capsulorrhaphy of the shoulder which does not encompass the thermal technique. It is incorrect to use 23466, 29806 or 29999

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for electrothermal arthroscopic capsulorrhaphy.

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources

Consultant Review - 6/98

Orthopedics todayR, July 1996.

The American Journal of Sports Medicine, Vol. 23, No. 4, 1995

MPAG - 11/98

Consultant Presentation, 11/98

Specialty Matched Consultant Advisory Panel - 9/00

Medical Policy Advisory Group - 10/2000

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BCBSA Medical Policy Reference Manual, 7.01.82, 7/12/02

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.82, 12/17/03

Mohtadi NG, Holinshead RM, Ceponis PJ, Chan DS, Fick GH (February 2006). A multi-centre randomized controlled trial comparing electrothermal arthroscopic capsulorrhaphy versus open inferior capsular shift for patients with shoulder instability: Protocol implementation and interim performance: Lessons learned from conducting a multi-centre RCT [ISRCTN68224911; NCT00251160]. *Trials* 2006, 7:4. Retrieved 3/1/07 from <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1399448>

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.82, 3/7/06

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.82, 8/2/07

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Food and Drug Administration (FDA). 501(k) Summary for Arthocare dated March 3, 2004. Retrieved May 16, 2010 from http://www.accessdata.fda.gov/cdrh_docs/pdf3/K034004.pdf

Food and Drug Administration (FDA). 501(k) Summary for ORA-50 Electrothermal System and Accessories dated 1/18/00. Retrieved on May 16, 2010 from http://www.accessdata.fda.gov/cdrh_docs/pdf/K994333.pdf

Zheng N, Davis BR, Andrews JR. The Effects of Thermal Capsulorrhaphy of Medial Parapatellar Capsule on Patellar Lateral Displacement. *J Orthop Surg* (2008) 3:45. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2569921/?tool=pubmed>

Johnson SM, Robinson CM. Shoulder instability in patients with joint hyperlaxity. *J Bone Joint Surg Am* 2010; 92(6):1545-57.

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Specialty Matched Consultant Advisory Panel review 7/2010

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.82, 6/9/11

Specialty Matched Consultant Advisory Panel review 7/2011

Policy Implementation/Update Information

7/98 Original Policy Developed

5/99 Reformatted, Description of Procedure or Service revised, Medical Term Definitions added.

10/00 Specialty Matched Consultant Advisory Panel. No change recommended in criteria. System coding changes. Medical Policy Advisory Group review. No change in criteria. Approve.

11/01 Coding format change.

12/01 Billing and coding updated to include 29999.

8/02 Specialty Matched Consultant Advisory Panel meeting 8/2002. No changes. System coding changes.

9/03 Specialty Matched Consultant Advisory Panel review. No changes to policy. Sources added.

3/04 Billing/Coding section updated for consistency.

8/12/04 S2300 added to Billing and Coding section as appropriate code for Electrothermal Arthroscopic Capsulorrhaphy. 29806 added as an inappropriate code for this procedure. Reference added.

6/2/2005 Specialty Matched Consultant Advisory Panel review on 5/23/2005. No changes made to policy statement. SUR6280 added as key word. S2300 code description removed.

6/18/07 Information added to Description section for clarity. Rationale added to Policy Guidelines section to support continued Investigational status. References updated. Specialty Matched Consultant Advisory Panel review on 5/18/07. No changes to policy coverage criteria. (adn)

4/7/08 Statement in the Billing/Coding section reworded to read: CPT Code 23466 describes an open capsulorrhaphy. 29806 is an arthroscopic capsulorrhaphy of the shoulder which does not encompass the thermal technique. It is incorrect to use 23466, 29806 or 29999 for electrothermal arthroscopic capsulorrhaphy. If these are codes are used for this procedure, the claim will be denied as "investigational." (adn)

7/6/09 Specialty Matched Consultant Advisory Panel review on 5/21/09. No change to policy statement.

9/28/10 Specialty Matched Consultant Advisory Panel review 7/2010. Removed Medical Policy number. Description section extensively revised. In Policy section and in When not covered section changed "Investigational" to "Not Medically Necessary". Policy Guidelines updated. References updated. (mco)

8/16/11 Specialty Matched Consultant Advisory Panel review 7/2011. References updated. No

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changes to policy statements.(mco)

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.