

Medical Coverage Policy | Balloon Ostial Dilation for Treatment of Chronic Rhinosinusitis



EFFECTIVE DATE: 01|01|2019
POLICY LAST UPDATED: 08|08|2019

OVERVIEW

Balloon ostial dilation (also known as balloon sinuplasty) is proposed as an alternative to traditional endoscopic sinus surgery for patients with chronic rhinosinusitis who fail medical management. The procedure involves placing a balloon in the sinus ostium and inflating the balloon to stretch the opening. It can be performed as a stand-alone procedure or as an adjunctive procedure to functional endoscopic sinus surgery (FESS).

MEDICAL CRITERIA

Not applicable

PRIOR AUTHORIZATION

Not applicable

POLICY STATEMENT

BlueCHiP for Medicare

Use of a catheter-based inflatable device (balloon ostial dilation) in the treatment of sinusitis is not covered as the evidence is insufficient to determine the effects of the technology on health outcomes.

Commercial Products

Use of a catheter-based inflatable device (balloon ostial dilation) in the treatment of sinusitis is considered not medically necessary as the evidence is insufficient to determine the effects of the technology on health outcomes.

COVERAGE

Benefits may vary between groups and contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage or Subscriber Agreement for applicable not medically necessary/not covered benefits/coverage.

BACKGROUND

Chronic Rhinosinusitis

Chronic rhinosinusitis (CRS) is characterized by purulent nasal discharge, usually without fever, that persists for weeks to months. Symptoms of congestion often accompany the nasal discharge. There also may be mild pain and/or a headache. Thickening of mucosa may restrict or close natural openings between sinus cavities and the nasal fossae, although symptoms vary considerably because of the location and shape of these sinus ostia.

Treatment

Estimates have suggested approximately 30 million individuals in the United States suffer from CRS. Most cases are treated with medical therapy, but surgical drainage is an option for patients who fail to respond to medical therapy. Functional endoscopic sinus surgery (FESS) has become an important aspect for surgical management of chronic sinusitis, although evidence from randomized controlled trials is limited. For this procedure, a fiberoptic nasal endoscope is used to visualize the sinus ostia, and any obstruction found is corrected. This procedure restores patency and allows air and mucous transport through the natural ostium. Approximately 350,000 FESS procedures are done each year in the United States for CRS.

A newer procedure, balloon ostial dilatation can be used as an alternative or as an adjunct to FESS for those with CRS. The goal of this technique, when used as an alternative to FESS, is to improve sinus drainage using a less invasive approach. When used as an adjunct to FESS, it is intended to facilitate and/or increase access to the sinuses. The procedure involves placing a guidewire in the sinus ostium, advancing a balloon over the guidewire, and then stretching the opening by inflating the balloon. The guidewire location is confirmed with fluoroscopy or with direct transillumination of the targeted sinus cavity. General anesthesia may be needed for this procedure to minimize patient movement.

The maxillary sinus creates a unique challenge. The maxillary ostia, located within the ethmoid infundibulum, often cannot be accessed transnasally without excising a portion of the uncinata process. An alternative approach to the maxillary ostia is through the sinus, via the canine fossa. A guidewire can be advanced from within the maxillary sinus to the nasal fossa. The dilating balloon can enlarge the ostia while deflecting the uncinata process.

In 2008, the Relieva™ Sinus Balloon Catheter (Acclarent, Menlo Park, CA) was cleared for marketing by the U.S. Food and Drug Administration (FDA) through the 510(k) process. FDA determined that this device was substantially equivalent to existing devices for use in dilating the sinus ostia and paranasal spaces in adults and maxillary sinus spaces in children. Subsequent devices developed by Acclarent have also been cleared by FDA through the 510(k) process. They include the Relieva Spin Sinus Dilation System® (cleared in 2011) and the Relieva Seeker Balloon Sinuplasty System® (cleared in 2012).

In 2008, the FinESS™ Sinus Treatment (Entellus Medical, Maple Grove, MN) was cleared for marketing by FDA through the 510(k) process. The indication noted is to access and treat the maxillary ostia/ethmoid infundibulum in adults using a transantral approach (FDA product code: EOB). The bony sinus outflow tracts are remodeled by balloon displacement of adjacent bone and paranasal sinus structures. Two other balloon sinus ostial dilation devices, the ENTrigue® Sinus Dilation System (ENTrigue Surgical, acquired by more recently by Smith & Nephew), and the XprESS™ Multi-Sinus Dilation Tool, also received 510(k) clearance in 2012.

In 2013, a sinus dilation system (Medtronic Xomed, Jacksonville, FL), later named the NuVent™ EM Balloon Sinus Dilation System, was cleared for marketing by FDA through the 510(k) process for use in conjunction with a Medtronic computer-assisted surgery system when surgical navigation or image-guided surgery may be necessary to locate and move tissue, bone, or cartilaginous tissue surrounding the drainage pathways of the frontal, maxillary, or sphenoid sinuses. Also in 2013, a sinus dilation system (Smith & Nephew), later named the Ventera™ Sinus Dilation System, was cleared for marketing through the 510(k) process to access and treat the frontal recesses, sphenoid sinus ostia, and maxillary ostia/ethmoid infundibula in adults using a transnasal approach.

For individuals with chronic rhinosinusitis who receive balloon ostial dilation as a stand-alone procedure, or as an adjunct to FESS, the evidence is insufficient to determine the effects of the technology on health outcomes.

CODING

The following codes are not covered for BlueCHiP for Medicare and not medically necessary for Commercial Products:

- 31295** Nasal/sinus endoscopy, surgical; with dilation of maxillary sinus ostium (e.g., balloon dilation), transnasal, or via canine fossa
- 31296** Nasal/sinus endoscopy, surgical; with dilation of frontal sinus ostium (e.g., balloon dilation)
- 31297** Nasal/sinus endoscopy, surgical; with dilation of sphenoid sinus ostium (e.g., balloon dilation)
- 31298** Nasal/sinus endoscopy, surgical; with dilation of frontal and sphenoid sinus ostia (eg, balloon dilation)

NOTE:

- It is incorrect coding to use 31237, 31267, 31276, 31288.
- Incidental removal of tissue does not constitute a separately reported procedure.

RELATED POLICIES

Not applicable

PUBLISHED

Provider Update, October 2019
Provider Update, November 2018
Provider Update, December 2017
Provider Update, January 2017
Provider Update, May 2015

REFERENCES

1. Hopkins C, Browne JP, Slack R, et al. The Lund-Mackay staging system for chronic rhinosinusitis: how is it used and what does it predict? *Otolaryngol Head Neck Surg.* Oct 2007;137(4):555-561. PMID 17903570
2. Lund VJ, Kennedy DW. Staging for rhinosinusitis. *Otolaryngol Head Neck Surg.* Sep 1997;117(3 Pt 2):S35-40. PMID 9334786
3. Hopkins C, Gillett S, Slack R, et al. Psychometric validity of the 22-item Sinonasal Outcome Test. *Clin Otolaryngol.* Oct 2009;34(5):447-454. PMID 19793277
4. Ahmed J, Pal S, Hopkins C, et al. Functional endoscopic balloon dilation of sinus ostia for chronic rhinosinusitis. *Cochrane Database Syst Rev.* Jul 6 2011(7):CD008515. PMID 21735433
5. Plaza G, Eisenberg G, Montojo J, et al. Balloon dilation of the frontal recess: a randomized clinical trial. *Ann Otol Rhinol Laryngol.* Aug 2011;120(8):511-518. PMID 21922974
6. Levy JM, Marino MJ, McCoul ED. Paranasal sinus balloon catheter dilation for treatment of chronic rhinosinusitis: a systematic review and meta-analysis. *Otolaryngol Head Neck Surg.* Jan 2016;154(1):33-40. PMID 26519456
7. Achar P, Duvvi S, Kumar BN. Endoscopic dilatation sinus surgery (FEDS) versus functional endoscopic sinus surgery (FESS) for treatment of chronic rhinosinusitis: a pilot study. *Acta Otorhinolaryngol Ital.* Oct 2012;32(5):314-319. PMID 23326011
8. Bikhazi N, Light J, Truitt T, et al. Standalone balloon dilation versus sinus surgery for chronic rhinosinusitis: A prospective, multicenter, randomized, controlled trial with 1-year follow-up. *Am J Rhinol Allergy.* Jul 2014;28(4):323-329. PMID 24823902
9. Cutler J, Bikhazi N, Light J, et al. Standalone balloon dilation versus sinus surgery for chronic rhinosinusitis: a prospective, multicenter, randomized, controlled trial. *Am J Rhinol Allergy.* Sep-Oct 2013;27(5):416-422. PMID 23920419
10. Batra PS, Ryan MW, Sindwani R, et al. Balloon catheter technology in rhinology: reviewing the evidence. *Laryngoscope.* Sep 7 2011;121(1):226-232. PMID 20824793
11. Chandra RK, Kern RC, Cutler JL, et al. REMODEL larger cohort with long-term outcomes and meta-analysis of standalone balloon dilation studies. *Laryngoscope.* Jan 2016;126(1):44-50. PMID 26228589
12. Stankiewicz J, Truitt T, Atkins J, Jr. One-year results: Transantral balloon dilation of the ethmoid infundibulum. *Ear Nose Throat J.* Feb 2010;89(2):72-77. PMID 20155675
13. Stankiewicz J, Truitt T, Atkins J, et al. Two-year results: transantral balloon dilation of the ethmoid infundibulum. *Int Forum Allergy Rhinol.* May-Jun 2012;2(3):199-206. PMID 22337530
14. Levine SB, Truitt T, Schwartz M, et al. In-office stand-alone balloon dilation of maxillary sinus ostia and ethmoid infundibula in adults with chronic or recurrent acute rhinosinusitis: a prospective, multi-institutional study with-1-year follow-up. *Ann Otol Rhinol Laryngol.* Nov 2013;122(11):665-671. PMID 24358625

15. Gould J, Alexander I, Tomkin E, et al. In-office, multisinus balloon dilation: 1-Year outcomes from a prospective, multicenter, open label trial. *Am J Rhinol Allergy*. Mar-Apr 2014;28(2):156-163. PMID 24598043
16. Minni A, Dragonetti A, Sciuto A, et al. Use of balloon catheter dilation vs. traditional endoscopic sinus surgery in management of light and severe chronic rhinosinusitis of the frontal sinus: a multicenter prospective randomized study. *Eur Rev Med Pharmacol Sci*. Jan 2018;22(2):285-293. PMID 29424885
17. Bizaki AJ, Taulu R, Numminen J, et al. Quality of life after endoscopic sinus surgery or balloon sinuplasty: a randomized clinical study. *Rhinology*. Dec 2014;52(4):300-305. PMID 25479206
18. Bizaki AJ, Numminen J, Taulu R, et al. Decrease of nasal airway resistance and alleviations of symptoms after balloon sinuplasty in patients with isolated chronic rhinosinusitis: a prospective, randomised clinical study. *Clin Otolaryngol*. Dec 2016;41(6):673-680. PMID 26548697
19. Bizaki AJ, Numminen J, Taulu R, et al. A controlled, randomized clinical study on the impact of treatment on antral mucociliary clearance: uncinectomy versus balloon sinuplasty. *Ann Otol Rhinol Laryngol*. May 2016;125(5):408-414. PMID 26611244
20. Marzetti A, Tedaldi M, Passali FM. The role of balloon sinuplasty in the treatment of sinus headache. *Otolaryngol Pol*. Jan-Feb 2014;68(1):15-19. PMID 24484944
21. Kutluhan A, Salviz M, Bozdemir K, et al. The effects of uncinectomy and natural ostial dilatation on maxillary sinus ventilation: a clinical experimental study. *Eur Arch Otorhinolaryngol*. Apr 2011;268(4):569-573. PMID 21110035
22. Bozdemir K, Kutluhan A, Cetin H, et al. Comparison of outcomes of simple polypectomy plus balloon catheter dilatation versus functional endoscopic sinus surgery in nasal polyposis: a preliminary study. *Am J Rhinol Allergy*. May-Jun 2011;25(3):198-200. PMID 21679533
23. Bolger WE, Brown CL, Church CA, et al. Safety and outcomes of balloon catheter sinusotomy: a multicenter 24-week analysis in 115 patients. *Otolaryngol Head Neck Surg*. Jul 2007;137(1):10-20. PMID 17599558
24. Kuhn FA, Church CA, Goldberg AN, et al. Balloon catheter sinusotomy: one-year follow-up--outcomes and role in functional endoscopic sinus surgery. *Otolaryngol Head Neck Surg*. Sep 2008;139(3 Suppl 3):S27-37. PMID 18707992
25. Weiss RL, Church CA, Kuhn FA, et al. Long-term outcome analysis of balloon catheter sinusotomy: two-year follow-up. *Otolaryngol Head Neck Surg*. Sep 2008;139(3 Suppl 3):S38-46. PMID 18707993
26. Soler ZM, Rosenbloom JS, Skarada D, et al. Prospective, multicenter evaluation of balloon sinus dilation for treatment of pediatric chronic rhinosinusitis. *Int Forum Allergy Rhinol*. Mar 2017;7(3):221-229. PMID 27888649
27. Hathorn IF, Pace-Asciak P, Habib AR, et al. Randomized controlled trial: hybrid technique using balloon dilation of the frontal sinus drainage pathway. *Int Forum Allergy Rhinol*. Feb 2015;5(2):167-173. PMID 25360863
28. National Institute of Health and Care Excellence (NICE). Balloon catheter dilation of paranasal sinus ostia for chronic sinusitis [IPG273]. 2008; <http://www.nice.org.uk/guidance/IPG273/chapter/1-Guidance>. Accessed January 23, 2019.
29. National Institute of Health and Care Excellence (NICE). XprESS multi sinus dilation system for treating chronic sinusitis [MTG30]. 2016; <https://www.nice.org.uk/guidance/mtg30>. Accessed January 23, 2019.
30. American Academy of Otolaryngology - Head and Neck Surgery. Position Statement: Dilation of sinuses, any method (e.g., balloon, etc.). 2017; <https://www.entnet.org/?q=node/542>. Accessed January 23, 2019.
31. Rosenfeld RM, Piccirillo JF, Chandrasekhar SS, et al. Clinical practice guideline (update): adult sinusitis. *Otolaryngol Head Neck Surg*. Apr 2015;152(2 Suppl):S1-S39. PMID 25832968
32. American Rhinologic Society (ARS). Ostial Balloon Dilation Position Statement. 2017; https://www.americanrhinologic.org/index.php?option=com_content&view=article&id=33:osti

al-balloon-dilation-position-statement&catid=26;position-statements&Itemid=197. Accessed January 23, 2019.

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