Medical Coverage Policy | Plugs for Anal Fistula Repair



EFFECTIVE DATE: 6 | 01 | 2022

POLICY LAST UPDATED: 02 | 02 | 2022

OVERVIEW

Anal fistula plugs (AFPs) are biosynthetic devices used to promote healing and prevent the recurrence of anal fistulas. They are proposed as an alternative to procedures including fistulotomy, endorectal advancement flaps, seton drain placement, and use of fibrin glue in the treatment of anal fistulas.

MEDICAL CRITERIA

Not applicable

PRIOR AUTHORIZATION

Not applicable

POLICY STATEMENT

Medicare Advantage Plans

Biosynthetic fistula plugs, including plugs made of porcine small intestine submucosa or of synthetic material for the repair of anal fistulas, are not covered as the evidence is insufficient to determine the effects of the technology on health outcomes.

Commercial Products

Biosynthetic fistula plugs, including plugs made of porcine small intestine submucosa or of synthetic material for the repair of anal fistulas, are not medically necessary as the evidence is insufficient to determine the effects of the technology on health outcomes.

COVERAGE

Medicare Advantage Plans and Commercial Products

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

BACKGROUND

Anal Fistulas

An anal fistula is an abnormal communication between the interior of the anal canal or rectum and the skin surface. Rarer forms may communicate with the vagina or other pelvic structures, including the bowel. Most fistulas begin as anorectal abscesses, which are thought to arise from infection in the glands around the anal canal. When the abscess opens spontaneously in the anal canal (or has been opened surgically), a fistula may occur. Studies have reported that 26% to 37% of cases of perianal abscesses eventually form anal fistulas.

Other causes of fistulas include tuberculosis, cancer, prior radiotherapy, and inflammatory bowel disease. Fistulas may occur singly or in multiples. Symptoms include a purulent discharge and drainage of pus and/or stool near the anus, which can irritate the outer tissues causing itching and discomfort. Pain occurs when fistulas become blocked, and abscesses recur. Flatus may also escape from the fistulous tract.

The most widely used classification of anal fistulas is the Parks classification system, which defines anal fistulas by their position relative to the anal sphincter as transsphincteric, intersphincteric, suprasphincteric, or extrasphincteric. More simply, anal fistulas are described as low (present distally and not extending up to the anorectal sling) or high (extending up to or beyond the anorectal sling). The repair of high fistulas can be associated with incontinence. Diagnosis may involve a fistula probe, anoscopy, fistulography, ultrasound, or magnetic resonance imaging.

Treatment

Treatment is aimed at repairing the fistula without compromising continence.

Surgical treatments for anal fistulas include fistulotomy or fistulectomy, endorectal or anal sliding flaps, ligation of the intersphincteric fistula tract (LIFT) technique, seton drain, and fibrin glue. Fistulotomy involves a division of the tissue over the fistula and laying open of the fistula tract. Although fistulotomies are widely used for low fistulas, lay-open fistulotomies in high fistulas carry the risk of incontinence. A seton is a thread placed through the fistula tract to drain fistula material and preventing the development of a perianal infection. Draining setons can control sepsis, but few patients heal after removal of the seton, and the procedure is poorly tolerated long-term. A "cutting seton" refers to the process of regular tightening of the seton to encourage the gradual cutting of the sphincteric muscle with subsequent inflammation and fibrosis. Cutting setons can cause continence disturbances. Endorectal advancement flaps involve the advancement of a full or partial thickness flap of the proximal rectal wall over the internal (rectal) opening of the fistula tract. The intersphincteric fistula tract technique involves identifying the intersphincteric plane and then dividing the fistula tract; its use has been reported in small studies, but long-term follow-up is unavailable.2, Fibrin glue is a combination of fibrinogen, thrombin, and calcium in a matrix, which is injected into the fistula tract. The glue induces clot formation within the tract, which is then closed through the overgrowth of new tissue.

Fistula Plugs

Fistula plugs are designed to provide a structure that acts as a scaffold for new tissue growth. The scaffold, which can be derived from animal (eg, porcine) tissue or a synthetic copolymer fiber, is degraded by hydrolytic or enzymatic pathways as healing progresses. The plug is pulled through the fistula tract and secured at the fistula's proximal opening. The fistula tract is left open at the distal opening to allow drainage. Several fistula plugs have been cleared for marketing by the U.S. Food and Drug Administration (FDA) (see Regulatory Status section).

A fistula plug derived from autologous cartilage tissue has been investigated in a small (N=10) pilot study.

Regulatory Status

Several plugs for anal fistula repair have been cleared for marketing by the FDA through the 510(k) process and are outlined in Table 1.

Table 1. Devices for Anal Fistula Repair

Device	Year	Description	Indication(s)	Predicate Device(s)	FDA Product Code
SIS Fistula Plug (Cook Biotech)	Mar 2005	- Manufactured from porcine SIS	- Repair of anal, rectal, and enterocutaneous fistulas	- Surgisis® Soft Tissue Graft (Cook Biotech) - Stratasis® Urethral Sling (Cook Biotech)	FTM
Surgisis RVP Recto-Vaginal Fistula Plug (Cook Biotech)	Oct 2006	- Manufactured from porcine SIS - Tapered configuration with a button to increase plug retention and improve fistula blockage	- Reinforce soft tissue to repair rectovaginal fistulas	- SIS Fistula Plug (Cook Biotech)	FTM
Surgisis Biodesign Enterocutaneous	Feb 2009	- Manufactured from porcine SIS - Tapered configuration with	- Reinforce soft tissue to repair enterocutaneous fistulas	- SIS Fistula Plug (Cook Biotech)	FTM

Fistula Plug (Cook Biotech)		flange to increase plug retention and improve fistula blockage			
Gore Bio-A Fistula Plug (W.L. Gore & Associates)	Mar 2009	- Manufactured from bioabsorbable PGA:TMC copolymer - Supplied in a 3- dimensional configuration of a disk with attached tubes	- Reinforce soft tissue to repair anorectal fistulas	- Gore Bioabsorbable Mesh (W.L. Gore & Associates) - SIS Fistula Plug (Cook Biotech)	FTL
Biodesign Anal Fistula Plug (Cook Biotech)	May 2016	Manufactured from porcine SISAdditional wash steps added in processing	- Reinforce soft tissue where a rolled configuration is required to repair anal, rectal, and enterocutaneous fistulas	- SIS Fistula Plug (Cook Biotech)	FTM

CODING

The following code(s) is not covered for Medicare Advantage Plans and not medically necessary for Commercial Products:

46707 Repair of anorectal fistula with plug (e.g., porcine small intestine mucosa [SIS])

RELATED POLICIES

Not applicable

PUBLISHED

Provider Update, April 2022

REFERENCES

- Simpson JA, Banerjea A, Scholefield JH. Management of anal fistula. BMJ. Oct 15 2012; 345: e6705. PMID 23069597
- 2. Campbell ML, Abboud EC, Dolberg ME, et al. Treatment of refractory perianal fistulas with ligation of the intersphincteric fistula tract: preliminary results. Am Surg. Jul 2013; 79(7): 723-7. PMID 23816007
- 3. Ozturk E. Treatment of recurrent anal fistula using an autologous cartilage plug: a pilot study. Tech Coloproctol. May 2015; 19(5): 301-7. PMID 25850629
- 4. Cheung XC, Fahey T, Rogers AC, et al. Surgical Management of Idiopathic Perianal Fistulas: A Systematic Review and Meta-Analysis. Dig Surg. 2021; 38(2): 104-119. PMID 33503621
- 5. van Koperen PJ, Bemelman WA, Gerhards MF, et al. The anal fistula plug treatment compared with the mucosal advancement flap for cryptoglandular high transsphincteric perianal fistula: a double-blinded multicenter randomized trial. Dis Colon Rectum. Apr 2011; 54(4): 387-93. PMID 21383557
- Ortiz H, Marzo J, Ciga MA, et al. Randomized clinical trial of anal fistula plug versus endorectal advancement flap for the treatment of high cryptoglandular fistula in ano. Br J Surg. Jun 2009; 96(6): 608-12. PMID 19402190
- 7. Narang SK, Jones C, Alam NN, et al. Delayed absorbable synthetic plug (GORE(R) BIO-A(R)) for the treatment of fistula-in-ano: a systematic review. Colorectal Dis. Jan 2016; 18(1): 37-44. PMID 26542191
- 8. Nasseri Y, Cassella L, Berns M, et al. The anal fistula plug in Crohn's disease patients with fistula-in-ano: a systematic review. Colorectal Dis. Apr 2016; 18(4): 351-6. PMID 26749385
- 9. Xu Y, Tang W. Comparison of an anal fistula plug and mucosa advancement flap for complex anal fistulas: a meta-analysis. ANZ J Surg. Dec 2016; 86(12): 978-982. PMID 27680894

- 10. Cirocchi R, Trastulli S, Morelli U, et al. The treatment of anal fistulas with biologically derived products: is innovation better than conventional surgical treatment? An update. Tech Coloproctol. Jun 2013; 17(3): 259-73. PMID 23207714
- 11. Pu YW, Xing CG, Khan I, et al. Fistula plug versus conventional surgical treatment for anal fistulas. A system review and meta-analysis. Saudi Med J. Sep 2012; 33(9): 962-6. PMID 22964807
- 12.Leng Q, Jin HY. Anal fistula plug vs mucosa advancement flap in complex fistula-in-ano: A meta-analysis. World J Gastrointest Surg. Nov 27 2012; 4(11): 256-61. PMID 23494149
- 13. O'Riordan JM, Datta I, Johnston C, et al. A systematic review of the anal fistula plug for patients with Crohn's and non-Crohn's related fistula-in-ano. Dis Colon Rectum. Mar 2012; 55(3): 351-8. PMID 22469804
- 14. Jayne DG, Scholefield J, Tolan D, et al. A Multicenter Randomized Controlled Trial Comparing Safety, Efficacy, and Cost-effectiveness of the Surgisis Anal Fistula Plug Versus Surgeon's Preference for Transsphincteric Fistula-in-Ano: The FIAT Trial. Ann Surg. Mar 01 2021; 273(3): 433-441. PMID 32516229
- 15. Senejoux A, Siproudhis L, Abramowitz L, et al. Fistula Plug in Fistulising Ano-Perineal Crohn's Disease: a Randomised Controlled Trial. J Crohns Colitis. Feb 2016; 10(2): 141-8. PMID 26351393
- 16. Hall JF, Bordeianou L, Hyman N, et al. Outcomes after operations for anal fistula: results of a prospective, multicenter, regional study. Dis Colon Rectum. Nov 2014; 57(11): 1304-8. PMID 25285698
- 17. Hyman N, O'Brien S, Osler T. Outcomes after fistulotomy: results of a prospective, multicenter regional study. Dis Colon Rectum. Dec 2009; 52(12): 2022-7. PMID 19934925
- 18. Fisher OM, Raptis DA, Vetter D, et al. An outcome and cost analysis of anal fistula plug insertion vs endorectal advancement flap for complex anal fistulae. Colorectal Dis. Jul 2015; 17(7): 619-26. PMID 25641401
- 19. Christoforidis D, Pieh MC, Madoff RD, et al. Treatment of transsphincteric anal fistulas by endorectal advancement flap or collagen fistula plug: a comparative study. Dis Colon Rectum. Jan 2009; 52(1): 18-22. PMID 19273951
- 20. Wang JY, Garcia-Aguilar J, Sternberg JA, et al. Treatment of transsphincteric anal fistulas: are fistula plugs an acceptable alternative?. Dis Colon Rectum. Apr 2009; 52(4): 692-7. PMID 19404076
- 21. Chung W, Kazemi P, Ko D, et al. Anal fistula plug and fibrin glue versus conventional treatment in repair of complex anal fistulas. Am J Surg. May 2009; 197(5): 604-8. PMID 19393353
- 22. Vogel JD, Johnson EK, Morris AM, et al. Clinical Practice Guideline for the Management of Anorectal Abscess, Fistula-in-Ano, and Rectovaginal Fistula. Dis Colon Rectum. Dec 2016; 59(12): 1117-1133. PMID 27824697
- 23. National Institute for Health and Care Excellence (NICE). Bioprosthetic plug insertion for anal fistula [IPG662]. September 25, 2019; https://www.nice.org.uk/guidance/ipg662. Accessed September 12, 2021.

------ CLICK THE ENVELOPE ICON BELOW TO SUBMIT COMMENTS

This medical policy is made available to you for informational purposes only. It is not a guarantee of payment or a substitute for your medical judgment in the treatment of your patients. Benefits and eligibility are determined by the member's subscriber agreement or member certificate and/or the employer agreement, and those documents will supersede the provisions of this medical policy. For information on member-specific benefits, call the provider call center. If you provide services to a member which are determined to not be medically necessary (or in some cases medically necessary services which are non-covered benefits), you may not charge the member for the services unless you have informed the member and they have agreed in writing in advance to continue with the treatment at their own expense. Please refer to your participation agreement(s) for the applicable provisions. This policy is current at the time of publication; however, medical practices, technology, and knowledge are constantly changing. BCBSRI reserves the right to review and revise this policy for any reason and at any time, with or without notice. Blue Cross & Blue Shield of Rhode Island is an independent licensee of the Blue Cross and Blue Shield Association.

