Chapter 5

MINIMAL INVASIVE APPROACH IN PILONIDAL SINUS TREATMENT: ENDOSCOPIC PILONIDAL SINUS TREATMENT

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Pilonidal cyst disease is a chronic inflammatory process which is frequently developed on the sacrococcygeal area and is related with the existence of hair on that area ⁽¹⁾. This disease is seen approximately 3 times more often in men and is frequently seen in young people, especially in the third decade ⁽²⁾. Some factors such as increase of hair on the disease area, male sex, inadequate hygiene, sedentary life and being overweight are accused for the formation of pilonidal sinus (PS) ^(3,4). In addition to some patients who can be asymptomatic, pilonidal sinus can cause pain, recurrent abscess formation and acute or chronic infections ^(5,6). Sacrococcygeal pilonidal disease was firstly described by Mayo in 1883 and since then, various treatment modalities have been improved for this disease's management ⁽⁶⁾.

Although several methods have been used over the years in PS treatment, any consensus cannot be generated on an ideal treatment ⁽⁷⁾. The ideal treatment method should have some specific qualities for example; easily applicable, cost effective, small wound size, slight pain, rapid wound healing, simple wound care, return to daily activities as soon as possible, short term labor loss, low recurrence and complications ^(3,8).

Sacrococcygeal pilonidal disease's major treatment is surgery. Several treatment methods are defined in literature. These techiques are as follows; the excision of the sinus which is left open, excision and marsupialiastion, Karyadakis and Limberg like flap techniques with fibrin glue, thrombin-gelatine matrix or phenol injections with the curettage of the sinus ⁽⁶⁾. The use of these minimal invasive techniques have been preferred more during the recent years for pilonidal sinus disease. In the minimal invasive surgery period, the use of endoscopy has

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Even in recurrent sinus cases, the EPSIT method had satisfying results. In the study which was performed by Meinero and his friends, a 5.1% relapse rate and a 5% incomplete wound healing rate was found. Despite the fact that EPSIT has many advantages, it also has some limitations such as the cost of fistuloscope and its kit, and the training and experience required by the surgeons for this procedure.

RESULT

For pilonidal sinus disease, there is no definite treatment but minimal invasive procedures have started to be performed more frequently. In these methods, EPSIT is one of the best known. In primary sinus and recurrent sinus patients, EPSIT is an alternative procedure to flap technique and other ways of treatment. After surgery, getting back to work and one's own daily life is fast and disease related economical loss is decreased. EPSIT is a more effective procedure than traditional methods, in terms of having less complications, slighter pain, shorter hospitalization times, less incision scars, and an acceptable level of recurrence rates. Recently, endoscopic procedures have become the first choice for most of the surgeries. Thus, in the near future, it is thought that EPSIT may be a gold standard method of pilonidal sinus treatment.

REFERENCES

- Bendewald, F.P., Cima, R.R. Pilonidal disease. Clin Colon Rectal Surg. 2007;20: 86-95.
- Muzi, M.G., Maglio, R., Milito, G., et al. Long-term results of pilonidal sinus disease with modified primary closure: new technique on 450 patients. *Am Surg*, 2014;80: 484-488.
- 3. Meinero, P., La Torre, M., Lisi, G., et al. Endoscopic pilonidal sinus treatment (EPSiT) in recurrent pilonidal disease: a prospective international multicenter study. *Int J Colorectal Dis*, 2019. Doi: 10.1007/s00384-019-03256-8.
- 4. Humphries, A.E., Duncan, J.E. Evaluation and management of pilonidal disease. *Surg Clin North Am*, *2010*;90:113-124.
- McCallum, I., King, P.M., Bruce, J. (2007) Healing by primary versus secondary intention after surgical treatment for pilonidal sinus. Cochrane Database Syst Rev (4):CD006213 Review. Update in: Cochrane Database Syst Rev. 2010;(1):CD006213.
- 6. Emile, S.H., Elfeki, H., Shalaby, M. et al. Endoscopic pilonidal sinus treatment: a systematic review and meta-analysis. *Surg Endosc*, *2018*; *32*, 3754-3762.
- 7. Milone, M., Sosa Fernandez, L.M., 5 Manigrasso, M., et al. Pilonidal sinus and endoscopic surgery—myth or reality? *Ann Laparosc Endosc Surg*, 2017;2:175.
- 8. Angerer, C., Königsrainer, I. Endoscopic pilonidal sinus treatment (EPSiT). *Coloproctol*, 2020; 42, 345-352.
- 9. Meinero, P., Mori, L., Gasloli, G. Endoscopic pilonidal sinus treatment (E.P.Si.T.).

Tech. Coloproctol, 2014; 18(4):389-392.

- 10. Milone, M., Fernandez, L.M., Musella, M., et al. Safety and efficacy of minimally invasive video-assisted ablation of pilonidal sinus: a randomized clinical trial. *JAMA Surg*, 2015; 151(6):547-553.
- Peksöz, R., Can, M. Endoscopic Pilonidal Sinus Treatment (EPST) Experience of a Provincial Hospital in Eastern Turkey. *Turk J Colorectal Dis*, 2020;30:173-178. Doi: 10.4274/tjcd.galenos.2020.2020.3.8.
- Gecim, I.E., Goktug, U.U., Celasin, H. Endoscopic Pilonidal Sinus Treatment Combined With Crystalized Phenol Application May Prevent Recurrence. *Dis Colon Rectum*. 2017;60(4):405-407. Doi: 10.1097/DCR.000000000000778. PMID: 28267008.
- Steele, S.R., Perry, W.B., Mills, S., et al. Standards Practice Task Force of the American Society of Colon and Rectal Surgeons Practice parameters for the management of pilonidal disease. *Dis Colon Rectum*, 2013; 56(9):1021-1027. Doi: 10.1097/ DCR.0b013e31829d2616
- McCallum, I.J.D., King, P.M., Bruce, J. Healing by primary closure versus open healing after surgery for pilonidal sinus: systematic review and meta-analysis. *BMJ*, 2008; 336(7649):868-871. Doi: 10.1136/bmj.39517.808160.BE.
- Garg, P., Menon, G.R., Gupta, V. Laying open (deroofing) and curettage of sinus as treatment of pilonidal disease: a systematic review and meta-analysis. ANZ J Surg, 2016; 86(1-2):27-33. Doi:10.1111/ans.13377.
- Kayaalp, C., Ertugrul, I., Tolan, K., et al. Fibrin sealant use in pilonidal sinus: systematic review. *World J Gastrointest Surg*, 2016;8(3):266-273. Doi: 10.4240/wjgs.v8.i3.266 26.
- 17. Kayaalp, C., Aydin, C. Review of phenol treatment in sacrococcygeal pilonidal disease. *Tech Coloproctol, 2009; 13*(3):189-193. Doi: 10.1007/s10151-009-0519-x.
- 18. Horwood, J., Hanratty, D., Chandran, P., e al. Primary closure or rhomboid excision and Limberg flap for the management of primary sacrococcygeal pilonidal disease? A meta-analysis of randomized controlled trials. *Color Dis*, 2012; 14(2):143-151.
- 19. Bali, İ., Aziret, M., Sözen, S., et al. Effectiveness of Limberg and Karydakis flap in recurrent pilonidal sinus disease. *Clinics (Sao Paulo), 2015; 70*(5):350-355.
- Nordon, I.M., Senapati, A., Cripps, N.P. A prospective randomized controlled trial of simple Bascom's technique versus Bascom's cleft closure for the treatment of chronic pilonidal disease. *Am J Surg*, 2009; 197(2):189-192.