Laying open (deroofing) and curettage of sinus as treatment of pilonidal disease: a systematic review and meta-analysis

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Keywords
curettage, excision, meta-analysis, pilonidal sinus, recurrence.

Abstract

Background: Laying open (deroofing, not excision) and curettage of the sinus is a minimally invasive procedure to treat pilonidal disease. A consensus on its efficacy and outcomes has not been reached.

Objectives: We reviewed and meta-analysed the efficacy of this procedure.

Data sources: Pubmed, Medline, Scopus, Ovid, Cochrane central register of controlled trials (CENTRAL) and Google scholar databases

Review methods: All studies describing laying open (not excision) of sinus with curettage of the tract to treat pilonidal disease (simple and complicated) were included. The primary outcome parameter was recurrence and the secondary outcome parameters were complication rate, operating time, return to work and healing time.

Results: A total of 1194 studies were screened. Out of these, 13 studies were finally included for the analysis. The analysis (n = 1445) demonstrated a net proportion meta-analysis (random effect) pooled rate of 4.47% (95% CI = 0.029-0.063) for recurrence, 1.44% (95% CI = 0.005-0.028) for complications, 34.59 min (95% CI = 13.58-55.61) for operating time, 21-72 days for healing time and 8.4 days (95% CI = 5.23-11.72) for return to work. The procedure was possible under local anaesthesia in 7 out of 13 studies.

Conclusions: The meta-analysis demonstrates that laying open (deroofing) and curettage has distinct advantages. These are high success rate, possible in all types of pilonidal disease (simple and complex), low complication rate, short operating time and early return to normal routine and work. This procedure can be conveniently under local anaesthesia as an outpatient procedure.

Introduction

Pilonidal sinus disease has been known for many centuries. Several procedures have been described for pilonidal disease but its optimal treatment is still debated. Acute abscesses had been treated by incision and drainage.1 Chronic disease had been treated by wide excision and healing by secondary intention,2 or wide excision and primary closure.3,4 The latter may be a midline closure5 or usage of a flap – Z-plasty,6 Karydakis flap,7 Bascom flap8 and Limberg flap.9 The principle behind these extensive procedures had been to remove all the diseased tissues and to close the wound away from the midline.5,9 However, these excisional procedures not only increased morbidity but also augmented the risk of tissue loss and wound-related problems.10-12 Moreover, the recurrence rate was also not necessarily reduced after these extensive procedures.10-12

Laying open (deroofing, not excision) and curettage of pilonidal sinus was first described in detail by Abramson in 225 patients having simple as well as complicated pilonidal disease (abscess, recurrent and chronic) and reported a cure rate of 93.1%.13 Since then, several studies have reported the efficacy and benefits of this simple procedure.10-12,14-22

No systematic review has been published in the literature which has analysed the efficacy of this simple procedure. We retrieved all studies describing laying open with curettage procedure for treating pilonidal disease (simple and complicated). A systematic review (proportion meta-analysis) of these studies was done to obtain a