Fibrin glue for pilonidal sinus disease. [Review]

Authors: Lund J, Tou S, Doleman B, Williams JP

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Abstract:

BACKGROUND: Pilonidal sinus disease is a common condition that mainly affects young adults. This condition can cause significant pain and impairment of normal activities. No consensus currently exists on the optimum treatment for pilonidal sinus and current therapies have various advantages and disadvantages. Fibrin glue has emerged as a potential treatment as both monotherapy and an adjunct to surgery.

OBJECTIVES: To assess the effects of fibrin glue alone or in combination with surgery compared with surgery alone in the treatment of pilonidal sinus disease.

SEARCH METHODS: In December 2016 we searched: the Cochrane Wounds Specialised Register; CENTRAL; MEDLINE; Embase and CINAHL Plus. We also searched clinical trials registries and conference proceedings for ongoing and unpublished studies and scanned reference lists to identify additional studies. There were no restrictions with respect to language, date of publication or study setting.

SELECTION CRITERIA: We included randomised controlled trials (RCTs) only. We included studies involving participants of all ages and studies conducted in any setting. We considered studies involving people with both new and recurrent pilonidal sinus. We included studies which evaluated fibrin glue monotherapy or as an adjunct to surgery.

DATA COLLECTION AND ANALYSIS: Two study authors independently extracted data and assessed risk of bias. We used standard methods expected by Cochrane.

MAIN RESULTS: We included four RCTs with 253 participants, all were at risk of bias. One unpublished study evaluated fibrin glue monotherapy compared with Bascom's procedure, two studies evaluated fibrin glue as an adjunct to Limberg flap and one study evaluated fibrin glue as an adjunct to Karydakis flap.For fibrin glue monotherapy compared with Bascom's procedure, there were no data available for the primary outcomes of time to healing and adverse events. There was low-quality evidence of less pain on day one after the procedure with fibrin glue monotherapy compared with Bascom's procedure (mean difference (MD) -2.50, 95% confidence interval (CI) -4.03 to -0.97) (evidence downgraded twice for risk of performance and detection bias). Fibrin glue may reduce the time taken to return to normal activities compared with Bascom's procedure (mean time 42 days with surgery and 7 days with glue, MD -34.80 days, 95% CI -66.82 days to -2.78 days) (very low-quality evidence, downgraded as above and for imprecision).Fibrin glue as an adjunct to the Limberg flap may reduce the healing time from 22 to 8 days compared with the Limberg flap alone (MD -13.95 days, 95% CI -16.76 days to -11.14 days) (very low-quality evidence, downgraded twice for risk of selection, performance and detection bias and imprecision). It is uncertain whether use of fibrin glue affects the incidence of postoperative seroma (an adverse event) (risk ratio (RR) 0.27, 95% CI 0.05 to 1.61; very low-quality evidence, downgraded twice for risk of selection, performance and detection bias and imprecision). There was low-quality evidence that fibrin glue, as an adjunct to Limberg flap, may reduce postoperative pain (median 2 versus 4; $P < 0.001$) and time to return to normal activities (median 8 days versus 17 days; $P < 0.001$). The addition of fibrin glue to the Limberg flap may reduce the length of hospital stay (MD -1.69 days, 95% CI -2.08 days to -1.29 days) (very low-quality evidence, downgraded twice for risk of selection, performance and detection bias and for unexplained heterogeneity).A single RCT evaluating fibrin glue as an adjunct to the Karydakis flap did not report data for the primary outcome of time to healing. It is uncertain whether

fibrin glue with the Karydakis flap affects the incidence of postoperative seroma (adverse event) (RR 3.00, 95% CI 0.67 to 13.46) (very low-quality evidence, downgraded twice for risk of selection, performance and detection bias and for imprecision). Fibrin glue as an adjunct to Karydakis flap may reduce length of stay but this is highly uncertain (mean 2 days versus 3.7 days; $P < 0.001$, low-quality evidence downgraded twice for risk of selection, performance and detection bias).

AUTHORS' CONCLUSIONS: Current evidence is uncertain regarding any benefits associated with fibrin glue either as monotherapy or as an adjunct to surgery for people with pilonidal sinus disease. We identified only four RCTs and each was small and at risk of bias resulting in very low-quality evidence for the primary outcomes of time to healing and adverse events. Future studies should enrol many more participants, ensure adequate randomisation and blinding, whilst measuring clinically relevant outcomes.