A randomized controlled trial of novel loop drainage technique versus standard incision and drainage in the treatment of skin abscesses


SUMMARY:

- The loop drainage technique (LOOP) for an abscess involves making 2 small stab incisions at each end of the abscess, breaking up loculations with or without irrigation, threading a long, thin rubber cord between the holes, and tying the ends together to make a loop.

- In this prospective, nonblinded, randomized trial, the authors compare the efficacy of the LOOP technique vs incision and drainage with packing, including some patient-oriented outcomes.

- A convenience sample of adult and pediatric patients with cutaneous abscesses in whom the plan was for ED drainage and discharge (with no specialist involvement or admission) were randomized to LOOP with a vessel tie or to traditional drainage and packing with sterile ribbon gauze. The decisions to use local anesthesia, antibiotics, or sedation were left to the treating providers.

- The primary outcome measurement was treatment failure, defined as a need for an additional procedure, IV antibiotics, or operative intervention on follow-up; the secondary outcomes were the ease of the procedure (from the clinician’s perspective), pain at the time of treatment (from the patient’s or parent’s perspective), ease of care at 36 hours (from the patient’s or parent’s perspective), and pain at 36 hours (from the patient’s or parent’s perspective).

- The authors identified 256 potential participants, of whom 217 were enrolled and randomized. The patients were generally in their early 20s, approximately 75% of abscesses were between 1 and 4 cm, and 95% of patients received antibiotics.

- Only 10% of patients were lost to follow-up. Treatment failure was seen in 15% of the overall cohort.

- Among adults (n = 130), there was no difference in the primary outcome, but among the children (n = 87), treatment failure occurred in 21% of the packing group vs 0% of the LOOP group.

- The ease of performing the procedures was similar, as assessed by the operators, as was pain during the procedure, as assessed by the patients; however, the pain at follow-up, ease of care, and patient satisfaction at 10 days postprocedure were all statistically better in the LOOP group.

- Although the follow-up rate was much better in this study than in previous studies on this topic, some notable study limitations include potential bias in outcome assessment, because the study was not blinded; the very high antibiotic use rate affecting the generalizability of the findings; and the use of routine packing in the group receiving traditional incision and drainage, thus making LOOP’s potential performance against a nonpacked abscess drainage unknown.

PMID: 32770686

EDITOR’S COMMENTARY: In this nonblinded, randomized trial of loop drainage vs traditional incision and drainage with packing for management of cutaneous abscesses in the ED, LOOP was found to have a much lower rate of treatment failure in the pediatric subset of patients. This is also the first study I have seen to examine people-focused outcomes and suggest that LOOP is just as easy to perform, and has potential for less pain and easier postprocedure care. It is clear to me that if you plan to pack an abscess, you should consider the LOOP technique as an alternative, particularly among pediatric patients.