

Peer Review File

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Reviewer A

Formatting issues:

Thank you for your comments. We have reorganized the paper according to the editors' recommendations ALES 2.2.4-Structure of Clinical Practice Review. We did add some of our data, but the goal was not as presenting our research but affirming our experience in this technique.

Specific comments

1. There are some grammatical errors noted throughout which need correction.
Revised throughout.
2. In the mechanism of action section, it is not mentioned that there are repetitive changes of the sponge material to do the debridement. The suction doesn't account for that mechanism.
Clarification added in the text in "Mechanism of Action" section.
3. Intubation is typically recommended. Do you really drag the endosponge past the airway un-intubated? Or are you referring to colorectal placement?
In our experience intubation is required in all upper GI cases; It is generally not needed in the colorectal cases. This was clarified throughout.
4. Intraluminal placement has been poorly studied and the mechanism of action you mentioned can't work. I wonder why you would do this, and why not try other methods of drainage such as opening the perforation site larger to get the endosponge in place (like you say you do in the methods) or internal drainage?
Thank you for your excellent comment. In most cases the goal is to place the sponge into the cavity, which sometimes requires dilation of the defect. In some case the sponge is laid intraluminal in order to seal the defect and can be particularly effect when there is a proximal diversion (e.g. ileostomy). This was clarified in the 'Mechanism of Action' section.
5. You mention outpatient management in line 145. Are you sending patients home? This has been an issue using this technique. I would elaborate on this portion.
The majority patients are treated as an inpatient, however – two long-term anastomotic leaks in patients with proximal diversions were safely managed as an outpatient. This data was added to Section C in the discussion.
6. In line 89 you state that you continue until the cavity is 5mm in depth. Later, in line 170, you look for containment. Which is it?
Those statements are not exclusive. Cavity should be less <5mm and without extravasation; it can be difficult to tell that no contrast is leaking beyond the

often irregular defect but in our experience, when it is quite shallow, leakage is unlikely but should be confirmed. This has been clarified in both locations.

7. I would clarify the statements made regarding nutrition during EVAC therapy. In one section you mentioned enteral feeding alongside EVAC, but then in another section you mentioned feedings need to be initiated past the EVAC system. This needs to be clarified along with the role of TPN.

Enteral nutrition is preferred. A separate feeding tube can be placed alongside the NGT to feed distal (it is often clipped in place so that it doesn't retract as you withdraw the scope). There are also other clinicians utilizing a double lumen tube and feeding through one of the lumens distally while the sponge is placed in the defect. Lastly, a gastrostomy and/or gastro-jejunostomy placement may be more pragmatic to allow ongoing feeding independent of the EVAC system. Clarifications have been made in the text.

Reviewer B

A very nice review paper on the benefits of Vac in treating leaks in the GI tract as the current gold standard.

Appreciate this review.

Reviewer C

The paper is well written. I especially appreciated the clinical advice on making the system work for those who do not have experience. This paper is an excellent summary of the state of the art and should be published. My only moderate recommendation would be to have a section devoted to prophylactic use for high-risk anastomoses (such as Ivor-Lewis esophagectomy), and a more detailed physiological look at the benefits of using the device as a way of diverting fluids. This is because they include "future directions" in the title.

We do not utilize this approach currently, but there is interesting data regarding this novel approach. It has been added to the "future directions" section.

Reviewer D

Reference list:

Incomplete citation and doubling (Reference 8) Lines: 459-462

Doubling of Reference (References 10 and 17) Lines: 466-467 and 489-490

Different citation style

The usage of a citation program can prevent such mistakes

The word spacing format is to be reviewed along the whole text

These have been addressed

Minor mistakes:

Line 88: the suction with -> the suction will

Line 103: the word "tube" to be deleted

Line 104: the word "tube" to be deleted

Line 126: nasogastric tube -> NGT

Line 140: nasogastric tube -> NGT

Line 161: NPO -> nil per os (NPO)
Line 161: TPN -> total parenteral nutrition (TPN)
Line 246: early -> yearly
Line 250: [..26] -> [..26].
Line 251: Roux-en-Y -> RY
Line 252: [28] in 2016 -> [28]. In 2016
Line 264: steam -> team
Line 266: complications -> complication
Line 268: rewrite the sentence to avoid doubling of “documented”
Line 278: reevaluate the sentence to avoid doubling of “due”
Line 301: injure -> injury
Line 316: devise -> device
Line 331: [37 -> [37]
Line 335: used s -> used as
Line 339: id the EVAC therapy appears to be safe an -> is that EVAC therapy appears to be safe and
Line 343: , can be -> , the more
Line 348: nil per os (NPO) -> NPO
Line 360: NG tube -> NGT
Line 365: nasogastric tube -> NGT
Line 366: (7039) -> (7-39)
Line 380: placement -> placement.
Line 399: is a needed -> is needed
Line 403: from by -> by
Line 625: Roux-en-Y -> RY
Line 639: Roux-en-Y -> RY
These have been addressed

I want to congratulate you for an interesting and comprehensive manuscript. In my opinion, you have done a great job summarizing the broad information about this topic.

However, I have few remarks:

- I think that more clarification on the technique of feeding through the EVAC sponge is needed, as from our experience this is contradicting the biomechanics of the device itself.

*Feeding is best accompanied through a Dobhoff type tube **NEXT** to the system. Alternatively other access can be used such as a G-tube, GJ tube, or J tube. On occasion a dual lumen tube can be used. Finally, patients who cannot tolerate enteral feedings can receive nutrition via TPN. We have clarified the statements in the text edited all the references to prevent doubling and other similar issues.*

- I think you should use a citation program to prevent the doubling and wrong placement in the number order of references as happened with the same reference cited two times (10 and 17).

We have edited all the references to prevent doubling and other similar issues.

I think the contents of this article are close to perfect but I propose to make minimal corrections, these are very trivial.

Reviewer E

The study needs to be written according to the IMRAD form. Please read the following article to learn about the structure of a review article.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4548566/>

We have reorganized the paper according to the editors' recommendations ALES 2.2.4-Structure of Clinical Practice Review. We did add some of our data, but the goal was not as presenting our research but affirming our experience in this technique.

What is the goal of your study?

You can explain the techniques of EVAC of all locations under methods.

The results of your institution can be written under results.

There is no statistical analysis of your results.

The goal of this paper is to create an overview review paper analyzing current application of wound vac, as stated our data is merely to illustrate our experience with this novel technique. We have sought to clarify this in the introduction to avoid confusion.

Lines 33-35: "It is a versatile technique that can safely and effectively manage complicated anastomotic leaks and injuries from the oropharynx to the rectum, potentially avoiding high-risk surgical salvage." This is not accurate. Can you explain the technique of EVAC for the lesions of the small intestine?

It is true that EVAC technique has found most applications in areas accessible by endoscopy. Nevertheless, attempts have been made to use the vac in more distal settings. We cite Krajnovich et al. whose group described the "rendezvous technique". We have also utilized the vac via a pediatric colonoscope to address leaks from a pancreateojejunostomy.

Line 269: "Both patients had documented healing documented with radiologic imaging" Please rewrite.

What about the complications of EVAC like aorto-esophageal fistula? You can see this article.

Omran S, Ardalani L, Beyer K, De Bucourt M, Gombert A, Buerger M, Frese JPB, Greiner A. Management of Tumor- and Nontumor-related Aorto-esophageal and Aorto-bronchial Fistulas. *Ann Vasc Surg.* 2021 Apr;72:419-429. doi: 10.1016/j.avsg.2020.10.009 Titel anhand dieser DOI in Citavi-Projekt übernehmen. Epub 2020 Nov 21. PMID: 33227472 Titel anhand dieser Pubmed-ID in Citavi-Projekt übernehmen. <https://pubmed.ncbi.nlm.nih.gov/33227472/>

Appreciate this comment. Citation and clarifications added into the text. See complications section.