Peer Review File

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Reviewer A:

Comment 1:
This is overall an excellent study, however there are some limitations that hopefully the authors can clarify: The control sample is far bigger (MAM) and heterogenous than the test (EAM). The control arm had numerous surgeons where as the test arm only had a consultant. The data is not stratified according to the confounding factors. The authors are therefore requested to:

Stratify the results by level of experience of surgeons and then compare the consultant performed MAM to consultant performed EAM, to allow a more meaningful comparison.

Reply 1:
Results have been stratified according to the level of experience of the operator. See updated manuscript.

Comment 2:
There is a discussion of CSOM but it is unclear whether any of the MAM's performed had middle ear disease or other mastoidectomy due to CSOM.
Can the authors please clarify whether any other confounding factors were present: such as poor eustachian tube function, middle ear granulation, previous history of cholesteatoma or CSOM, primary or revision, post op compliance with care, type of graft used etc.

Reply 2:
All patients with a history of cholesteatoma or previous ear surgerywere excluded from this study, as were patients undergoing combined operations (e.g. ossiculoplasty).

Comment 3:
It would also be important to tabulate in the results the proportion of size and location of the perforation in each group and area of failure.
Due to these factors, it is difficult to assess whether the results show any real trend. For instance, if the outcome in anterior perforations using EAM was significantly

better than MAM, one can make some useful recommendations about its value and strengths of the technique. As it is, it is difficult to make any useful conclusions and the authors have been understandably guarded about doing so. Therefore, that raises questions about the merit of the study. The overall finding will likely be improved if the authors can stratify the results and show whether the results are equivalent/ better/ worse. To do this it is important to compare likes with likes even if it means a smaller sample size.

Reply 3:
There was no consistent reporting of location of perforation or size of perforation, hence these factors were not commented on in this study

Reviewer B:

Comment 1:
I have some recommendations/comments on the study:

Did the authors perform tests for statistical power? There are very small numbers in EAM group. Also these 10 pts were performed by an ENT consultant vs a mixture of registrars and consultants in the MAM group. This is a strong confounding bias vs 60 pts with different surgeons. Furthermore, EAM can have a steep learning curve for registrars with the one- handed technique and who also have to learn both techniques of EAM and MAM during training. This further highlights the needed for representation of more junior surgeons/surgical trainees who performed EAM, to be included in this group.

Reply 1:
Results have been stratified based on level of experience of the operator. See updated manuscript.

Comment 2:
What about the perforation size? This plays a role in the success rate of a myringoplasty, and the choosing of the surgical approach, which was mentioned in the discussion but no mention of the description of perforation size of the patients in the study, nor the average perforation size between 2 groups. It is possible the EAM group may have had a smaller TMP size hence was chosen to have that approach, whilst the subtotal perforations may have had to be done with a post auricular incision via MAM. Can the authors include this in their results?

Reply 2:
There was no consistent reporting of the location and size of the perforation hence this was not commented on in this study.

Comment 3:
Table 1: authors say there are 4 approaches used, but only 3 are listed. Also it is not clear if the endoscope assisted myringoplasty is purely transcanal, or also utilized other approaches/combination. This should be clarified.

Reply 3:
Table updated, see manuscript.

Comment 4:
It is also not clear what the definition of EAM is. Is it a purely endoscopic approach (no use of microscope or microscope on standby) or is it a combination of endoscope-microscope use. If the latter, how did the authors define EAM, how much of the endoscope (percentage time of use in the surgery etc) was used intraoperatively to classify the surgery as EAM? There is no comment on the hospital stay. There is argument for EAM given they are often day-stay patients vs MAM who sometimes require an overnight stay. Can the authors comment on this with their patients?

Reply 4:
EAM was defined as a combination of endoscope-microscope use. MAM was defined as solely microscope use. There was no clear documentation of percentage of time of endoscope use in surgery, hence this was not commented on.

Comment 5:
Table 5 is a confusing graft, can this be simplified?

Reply 5:
Graft removed

Comment 6:
Overall a good topic for discussion and there is certainly a role for EAM in the evolution of myringoplasty techniques, but the study has a strong confounder in that there is a small number of patients in the EAM group and a single surgeon who is probably very experienced in EAM, hence excellent graft success rates and post-op hearing improvement in this group. The comparison of outcomes in both groups are thus not reflective of both techniques with the study's results. I thus recommend higher patient

numbers in the EAM group (at least closer to the number of pts in the MAM group), and a greater variability of surgeons.

Reply 6:
Results have been stratified based on level of experience of the operator. See updated manuscript.