

## Peer Review File

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### Reviewer A

Excellent manuscript that is well researched. Three main recommendations:

1) consider moving the TMDSC/MDSC procedure later in your protocol. Patients who fail this procedure tend not to respond to nerve stimulation, pulsed RFA, and / or cryo-ablation of the genitofemoral and / or ilioinguinal nerves.

Reply 1) Thank you for the suggestion. We would like to point out that we wanted to maintain a structural approach starting with a cord block followed by a TMDSC/MDSC procedure especially to the patients with any type of response to the prior. We wanted to reflect the order of procedures in the manuscript according to our routine practice as well as the algorithm (Figure 1).

-Changes in the text: No changes have been made to the text in light of abovementioned reasons.

2) Modify Figure 1 to be less confusing.

Reply 2) Thank you for bringing this confusion up. We tried our best to use another template to visualize the algorithm. Please see the edited figure 1 in the main manuscript file

-Changes in the text: Figure 1 has been changed.

3) Consider figures or images of the procedures.

Reply 3) We would like to thank you for your suggestion. Please see below our efforts to add some more visualization to the paper at Reviewer B- Comment 7, Reply 7.

-Change in the text: Please see below, Reply 7

### Reviewer B

Well-written article describing the management of chronic orchialgia. I have a few comments and concerns which you can address below:

1) Introduction – You have introduced the topic nicely, but I think you need to add to your introduction that you also explain the surgical technique. This falls under management, but I think that as it forms a substantial amount of text, you can include it in your intro and potentially give an explanation as to why you have included it. You are looking at the holistic management, and I feel that it should be mentioned in your abstract and introduction. Perhaps includes the text "we recommend..." for the techniques, as this is tried and practised by you.

Reply 1) We would like to thank you for this suggestion as it states a very valid point that is worth mentioning both in the abstract and the manuscript.

-Changes in the text (Abstract): We changed the sentence in the abstract as follows: This article reviews the current literature, shares the surgical techniques and our own experience with thousands

of CO patients to provide the latest advancements in the management of this debilitating disease in addition to an algorithm to help the urologist plan the patient's treatment.

-Changes in the text (Introduction): We adjusted the statement as follows: In this article, we present recent publications, surgical techniques and author's experience about these treatments and their outcomes in order to develop an approach strategy to aid the urologist in managing CSP cases.

2) Line 31 - Please consider using the 3rd person. This happens a few times in the paper, and although not wrong, I feel it would be more appropriate to change it. You can change this to be "Urologists usually consider..."

Reply 2) Thank you for the comment, we changed the statement to: "Urologists usually consider CSP when they rule out..."

-Changes in the text: Please see above

3) Line 53 – I see this is your previous work. Consider saying "Parekattil et. al..."

Reply 3) Thank you for the suggestion, we noticed the reference was correct so we weren't sure if you referred to the beginning of the sentence. So we changed the subject of the sentence to Parekattil et al. We also changed the following sentence to make it more clear for the readers to understand how we conducted our study.

-Changes in the text: "Parekattil et al. previously described..." "We (Parekattil et.al) biopsied spermatic cord samples..."

4) Line 66 – The end of this paragraph needs a reference to back up the statement

Reply 4) Thank you for the notice. We reiterated the reference our work at the end of the paragraph.

-Changes in the text: Reference 21 added to the end of the paragraph.

5) Line 151 – You cite references 13 and 24 for Benson et al. Correct Reference is only 24 for Benson. Parekattil et al need to be cited separately or change the sentence.

Reply 5) Thanks for bringing this mistake up. We deleted the reference 13 (Parekattil et al.) which was meant to be on the following validation sentence.

-Change in the text: Removed linked reference 13.

6) Line 183 – You state that you perform the IV sedation for both the patient and ...? I assume this should say something along the line of "for both patient comfort and physician ease of access."

Reply 6) Thank you so much for this comment and for realizing our intention very accurately. This assumption happens to be what we wanted to write there, therefore is now included in the sentence.

-Change in the text: "...IV sedation for both the patient comfort and physician ease of access."

7) Tables – There have been no tables in the article. To highlight the data of the various techniques, I would suggest adding a table that explains the resolution of pain. E.g. CR for TMDSC at 1,2,3,4,5 years, and CR for UTC at the same time intervals. You have the data in the paragraphs, but a table may support your evidence as well. I think it will help solidify your approach and give further support to your flow in the algorithm.

Reply 7) Thank you for recommending this addition. We summarized our findings in terms of significant reduction in pain in both TMDSC and UTC groups in Table 1.

-Change in the text: We inserted the reference “(Table 1)” in both TMDSC and UTC paragraphs.

-Change in the text: We added Table 1. To the end of the manuscript, please see below the edited Figure 1.

8) Algorithm – This is quite difficult to read and follow. I was unsure of the difference between the dotted lines and the solid ones. Consider reworking this diagram. The content is good, but if the goal is for it to be used on a larger scale, it would need to be made more reader-friendly. You also prioritise vasectomy reversal as the first-line surgical treatment for patients who have previously undergone vasectomies. While I do agree with this approach, you only mention this in a paragraph at the end of the article. For better flow, consider moving the paragraph sooner in the article.

Reply 8) Thank you for the suggestion. We revisited the figure and tried our best to make it more clear, please see the new figure and also the reviewer A's comment #2. We wanted to report these treatment options in the same order as our algorithm suggests. So we really appreciate that you suggested we keep that standard by moving the PVPS patients prior to cord block section. We agreed and acted accordingly.

Change in the text: We moved the PVPS paragraph just before the cord block paragraph to reflect our thought process in terms of the approaching algorithm.