

Dear Editorial Review Board and Reviewers,

We thank you for your critical review of our manuscript. We have addressed all of the reviewer's comments and highlighted our responses in blue. We hope that you find these revisions acceptable for publication in *World Journal of Gastrointestinal Endoscopy*.

Sincerely,

Vinay Chandrasekhara

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This is a study assessing the efficacy of endoscopic balloon catheter dilatation for treatment of cricopharyngeal dysfunction. The authors retrospectively reviewed all UES dilatations performed during a three year period. Thirty-one patients were included although follow-up was only available for 24. A symptomatic improvement was confirmed for 80% of patients. The manuscript is well written and describes a large series of cases. Major comments: - As the authors acknowledge, this report has the typical limitations of retrospective studies: the dilatation technique was chosen by the endoscopist, without predefined criteria, the inclusion criteria were perhaps too broad; the assessment of efficacy was subjective and no dysphagia scales were used. - UES manometry helps to differentiate the different etiologies of oropharyngeal dysphagia, and it may help to identify patients with cricopharyngeal dysfunction who may benefit from myotomy. It seems that manometry was not performed prior dilatation; therefore different subsets of patients may have been included, adding heterogeneity to the sample.

We agree with the reviewer's comments and acknowledge these limitations as a retrospective study.

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It is true that usually manometry does not change management, but it would have been useful to recognize patients more prone to respond to dilatation. - Including patients with other esophageal stenosis and Zenker's diverticulum which has an specific endoscopic treatment also adds even more variability to the sample. Zenker's diverticulum also causes dysphagia and swallowing disorders and also has an specific endoscopic treatment.

We agree that a Zenker's diverticulum may also cause dysphagia symptoms. In this series 7 patients also had a concurrent Zenker's diverticulum; however all of these were 2 cm or smaller. Half of these were < 1 cm, thereby limiting the degree of symptoms caused by the diverticulum itself.

Mean follow-up duration was 7 months, but the range is quite wide. Median would have been a more suitable descriptor, and would have given us a better description of the sample.

We agree with the author's suggestion and have included a median follow-up duration and interquartile range. The results now are described as a median follow-up of 2.5 months (IQR 1-10 months).

Some patients seem to have a very short follow-up period. - It would be of interest to know the number of sessions per patient (eg. categorising the variable).

We have included this in our manuscript. Thank you for the suggestion.

From table 1, it appears that one asymptomatic patient was also dilated. How was improvement assessed in that case?

For obvious reasons, that person was not considered as a symptomatic response to dilatation.

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Minor comments - The first paragraph of the results section repeats the data shown in table 1. Consider deleting it.

We have greatly shortened this paragraph and referenced table 1.

Summing up, this is a large series but its heterogeneity hampers drawing strong conclusions about the role of dilation on the treatment of cricopharyngeal dysfunction. However its results may lead to the design of a randomized trial.

We agree with your conclusions and appreciate your review.

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The manuscript entitled “Endoscopic Balloon Catheter Dilatation via Retrograde or Static Technique is Safe and Effective for Cricopharyngeal Dysfunction” seems very interesting paper with the aim to evaluate the safety and efficacy of two different UES dilatation techniques for cricopharyngeal dysfunction. However, several concerns must be pointed out. MAJOR COMMENTS: 1. As the authors stated, cricopharyngeal dysfunction is incoordination of the cricopharyngeal muscle either due to a primary functional disorder or as a result of an underlying neurological or medical condition with or without symptoms. Symptoms can range from a “globus” sensation to oropharyngeal dysphagia manifested by regurgitation, coughing, choking and recurrent aspiration. Therefore, only patients with symptoms must be treated. Since the authors (Table) stated that only half of patients were symptomatic why they decided to treat them all.

We agree that the data is not clear. To clarify, 30 of the 31 patients had symptoms. 28 had symptoms of dysphagia, 2 had globus sensation and 1 was asymptomatic, but had an inability to pass a TEE probe. Therefore 30/31, or 97% of our patients had symptoms and we have clarified this in the manuscript.

2. On the other hand, it is inappropriate to mix the patients with cricopharyngeal dysfunction due to underlying neurological conditions with the patients with Zenker's diverticulum particularly since we have successful endoscopic therapy of Zenker's diverticulum. The authors also stated that eleven patients had dilatation of other esophageal segments (nine patients with Shatzki ring, one patient with a peptic stricture and one with stenosis at the esophagogastric junction). Therefore, if we shall add seven patients with Zenker's diverticulum to eleven patients with pathology of distal esophageal segments the sum is 18 patients (out of 31!) with esophageal pathology that may lead to cricopharyngeal dysfunction. I think that is the main problem that we are dealing with.

As previously discussed, in all patients with a Zenker's diverticulum, the size of the diverticulum was < 2 cm and we felt that the main reason for the patient's symptoms were driven by cricopharyngeal dysfunction. For those other patients with concurrent esophageal pathology, the CBD was felt to be the primary etiology for symptoms and therefore were included in this series.

3. In the diagnosis of cricopharyngeal dysfunction, particularly in asymptomatic individuals, esophageal manometry is necessary and represents very important objective criteria.

MINOR COMMENTS: 1. In the "Patients and Methods" section the authors stated that patients were excluded if they were under the age of 18 years old and if balloon dilatation was not performed. It will be very interesting to see the number of patients in whom balloon dilatation was not performed and why ("drop-out").

Our IRB requires additional paperwork for investigating individuals younger

than 18 years of age and therefore we were not permitted to study these individuals. Given our search strategy to identify patients in our study cohort, we limited our search to patients undergoing balloon dilatation of the esophagus and are unable to study patients who were referred for dysphagia but did not have dilatation performed.

2. Regarding the procedural technique I hope that all dilatation procedures were done under sedation. Generally speaking I strongly suggest more details regarding the procedural technique.

All procedures were performed with sedation. The manuscript has been revised to include this.

3. Both figures will be omitted.

We will remove both figures.

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In this retrospective study, Chandrasekhara and colleagues assessed usefulness of endoscopic balloon catheter dilatation for cricopharyngeal dysfunction. They also subclassified their techniques into retrograde and static technique and investigated which method is safe and effective. Although they analyzed a large number of cases, some issues should be clarified before publication which are shown below. Major 1. In terms of clinical improvements, authors should show some indicator or score that can be evaluated objectively.

We agree that objective measurement using a symptom score would be ideal. As this is a retrospective study, we are not able to collect symptom scores before and after dilatation for each individual. We still believe this study is valuable to demonstrate that these techniques are safe and effective for CPD and recommend

that future studies involving dilation for CPD include symptom scores.

2. Authors should show the methods of statistical analysis.

The manuscript has been modified to include the statistical analysis used.

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A few suggestions/clarification 1. Since no. of session have varied from 1 to 3, it will be worth knowing the result vis a vis no. of sessions

We have modified the manuscript to include the number of individuals undergoing 1, 2 or 3 dilatation sessions.

2. Major drawback in this retrospective study is lack of objectivity in response assessment. Although mentioned in discussion section, this seems to be a weak point in this study.

We agree with the reviewer's comments. We still believe this study is valuable to demonstrate that these techniques are safe and effective for CPD and recommend that future studies involving dilation for CPD include symptom scores.

3. Abstract has used incomplete sentences which need to be replaced by complete sentences.

The abstract has been revised to include only full sentences.