

Reviewer Assessment

Open Access

Nicole Ernst* and Nicolai Adolphs

Role of distraction osteogenesis in craniomaxillofacial surgery

DOI 10.1515/iss-2016-0027

Received October 11, 2016; accepted November 6, 2016

*Corresponding author: Nicole Ernst,

Department of Craniomaxillofacial Surgery, Charité Universitaetsmedizin Berlin, Centre 9 for Traumatology and Reconstructive Surgery, Campus Virchow Klinikum

E-mail: nicole.ernst@charite.de

Reviewers' Comments to Original Submission

Reviewer 1: Thomas Mücke

Oct 24, 2016

Reviewer Recommendation Term:	Accept with Minor Revision
Overall Reviewer Manuscript Rating:	75
Custom Review Question(s)	Response
Is the subject area appropriate for you?	3
Does the title clearly reflect the paper's content?	4
Does the abstract clearly reflect the paper's content?	5 - High/Yes
Do the keywords clearly reflect the paper's content?	4
Does the introduction present the problem clearly?	4
Are the results/conclusions justified?	4
How comprehensive and up-to-date is the subject matter presented?	4
How adequate is the data presentation?	3
Are units and terminology used correctly?	4
Is the number of cases adequate?	4
Are the experimental methods/clinical studies adequate?	4
Is the length appropriate in relation to the content?	4
Does the reader get new insights from the article?	4
Please rate the practical significance.	5 - High/Yes
Please rate the accuracy of methods.	4
Please rate the statistical evaluation and quality control.	N/A
Please rate the appropriateness of the figures and tables.	4
Please rate the appropriateness of the references.	5 - High/Yes
Please evaluate the writing style and use of language.	4
Please judge the overall scientific quality of the manuscript.	4
Are you willing to review the revision of this manuscript?	Yes

Comments to Author:

The authors presented an article about the role of distraction osteogenesis in the maxillofacial field. As a review, this article is very interesting and provides important information about this operative procedure. I would like to raise some queries:

- 1) I would recommend providing more detailed information about two different indications: 1. orthognathic cases in which distraction osteogenesis is quite established and a routine procedure. 2. Reconstructive cases are not routine and need to be more emphasized.
- 2) If possible, a statistic about the osteogenic potence would be helpful, e.g. planned osteogenesis and achieved in length or even 3D volume if possible.
- 3) The authors concluded well and gave the correct practice in their conclusions. I would like to see this in 1-2 sentences in the introduction.

In conclusion, this well written article is appropriate for publication in ISS after minor revision.

Reviewer 2 : Daniel Buchbinder

Oct 12, 2016

Reviewer Recommendation Term:	Accept
Overall Reviewer Manuscript Rating:	75
Custom Review Question(s)	Response
Is the subject area appropriate for you?	3
Does the title clearly reflect the paper’s content?	4
Does the abstract clearly reflect the paper’s content?	4
Do the keywords clearly reflect the paper’s content?	4
Does the introduction present the problem clearly?	4
Are the results/conclusions justified?	4
How comprehensive and up-to-date is the subject matter presented?	3
How adequate is the data presentation?	3
Are units and terminology used correctly?	4
Is the number of cases adequate?	4
Are the experimental methods/clinical studies adequate?	N/A
Is the length appropriate in relation to the content?	4
Does the reader get new insights from the article?	2
Please rate the practical significance.	3
Please rate the accuracy of methods.	N/A
Please rate the statistical evaluation and quality control.	N/A
Please rate the appropriateness of the figures and tables.	4
Please rate the appropriateness of the references.	4
Please evaluate the writing style and use of language.	4
Please judge the overall scientific quality of the manuscript.	3
Are you willing to review the revision of this manuscript?	Yes
Comments to Author:	
This is a nice overview of distraction osteogenesis in CMF surgery.	

Authors' Response to Reviewer Comments

Oct 31, 2016

Detailed response on reviewers comments on Ms No ISS-D-16-00027

Honoured reviewers!

Thank you very much for your real "fast track" review, your comments and suggestions on our manuscript about craniomaxillofacial distraction osteogenesis.

We would like to respond in detail to your suggestions respectively explain the open questions.

Reviewer 1:

Query 1: Thank you for emphasizing this point- actually there are no clear general recommendations or consensus with regard to that issue and the techniques typically are individually adapted according to different influencing factors:

In orthognathic surgery there seems to be a focus on classic osteotomies as they provide fast and reliable results and most of the skeletal discrepancies can be corrected by classic surgeries faster than by distraction procedures. DO seems to be indicated if transverse maxillary deficiency is more than 6mm and sagittal discrepancies exceed 12 mm. However additional factors might have an influence when choosing the appropriate procedure (age, tissue conditions, patient's compliance and comorbidities, patient's and surgeon's preferences). So far there is no evidence that one method is superior to the other.

In reconstructive surgery or syndromal patients when soft tissues should be addressed or growth impairment has to be managed the principle of gradual expansion seems to be convincing – however the decision is likely based on the individual situation. Due to the lack of appropriate studies there is no evidence that one method is superior to the other so far.

We added this explanation to the discussion part.

Query 2: Osteogenic potency - we may refer to figures 1g, 2c which show the mineralised bony formations within the distraction zones clinically and radiological at the end of the consolidation time. A typical observation that was made in all patients when devices were removed – due to the individual situation a statistical model for the osteogenic potency is hard to provide – according to our personal experiences the main factor for successful DO ist stability – during activation phase there must be a characteristic haptic feedback of the tissues followed by stable conditions afterwards – then complete mineralization of the callus is likely to occur - we added this description to the discussion part.

Query 3:

We added this passage to the introduction:

Accordingly craniomaxillofacial distraction osteogenesis plays a minor role with regard to overall surgical procedures within the field however if severe growth restriction is present or has to be expected the principle of gradual tissue expansion should be regarded as an additional reconstructive option for patients affected by cranio- or dentofacial anomalies within an staged individual treatment plan.

Reviewer 2:

Thank you very much for your assessment of our manuscript!

After correcting the manuscript we re-uploaded it as "review" as suggested.

Thank you for your support and best regards from Berlin

The authors

Reviewers' Comments to Revision

Reviewer 1: Thomas Mücke

Nov 05, 2016

Reviewer Recommendation Term:	Accept
Overall Reviewer Manuscript Rating:	83
Custom Review Question(s)	Response
Is the subject area appropriate for you?	5 - High/Yes
Does the title clearly reflect the paper's content?	5 - High/Yes
Does the abstract clearly reflect the paper's content?	5 - High/Yes
Do the keywords clearly reflect the paper's content?	4
Does the introduction present the problem clearly?	5 - High/Yes
Are the results/conclusions justified?	4
How comprehensive and up-to-date is the subject matter presented?	4
How adequate is the data presentation?	4
Are units and terminology used correctly?	4
Is the number of cases adequate?	4
Are the experimental methods/clinical studies adequate?	N/A
Is the length appropriate in relation to the content?	4
Does the reader get new insights from the article?	5 - High/Yes
Please rate the practical significance.	5 - High/Yes
Please rate the accuracy of methods.	N/A
Please rate the statistical evaluation and quality control.	N/A
Please rate the appropriateness of the figures and tables.	5 - High/Yes
Please rate the appropriateness of the references.	5 - High/Yes
Please evaluate the writing style and use of language.	5 - High/Yes
Please judge the overall scientific quality of the manuscript.	4
Are you willing to review the revision of this manuscript?	Yes
Comments to Author:	
All queries were appropriately adressed. I recommend publication of this well written article.	