Author's response to reviews

Title: Bruxism secondary to brain injury treated with Botulinum toxin-A: a case report

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Author's response to reviews: see over
Dear Sir/ Madame

Thank you for the comments, they were very constructive. We have followed carefully all the reviewers comments and answered all their queries and questions.

Reviewer 1

The authors are reporting a patient with bruxism who was successfully treated with botulinum toxin type A. The use of botulinum toxin for treatment of bruxism has been reported since the late 1980's. Currently it is standard clinical practise in all centres offering botulinum toxin treatment. This report therefore does not offer any new information whatsoever.

This case is a very interesting case of a 26-year-old male suffering global ischemic/hypoxic brain injury after attempted suicide by hanging. The patient was referred to our department after suffering a mouth opening of 0mm and severe teeth grinding. Such a complicated case can be very difficult to assess and treat because of the complicated background and medical condition of the patient. No every centre in the world receives such unique case and not every centre in the world offers such treatment.

Additionally there is some major criticism questioning the authors’ competence to perform this therapy:

1) The product licence requires botulinum toxin to be reconstituted with normal saline. In most countries reconstitution with local anaesthetics and adrenaline would be a legal offense.

We corrected this which was an error during the article preparation.

Besides, this practise does not make any medical sense.

2) According to unanimous consent the interinjection interval between botulinum toxin injections should be at least 12 weeks, not 3 weeks.

To top up the Botox injections few weeks after the first one is a common practice and general knowledge. This is also a well known practice amongst the plastic facial surgeons, which am surprised that the reviewer did not know about.

3) A total dose of 24mu per side is far too low to produce a robust and lasting effect. This is the reason why booster injections became necessary. The dose of this injection needs to be disclosed.
We are sure that the reviewer uses dysport in his practice (Botulinum toxin 500 units per vial) NOT Botox by allergan (Botulinum toxin 100 units per vial), which make each one unit of our Botox equal 5 units of his Dysport and this means (according to dysport calculation) we injected (24 units of Botox) X (5) = 120 units of his Dysport.

The reviewer antagonize himself in the second part of his 2nd comment as he is talking about the “necessity” of booster injection soon after the first one if the surgeon did not put enough units in the site to get long lasting effect, which he refused in the first comment.

The high number of injections sites for the masseter is absolutely unnecessary. Frequently, the pterygoid muscles are involved in bruxism and require treatment as well. The authors didn't even bother to consider this aspect.

We can’t comment on the Reviewer’s knowledge of Anatomy. And, if he consider 5 injections is high in the surface area of almost half the side of the face, and deep in the layer of masseter muscle, What is his opinion of all the surgeons and Botox injectors worldwide and by the companies recommendations, who give 3 injections to treat crews feet (lateral eye wrinkles) in an area of less than 2 cm, and 3 injections for frown lines (between eyebrows) in an area of less than 1 cm.

4) There is no sufficient neurological work-up of the case. MRI is the imaging technique required to investigate suspected brain stem lesions. Interpretation of the neurological findings is substandard.

The subject of this report is not analysis of the cause of brain injury or the treatment and investigation of suspected brain stem lesions which I am sure my neurological colleagues would have done and beyond the papers interest. Simply, we presented a case with bruxism secondary to brain injury that was successfully treated with Botulinum toxin type A.

We considered this but did not mention because we felt this to be common knowledge.

There are no internationally recognized criteria for the neurological investigations of bruxism. However we felt that after workup at UCL hospitals by experienced and internationally known neurologists that this would be satisfied.

5) The claim of botulinum toxin therapy to be a safe and effective treatment of bruxism is not substantiated by the presented data. It would be by reviewing the literature, which the authors never bothered to do.

The literature is now reviewed as requested, please see paragraph 6 in the discussion.
6) How can dysphagia be excluded in tube fed patient?

Dysphagia was excluded following a number of investigations. Normal routine investigations that is given to every patient but beyond the interest of this case report.

7) The loquacious discussion of bruxism reveals a lack of understanding of current concepts of this condition.
Did the patient suffer from trismus or bruxism? The authors do not seem to care.

Trismus is the inability to open the mouth fully because of tonic spasm of the jaw muscles.
Bruxism: grinding of the teeth.

The patient had both conditions and the treatment cured these conditions.

8) The style of the manuscript is unprofessional: Case reports do not require an abstract, methods are incorporated in the case report section, all authors are from the same institution, so numbering of the authors is not necessary etc.

The journal pre-publication check list (sections 3) mentions the need for abstract; but we have removed it. The abstract is only submitted online and has been checked and corrected. The authors and references were changes as requested.

We would be grateful if the Editorial team informed us of any changes required to the style of our case report and we will do them without hesitation.

Reviewer 2:

Discretionary Revisions (which the author can choose to ignore) recommended dosage of botulism toxin vs what's been reported in the literature can be included in the discussion.

This has been done and can be found imbedded in the manuscript.

Quality of written English: Needs some language corrections before being published

The article has been fully reviewed and all the language corrections have been made.

Reviewer 3:

A picture of the injected sites have been made and attached with the manuscript.
Please note that all the changes in the manuscript are highlighted in yellow.

With Kind regards

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