

Letter regarding “Effects of botulinum toxin A on fracture healing in rats: an experimental study”

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Dear Editor

I read with great interest the article by Aydin et al. [1] entitled “Effects of botulinum toxin A on fracture healing in rats: an experimental study” and I congratulate the authors on their interesting experiment. The authors address an important area of investigation.

I totally agree that the beneficial effects of botulinum toxin A in fracture healing can be explained by a paralytic immobilization effect, which may contribute to nonrigid fixation [1]. As you mentioned, this is also true of mandibular condylar fractures, because mastication muscles aggravate the initial displacement. Injection of botulinum toxin A into the mastication muscle induces immobilization of the muscle, leading to better fracture healing.

As we know, angiogenesis is crucial for appropriate fracture healing. Although there has been some controversy over the effects of botulinum toxin A on angiogenesis, recent studies showed botulinum toxin A had little effect on angiogenesis [2, 3].

Haubner et al. could not identify any effect of botulinum toxin A on endothelial cells in respect of synthesis of the tested cytokines and growth factors. They conclude that their in-vitro study does not add evidence to suggest a significant therapeutic effect of botulinum toxin

A injections on cutaneous wound healing beyond chemoimmobilization.

Regarding dosage of botulinum toxin A, have the authors performed a pilot study with different dosages? I believe the dose of 8 units of botulinum toxin A is insufficient to enable fracture healing.

Without doubt, further studies are warranted to better clarify the effect of botulinum toxin A on the fracture-healing process.

Conflict of interest We declare that we have no conflict of interest.

References

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