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Letter to the Editors-in-Chief

Response to 'Intracranial bleeding risk after minor traumatic brain injury in patients on antithrombotic drugs'

We have read the article about this important subject with great interest. However, we do have some concerns regarding the methodology and interpretation of the results of the article [1].

Galliazzo et al. retrospectively studied 1846 consecutive patients with minor traumatic brain injury (mTBI). For the purpose of this study they compared patients with mTBI on single or double antithrombotic treatment with patients without antithrombotic treatment. The investigated antithrombotic treatments were: vitamin K antagonists (VKA); direct oral anticoagulants (DOACs) or antiplatelet therapy (APT). The authors concluded that antithrombotic therapy did not appear to independently increase bleeding risk after mTBI.

Evidence regarding bleeding risk for mTBI patients on antithrombotic therapy is sparse. Two recent systematic reviews about the risk of APT and VKA or DOAC use concluded that there is limited evidence, but that the available evidence seems to point in the direction of a slightly higher bleeding risk for patients on antithrombotic therapy compared to patients without antithrombotic therapy [2,3].

Regarding the methodology of the current study we doubt whether a retrospective study is suitable to reliably identify risk factors for intracranial bleeding in mTBI patients. Information regarding risk factors might be missing from the patient record, clearly this does not necessarily mean absence of the risk factor. Nonetheless even when this methodological issue would be ignored we think that the conclusion of the article should be different. The authors find both in their univariable as in their multivariable analysis an Odds Ratio (OR) greater than one for all antithrombotic therapies. The fact that this OR did not reach statistical significance in the multivariable analysis does not warrant the conclusion that antithrombotic therapy is not an independent risk factor for intracranial bleeding in mTBI [4]. The authors rightfully conclude that the study might well be underpowered, which is also suggested by the wide confidence intervals found. Therefore, we think that the conclusion of the article should be that the current study was not able to demonstrate whether antithrombotic therapy is an independent risk factor for intracranial bleeding in mTBI patients.

References

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