Letters to Editor

Expansion of intracerebral hematoma in patients with coagulopathy—some diagnostic pitfalls

Sir,

We read with interest the prospective study published by Yadav et al.[1] evaluating the risk factors associated with expanding posttraumatic intracerebral hematoma.

The study concludes that a significant number of patients (41%) with clotting disorder had expansion of posttraumatic intracerebral hematoma in comparison to patients (12%) without a clotting disorder. The authors however do not clarify how many of those 39 patients with coagulopathy were treated simultaneously with clotting factors on admission. This is an important fact as it might confound the higher percentage of expanding intracerebral hematoma due to the reasons explained below:

1. Misinterpretation of the original CT scan: Patients with a clotting disorder can have abnormal clot formation which causes an isodense appearance, thereby missing an intraparenchymal bleed on initial CT scan. Following replacement of the clotting factors, the hematoma matures and becomes visible or appears larger on a subsequent CT scan.[2] A study by Pfleger et al.[3] concluded that the probability of finding a fluid-blood level in an intracerebral hemorrhage of a patient with abnormal prothrombin time or partial thromboplastin time is 59% (sensitivity). For this reason it might be difficult to identify the true expansion of intracerebral hematoma based on a CT scan alone among patients with coagulopathy.

2. In addition to CT scan, clinical parameters like change in Glasgow Coma scale (GCS) or intracerebral pressure suggest true expansion of intracerebral hematoma. It is evident from the study that CT scan was done routinely at a fixed interval on all the patients. However, it is not mentioned how many patients with a clotting disorder whose further CT scan revealed an expansion of the hematoma subsequently had a drop in GCS or change in intracerebral pressure.

Minor criticisms apart the authors deserve congratulations for this study on an interesting topic.

Acknowledgements

We thank Pati and Nambron for their interest in our paper “Expanding traumatic intracerebral contusion/hematoma”. [1] The queries raised are relevant. We did not clarify how many of those 39 patients with coagulopathy were treated simultaneously with clotting factors on admission. This is an important fact as it might confound the higher percentage of expanding intracerebral hematoma due to the reasons explained below:

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