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doi: 10.15171/jept.2017.27

## Journal of Emergency Practice and Trauma

Volume 5, Issue 1, 2019, p. 1

## Letter to Editor

# The five preferences for post-traumatic SAH

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### Dear Editor

Acute traumatic brain injury is a worldwide public health crisis. Post-traumatic subarachnoid hemorrhage (SAH) is a finding that is present at a frequency of 40% according to data from American TCDB (1,2). Among the mechanisms that have been implicated as causes of post-traumatic SAH is the cortical bleeding through the subarachnoid space. It is estimated that the incidence of post-traumatic SAH is 11% to 60% in patients with traumatic brain injury. The brain CT is considered a technique with good sensitivity, economical and available in many hospitals worldwide. We have reviewed the literature and found some imaging characteristics of post-traumatic subarachnoid hemorrhage. We have called “the five preferences for post-traumatic SAH”. Here we describe.

First: The subarachnoid hemorrhage occurs in the circle of Willis.

Second: Subarachnoid hemorrhage occurs in the cerebral convexity.

Third: Subarachnoid hemorrhage can occur in the region tentorial.

Fourth: Subarachnoid hemorrhage occurs in the Sylvian fissure.

Fifth: Subarachnoid hemorrhage can occur in areas adjacent to fractures.

Some studies have shown that the amount of blood observed on CT correlates with the initial presentation of the TBI and the long-term prognosis (3,4). The five

preferences we propose should be studied in prospective studies and potentially can be used for the personalized management of TBI.

### Ethical issues

Not applicable.

### Authors' contributions

All authors contributed equally to this work.

### References

1. Mattioli C, Beretta L, Gerevini S, Veglia F, Citerio G, Cormio M, et al. Traumatic subarachnoid hemorrhage on the computerized tomography scan obtained at admission: a multicenter assessment of the accuracy of diagnosis and the potential impact on patient outcome. *J Neurosurg* 2003; 98(1): 37-42. doi: 10.3171/jns.2003.98.1.0037.
2. Eisenberg HM, Gary HE Jr, Aldrich EF, Saydjari C, Turner B, Foulkes MA, et al. Initial CT findings in 753 patients with severe head injury. A report from the NIH Traumatic Coma Data Bank. *J Neurosurg* 1990; 73(5): 688-98. doi: 10.3171/jns.1990.73.5.0688.
3. Greene KA, Marciano FF, Johnson BA, Jacobowitz R, Spetzler RF, Harrington TR. Impact of traumatic subarachnoid hemorrhage on outcome in nonpenetrating head injury. Part I: a proposed computerized tomography grading scale. *J Neurosurg* 1995; 83(3): 445-52. doi: 10.3171/jns.1995.83.3.0445.
4. Besenski N. Traumatic injuries: imaging of head injuries. *Eur Radiol* 2002; 12(6): 1237-52. doi: 10.1007/s00330-002-1355-9.

**Received:** 1 August 2017; **Accepted:** 18 September 2017;

**Published online:** 26 September 2017

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**Competing interests:** None.

**Funding information:** There is none to be declared.

**Citation:** Moscote-Salazar LR, Padilla-Zambrano H, Ramos-Villegas Y, Agrawal A, Rubiano AM. The five preferences for post-traumatic SAH. *Journal of Emergency Practice and Trauma* 2019; 5(1): 1. doi: 10.15171/jept.2017.27.

