

“Mercedes-Benz” Sign in Posttraumatic Falcotentorial Subarachnoid Hemorrhage

Sumit Bansal¹ Ashok Kumar Mahapatra¹

¹ Department of Neurosurgery, All India Institute of Medical Sciences, Bhubaneswar, Odisha, India

Address for correspondence Dr. Sumit Bansal, MCh, Room No. 419, Department of Neurosurgery, All India Institute of Medical Sciences, Bhubaneswar, Odisha 751019, India (e-mail: drsumitbansal@gmail.com).

Indian J Neurotrauma 2015;12:169–170.

Abstract

Keywords

- head injury
- falcotentorial subarachnoid hemorrhage
- CT scan

Two-wheeler riders have a disproportionately higher incidence of traumatic brain injuries (TBI) as compared with other modes of transport. Diagnosis of posttraumatic falcotentorial subarachnoid hemorrhage can be made from CT scan. With such findings on CT scan, the authors are proposing a new sign named as “Mercedes-Benz” sign to identify such type of hemorrhage.

A 19-year-old man presented to our outpatient department with the history of a fall from a motorbike. He was not wearing a helmet at the time of the fall. His Glasgow Coma Scale (GCS) was E2V2M5 at the time of admission. Computed tomography (CT) of the head showed falcotentorial subarachnoid hemorrhage (FTSAH), and he was managed conservatively with an excellent outcome (► Fig. 1).

Two-wheeler riders have a disproportionately higher incidence of traumatic brain injuries (TBIs) as compared with other modes of transport. Worldwide, helmets have been proven to be extremely effective in reducing the incidence as well as the severity of TBI.¹

The tentorial cerebelli consists of the layers of the dura and has a free and fixed border. The most anteriorly placed fixed part, called the sphenopetrosal ligament, runs from the posterior clinoid process to the apex of the petrous part of the temporal bone and then runs bilaterally as a double-

layered structure along the transverse sinuses ascending along the occipital bone to join the falx cerebri in the midline.² Blood may collect under the inferior surface, over the superior surface, or between the two dural layers due to tearing of tentorial sinuses or bridging veins.³ As tentorium may be normally slightly hyperdense, small hematomas are difficult to be seen. However, most hematomas appear are clearly seen as hyperdensity along the tentorial surface with a Hounsfield units (HU), typically being between 60 and 90 HU.

A diagnosis of tentorial hemorrhage can be readily made by CT. Lau and Pike⁴ reported the following typical CT findings of tentorial collection: (1) a sheet-like collection, meaning the appearance of a sheet-like area of increased attenuation with a sloping, hazy, lateral margin conforming to the general configuration of the tentorium, with a well-defined medial margin corresponding to the free edge of the tentorium, and (2) the trigone sign, referring to the rotation of the trigone.

received

October 22, 2015

accepted

November 16, 2015

published online

December 17, 2015

© 2015 Neurotrauma Society of India

DOI <http://dx.doi.org/10.1055/s-0035-1570097>.
ISSN 0973-0508.

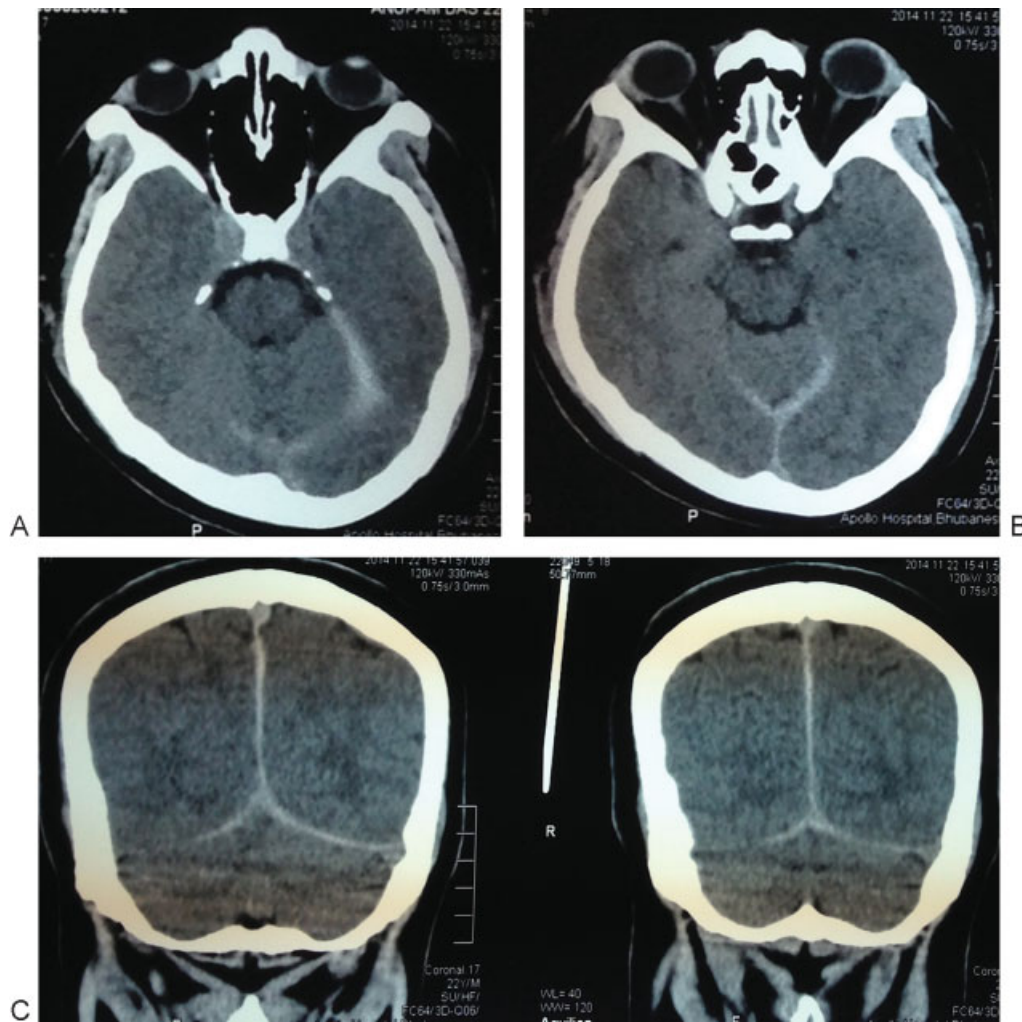


Fig. 1 Noncontrast CT of the head with axial (A and B) and coronal (C) views showing hemorrhage in falx as well as bilateral tentorium cerebelli (left more than right) (Mercedes-Benz sign).

With such findings on CT scan, the authors are proposing a new sign named as “Mercedes-Benz” sign to identify such type of hemorrhage.

Conflict of Interest
None.

Financial Support
None.

References

- 1 Richter M, Otte D, Lehmann U, et al. Head injury mechanisms in helmet-protected motorcyclists: prospective multicenter study. *J Trauma* 2001;51(5):949–958
- 2 Ueyama T, Al-Mefty O, Tamaki N. Bridging veins on the tentorial surface of the cerebellum: a microsurgical anatomic study and operative considerations. *Neurosurgery* 1998;43(5):1137–1145
- 3 Muthukumar N, Palaniappan P. Tentorial venous sinuses: an anatomic study. *Neurosurgery* 1998;42(2):363–371
- 4 Lau LS, Pike JW. The computed tomographic findings of peritentorial subdural hemorrhage. *Radiology* 1983;146(3):699–701