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A Subdural Supratentorial Hemorrhage and Contusion after a Traumatic Brain Injury Mimicking a Dural Thickening: A Clinical Case

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Abstract

This is a paper about a case of a subdural hemorrhage and contusion mimicking a dural thickening. The bone window was applied which helped in showing the bleeding very clear. This case will discuss about the usefulness of the bone window in similar scenarios.

Case Report

A 46-year-old male patient came to the emergency room after a falling down on his back from a short distance and his head hit the ground. The patient felt severe headache and came to the emergency room. The patient used to take anticoagulant medications and fall down on his head. A CT scan of the brain was requested to check the patient's brain. The CT scan showed a diffuse white mass extended from below the left temporal lobe to above the left tentorium. The white dense area looks like a dural thickening. By adjusting the CT window's contrast similar to the region of interest (ROI), the white dense area looks like a continuation of one mass extending from the temporal bone to the tentorium. The brain CT revealed a a supra-tentorium cerebelli, falx cereberi, and temporal lobe subdural hemorrhage and contusion on the left side see (Figs. from 1 thru 15).

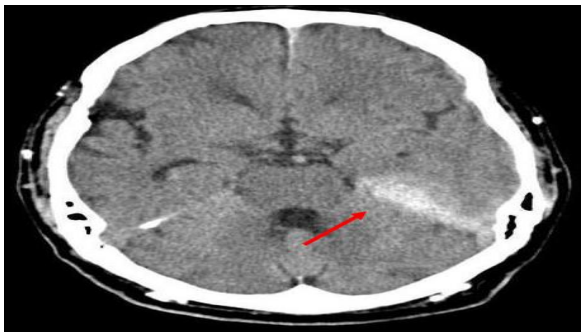

Fig 1: An axial brain CT shows dural thickening adjacent to the petrous part of the temporal bone on the left side (red arrow).

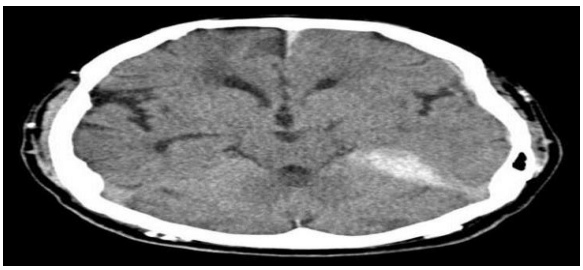

Fig 2: An axial CT scan of the brain shows a hyperdensity rear to the temporallobe and superiorpart of the cerebellum.

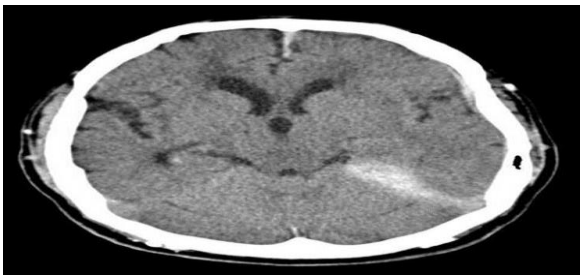

Fig 3: An axial CT scan of the brain shows the hyper-density going up with the dural mater.

Fig 4: An axial CT scan of the brain shows a hyper-density rear to the left temporal lobe and above the cerebellum.

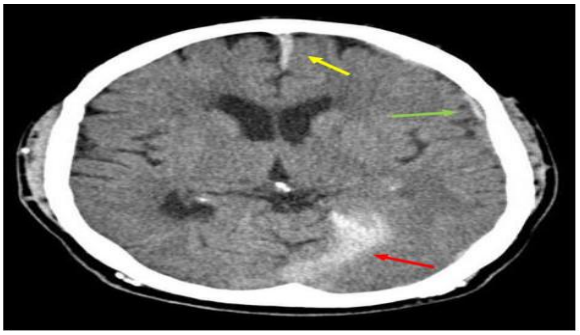

Fig 5: An axial CT scan of the brain shows the density following the tentorium cerebelli (red arrow), a contusion on the left side near the sylvian fissure (green arrow), and a hyper density on the left side of the falx cerebri (yellow arrow).

Fig 6: An axial CT of the brain shows an interhemispheric hemorrhage on the left side.

Fig 7: An axial CT of the brain shows an interhemispheric hemorrhage.

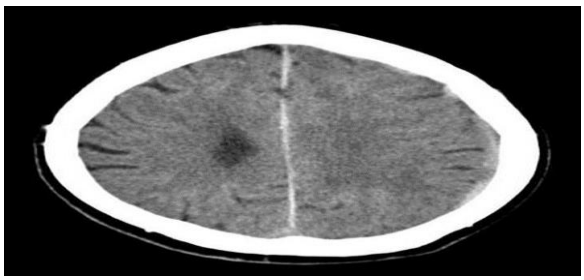

Fig 8: An axial CT of the brain shows interhemispheric hemorrhage of the falx cerebri on a brain window.

Fig 9: An axial CT of the brain shows a hyper density rear to the temporal lobe and anterior to petrous part of the temporal bone on the left side (blue arrow).

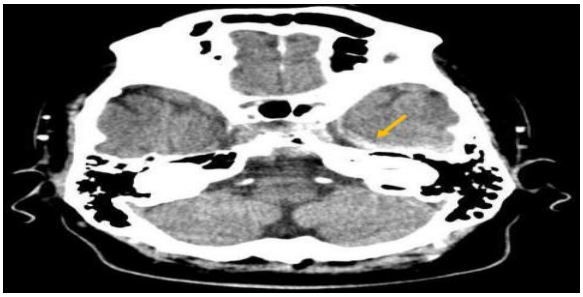

Fig 10: An axial CT of the brain shows a hyper density rear to the temporal lobe and anterior to petrous part of the temporal bone on the left side (orange arrow).

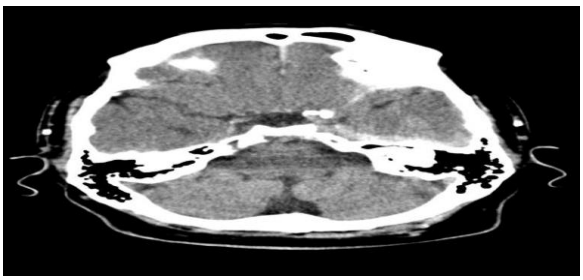

Fig 11: An axial CT of the brain shows a hyper density rear to the temporal lobe and anterior to petrous part of the temporal bone on the left side.

Fig 12: An axial CT of the brain shows a hyper density rear to the temporal lobe and anterior to petrous part of the temporal bone on the left side.

Fig 13: An axial CT of the brain shows a hyper density rear to the temporal lobe and anterior to petrous part of the temporal bone on the left side.

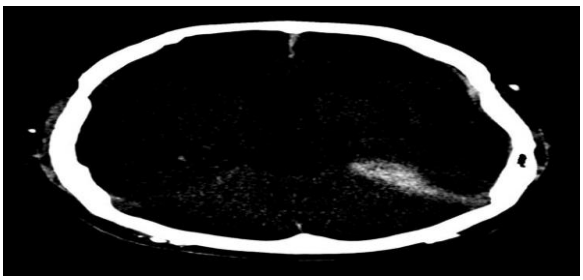

Fig 14: An axial CT of the brain shows a hyper density rear to the temporal lobe and anterior to petrous part of the temporal bone on the left side using the bone window.

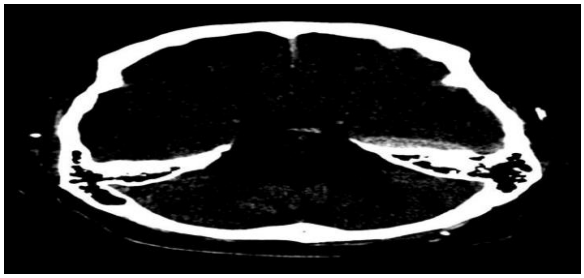

Fig 15: An axial CT of the brain shows a hyper density rear to the temporal lobe and anterior to petrous part of the temporal bone on the left side using the bone window.

Discussion

Supratentorial subdural hemorrhage is a rare finding [1]. Causes of such cases are: tentorial tear, brain contusion, extension of interhemispheric hemorrhage, and bridging veins injuries [1]. Deformation of the cranium during delivery can causes tentorial tearing, but in this case of an adult who never had any issues at birth is unlikely scenario. Pial and dural bridging veins penetrate the tentorial form the lateral side [1]. Tentorial hemorrhage was noticed in newborns who undergo a vacuum extraction and those newborns experienced seizures [2]. In a case of aneurysm of the anterior communicated artery which caused a symmetrical tentorial thickening of dura mater bilaterally [3]. The prognosis of supratentorial hemorrhage cases when surgical intervention is used, it depends mainly on the size of the hemorrhage. As more the size of the hemorrhage increases, as the prognosis becomes worse [4].

Conclusion

Using of bone window can help in showing brain hemorrhage. Usually, supratentorial hemorrhage is common in newborns and children.

References

1. MATSUMOTO, K., HOURI, T., YAMAKI, T., & UEDA, S. (1996). Traumatic Acute Subdural Hematoma Localized on the Superior Surface of the Tentorium Cerebelli—Two Case Reports—. *Neurologia medico-chirurgica*, *36*(6), 377-379.
2. Huang, C. C., & Shen, E. Y. (1991). Tentorial subdural hemorrhage in term newborns: ultrasonographic diagnosis and clinical correlates. *Pediatric neurology*, *7*(3), 171-177.
3. Krishnaney, A. A., Rasmussen, P. A., & Masaryk, T. (2004). Bilateral tentorial subdural hematoma without subarachnoid hemorrhage secondary to anterior communicating artery aneurysm rupture: a case report and review of the literature. *American journal of neuroradiology*, *25*(6), 1006-1007.
4. Rehman, W. A., & Anwar, M. S. (2017). Surgical outcome of spontaneous supra tentorial intracerebral hemorrhage. *Pakistan journal of medical sciences*, *33*(4), 804.