



## Top of Basilar Artery Syndrome: Complete Recovery Following Mechanical Thrombectomy

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### Clinical Presentation

A 60-year-old lady developed visual disturbance, slurred speech and ataxia. On admission, she had an NIHSS score of 11, with gaze deviation, facial palsy, right sided weakness, ataxia and dysarthria.

The patient was brought to the Royal Stoke University Hospital at 08:36 h with a suspected stroke 1 h 20 min after symptom onset. The stroke team met the patient at the A&E department and immediate examination revealed a NIHSS score of 11. The patient had a history of hypertension and her initial blood tests were all normal.

A CT Head and a CT angiogram aortic arch to circle of Willis were performed as per the institutions protocol (Figure 1 and 2).

### Thrombectomy Setup

Mechanical Thrombectomy was performed two hour fifteen minutes after the symptom onset with:

- Penumbra 071 95 cm Benchmark guide catheter.
- Medtronic 4 mm × 20 mm Solitaire-X Stentriever device.

### Post Procedure and Patient Outcome

Post-procedure the patient was admitted in the Acute Stroke Unit and monitored. OTPT and SALT input was obtained. Post Mechanical Thrombectomy procedure, the patient had an NIHSS score of 1. The patient made complete and excellent recovery from her stroke and was discharged home in 48 h. At discharge, the patient had an NIHSS score of 0, MRS score of 0. Functionally, the patient with her daughter, doesn't smoke, exercises regularly, drinks in moderation and drives. Appropriate driving advice was provided at discharge. Patient was started on aspirin 300 mg for 2 weeks then Clopidogrel 75 mg to continue (Figure 3 and 4).

### Discussion

Top of the basilar syndrome, also known as rostral brainstem infarction, occurs when there is thromboembolic occlusion of the top of the basilar artery. This results in bilateral thalamic ischemia due to occlusion of perforator vessels. Varying degrees of involvement of the midbrain, thalamus, and portions of the temporal and occipital lobes may occur and can produce severe disability [1].

Patients present with sudden changes in the level of consciousness, confusion, amnesia, and

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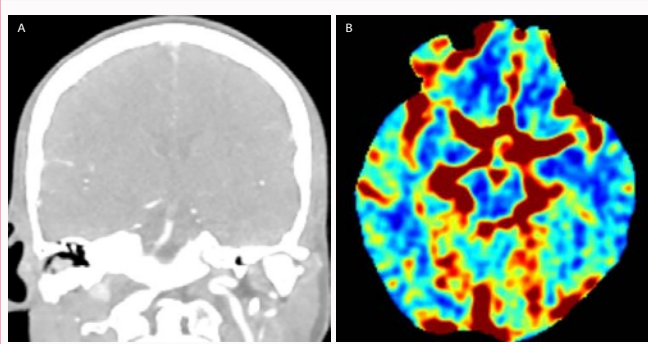
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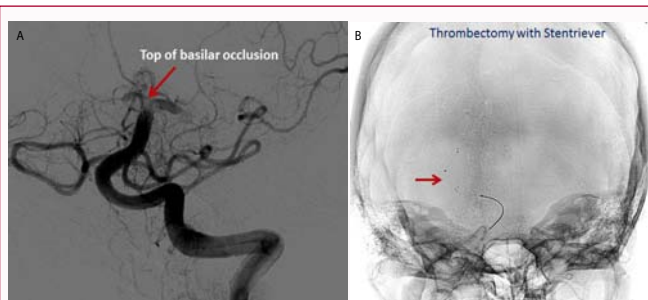
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Figure 1: Plain CT Head: Showed hyper-dense basilar artery without any areas of established ischemia.



**Figure 2:** (A) CT Angiogram: Showed a top-of-basilar occlusion. (B) CT Perfusion showed no established infarction.



**Figure 3:** (A) AP view of the left vertebral artery: The angiogram shows top-of-basilar occlusion due to a thrombus. (B) AP view of the left vertebral artery: Shows Stentriever in place capturing the thrombus.

visual symptoms (e.g., hemianopia, cortical blindness, abnormal color vision/color dysnomia). These patients can also demonstrate oculomotor abnormalities, most commonly of the vertical gaze, such as gaze palsy, skew deviation, convergence spasm resulting in pseudo abducens palsy, or convergence-retraction nystagmus [2].



**Figure 4:** (A) Post-procedure AP I view of the posterior circulation cerebral arteries: The basilar artery is revascularised with a single pass TIC1 3. (B) The retrieved thrombus is shown below.

We successfully prevented this patient from suffering a significant disability by achieving complete basilar artery revascularization by performing a stentriever mechanical thrombectomy.

## References

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