Despite recent breakthroughs in the treatment of ischemic stroke, patients with posterior circulation (PC) occlusion were excluded from randomized controlled trials. The AHA/ASA guidelines state that there is uncertainty about the benefit of mechanical thrombectomy (MT) involving PC. We evaluated the clinical outcome using modified Rankin scale (mRS) at 90 days. Patients with an mRS score of 0 to 3 were regarded as achieving a ‘favorable outcome’, and those with an mRS score of 4 to 6 as showing a ‘poor outcome’.

### Method
- We performed a retrospective analysis of all patients who underwent MT for acute ischemic stroke involving PC from our institution from January 2011 to May 2017.
- MT was indicated for patients who were transferred within 24 hours after onset, without an extensive irreversible impairment in the brain stem.
- We evaluated the clinical outcome using modified Rankin scale (mRS) at 90 days. Patients with a mRS score of 0 to 3 were regarded as achieving a ‘favorable outcome’, and those with an mRS score of 4 to 6 as showing a ‘poor outcome’.

### Patients characteristics and outcome

<table>
<thead>
<tr>
<th>Age, median (quartile)</th>
<th>Favorable outcome (mRS=0-3)</th>
<th>Poor outcome (mRS=4-6)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, median (quartile)</td>
<td>77.5 (68.3 - 79.8)</td>
<td>80.1 (74.0 - 84.0)</td>
<td>N.S.</td>
</tr>
<tr>
<td>Male, n (%)</td>
<td>4 (66.7)</td>
<td>9 (45.0)</td>
<td>N.S.</td>
</tr>
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</table>

### Modified Rankin Scale
- **At discharge**
  - Favorable outcome: 18 (90.0) (%)
  - Poor outcome: 2 (10.0) (%)
- **At 90 days**
  - Favorable outcome: 15 (75.0) (%)
  - Poor outcome: 5 (25.0) (%)

### SUMMARY OF THE RESULTS
- A total of 26 patients including 23 BAO and 3 vertebral artery occlusion were enrolled during the study period.
- Successfully recanalization was achieved in 24 patients (92.3%). Although 4 patients (15.4%) died, six of 26 patients (23.1%) were favorable outcome at 90 days.
- Compared to poor outcome group, the patients in favorable outcome group were significantly lower pre-onset NIHSS (18.5 vs 29.0, P = 0.03) and NIHSS at 24 hours (3.5 vs 21.0, P = 0.03).

### DISCUSSION
- Acute BAO has been associated with a high case fatality rate and morbidity. (Fatality rates 20 - 70%)
- MT involving PC may alleviate the mortality even though among the elderly patients with severe symptom.
- The most important patient-related factors determining clinical outcome are initial stroke severity and collateral status.
- The clinical outcome using modified Rankin scale was reported as a useful marker for predicting clinical outcome.

### CONCLUSION
- MT may contribute reduction of the mortality and relief of symptom among the patients with acute vertebrobasilar occlusion.
- Further studies were required to establish the efficacy of MT for patients with PC occlusion.