Wide necked ruptured aneurysm can be treated safely without using a stent: Double-micro-catheter technique.

**Patient Presentation**
- Early 60s female with no significant past medical history suddenly collapsed at work.
- Brain CT showed extensive subarachnoid hemorrhage (SAH), and early hydrocephalus (Fig.1)

**Evaluation and Imaging**
- Distribution of the SAH, and also a round shaped tissue in the basilar cistern on CT suggested a basilar tip aneurysm.
- Cerebral catheter angiography confirmed a larger wide-necked basilar tip aneurysm (Fig.2)

**Intervention Performed**
- Given the wide-neck nature of the aneurysm, primary coiling while preserving both eloquent posterior cerebral arteries was very challenging.
- Use of a stent carries a higher peri-procedural adverse event rates.
- A decision was made to do double micro-catheter embolization.
Double Microcatheter Technique

Figures 3Left and 3Right: Two microcatheters were placed into the aneurysm. Intentionally undersized embolization coil was placed in the aneurysm in order to avoid coil herniation into the parent artery (figure 3Left). The undersized coil mass was unstable therefore detaching the coil at this point was not possible. The undersized coil was braced with another undersized coil placed via the 2nd microcatheter forming a stable coil mass in the aneurysm. Once the coil mass becomes stable in the aneurysm, one coil was detached and another coil was placed. Repeating this process, a very stable coil mass could be created in this wide necked aneurysm (Figure 3Right).

The Outcome

- The parent arteries including basilar artery, and both PCAs and SCAs could be preserved without using a stent.
- Subsequent rupture risk was completely eliminated.
- The patient recovered from the SAH and expected to be discharged home.
- Proper use of adjunctive techniques enables a good quality aneurysm embolization without placing a metal hardware in the parent artery.

Figure 4: The wide-necked basilar tip aneurysm was tightly packed without coil herniation. Both PCAs were preserved without using stent. Only a small residual neck was left.