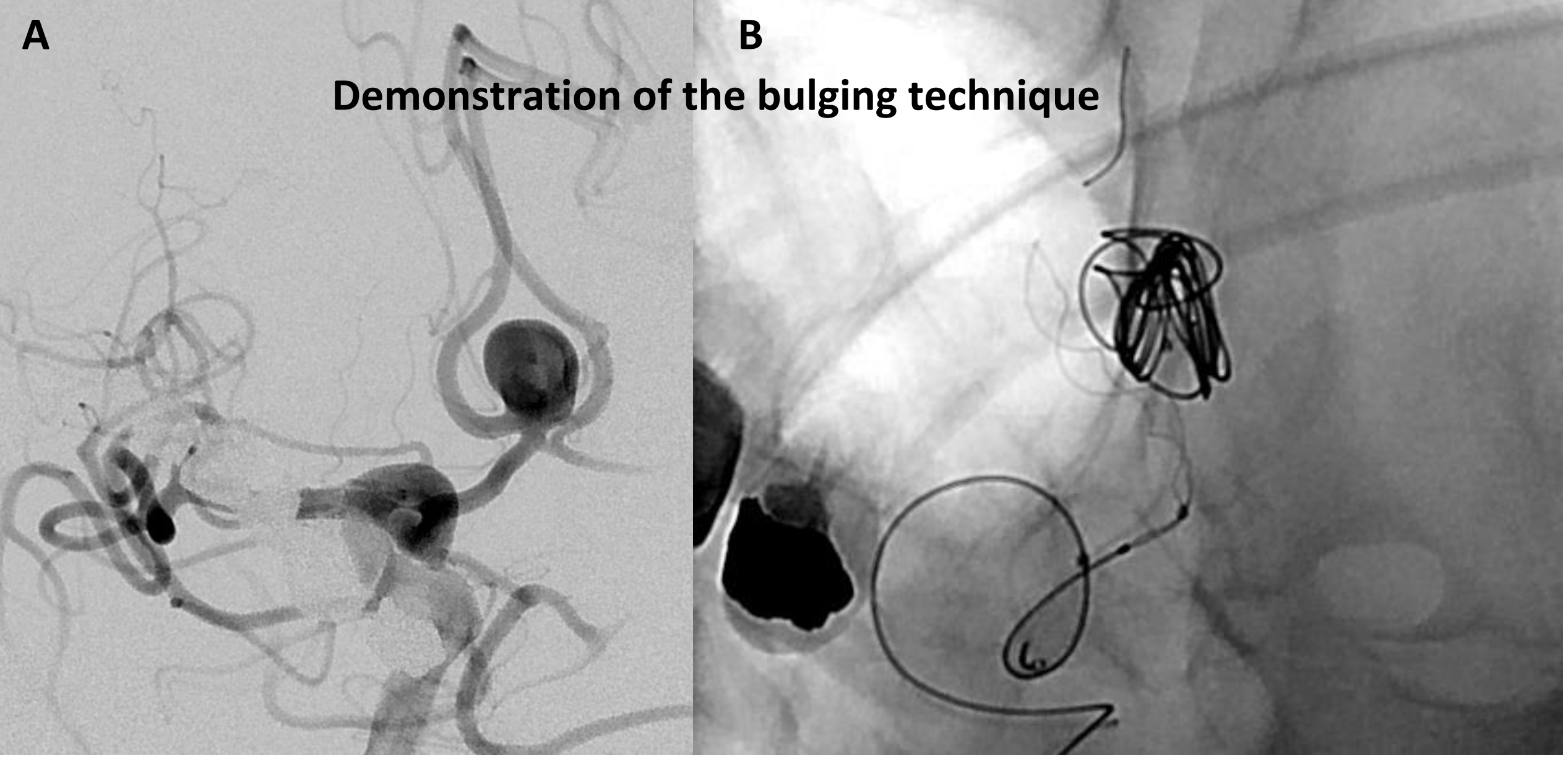
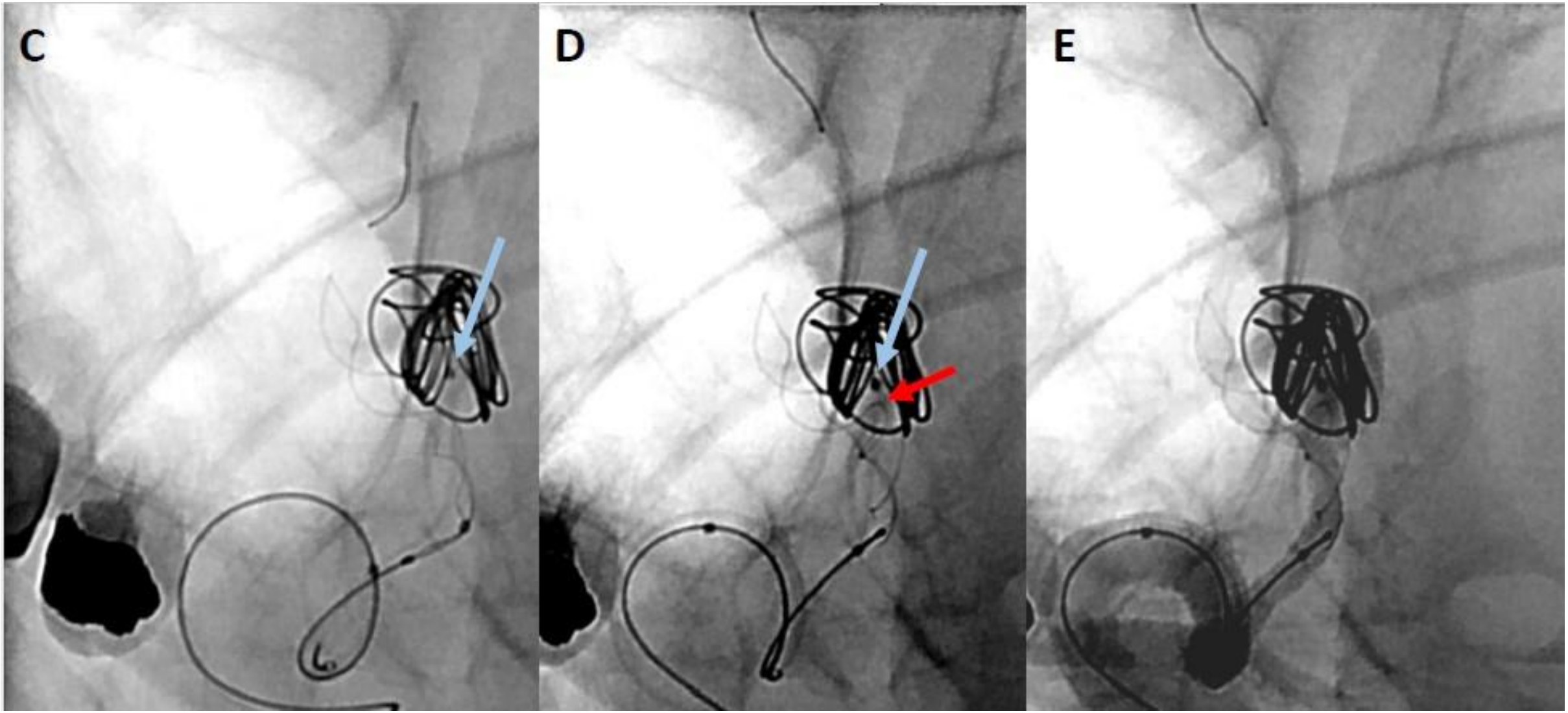
# Supplementary file

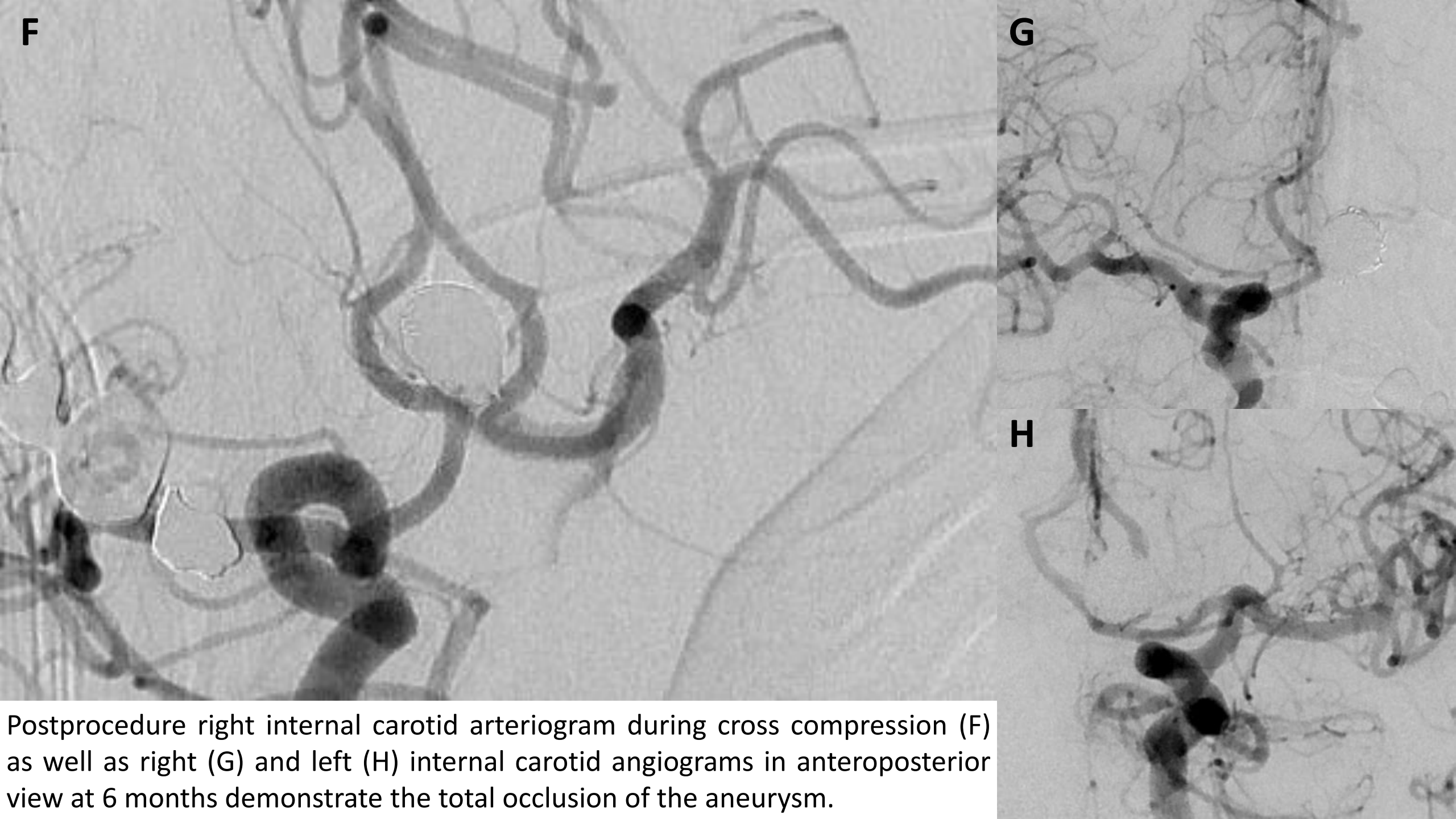
# Demonstration of the bulging technique




Anterior communicating artery aneurysm in a adult patient. The aneurysm neck is visible in Waters projection (A). A Leo Baby stent is partially deployed from the right A2 segment to the right A1 segment (B). There is a tendency of the coils to encroach upon the contralateral A1/A2 junction.



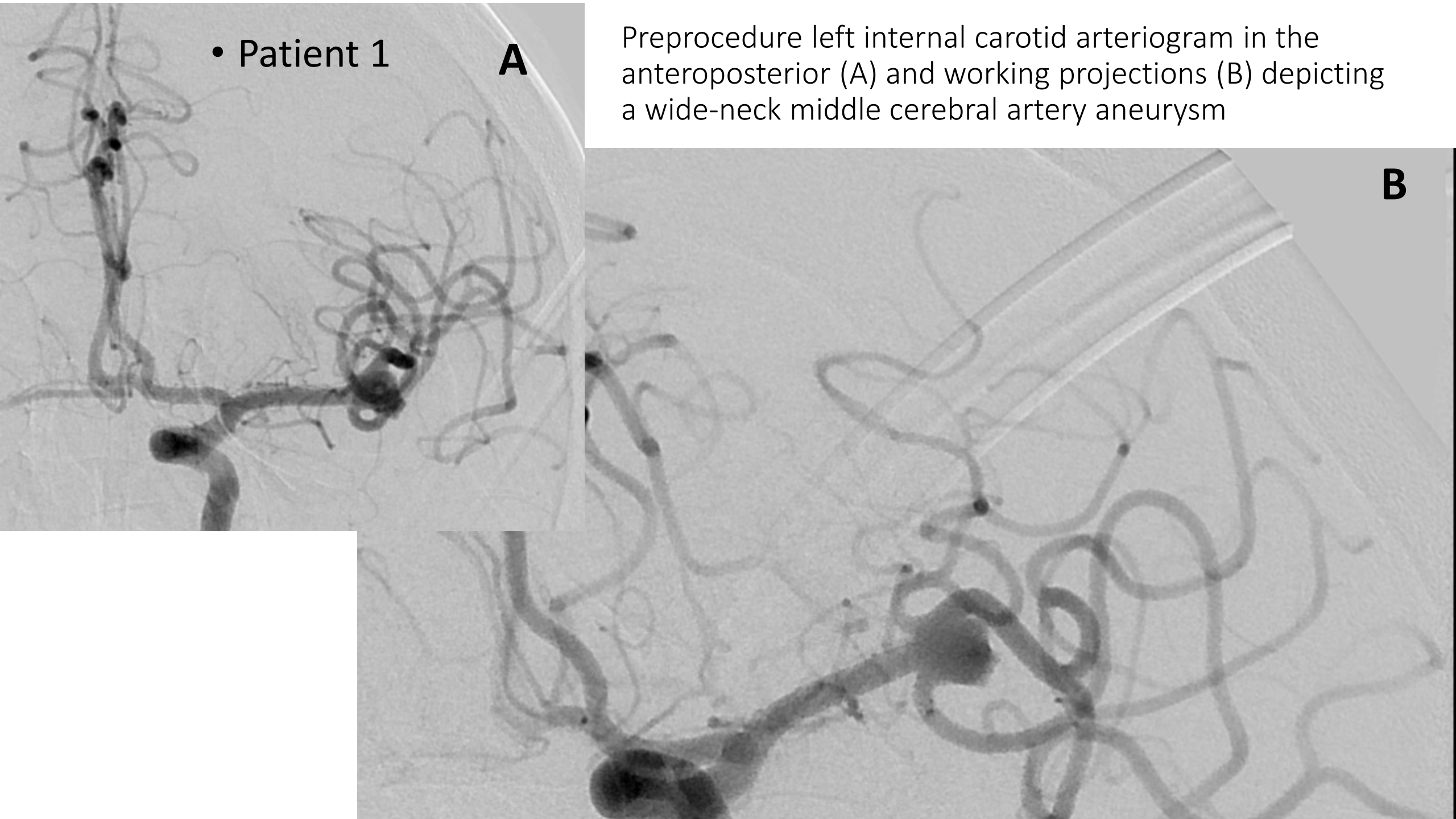

Fluoroscopic capture shows the partially deployed stent (C) and then the bulging of the stent on native views without (D) and with (E) injection of contrast medium. The red arrow demarcates the bulged stent and the blue arrow shows the tip of the coiling catheter. There is a tendency of the coils to encroach upon the contralateral A1/A2 junction.



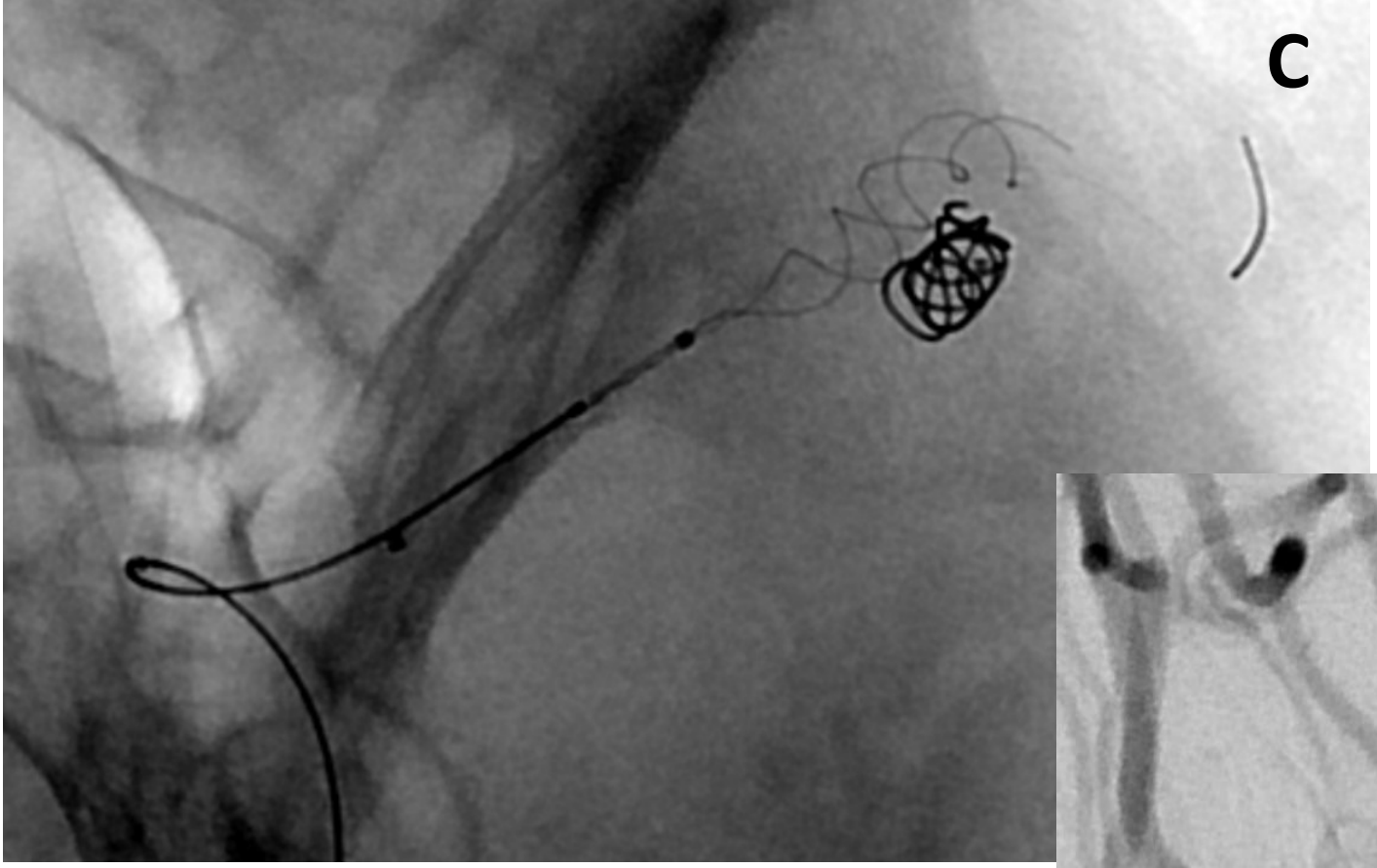

Postprocedure right internal carotid arteriogram during cross compression (F) as well as right (G) and left (H) internal carotid angiograms in anteroposterior view at 6 months demonstrate the total occlusion of the aneurysm.

| The follow-up modalities used for each time period | | | |
|---|---|---|---|
| | ≤ 4 months | 5 to 12 months | Over 12 months |
| Follow-up available (% within the total number of the cases) | 44 (66.7) | 61 (92.4) | 55 (88.3) |
| MRI (% within available) | 41 (93.2) | 3 (4.9) | 46 (83.6) |
| DSA (% within available) | 3 (6.8) | 58 (95.1) | 9 (16.4) |

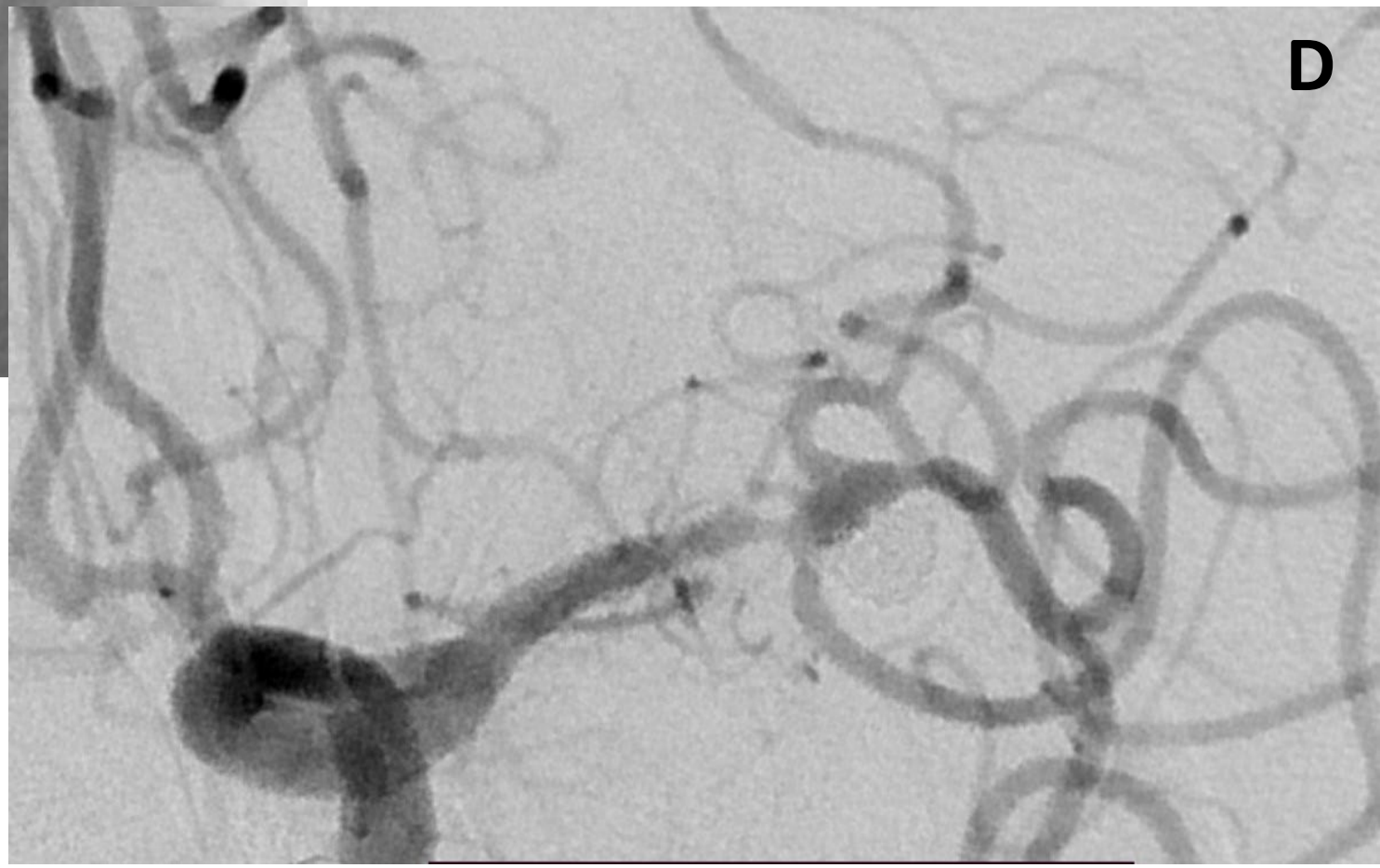
Images of the two patients with parent artery stenosis on a follow-up DSA after utilization of the stent bulging technique.

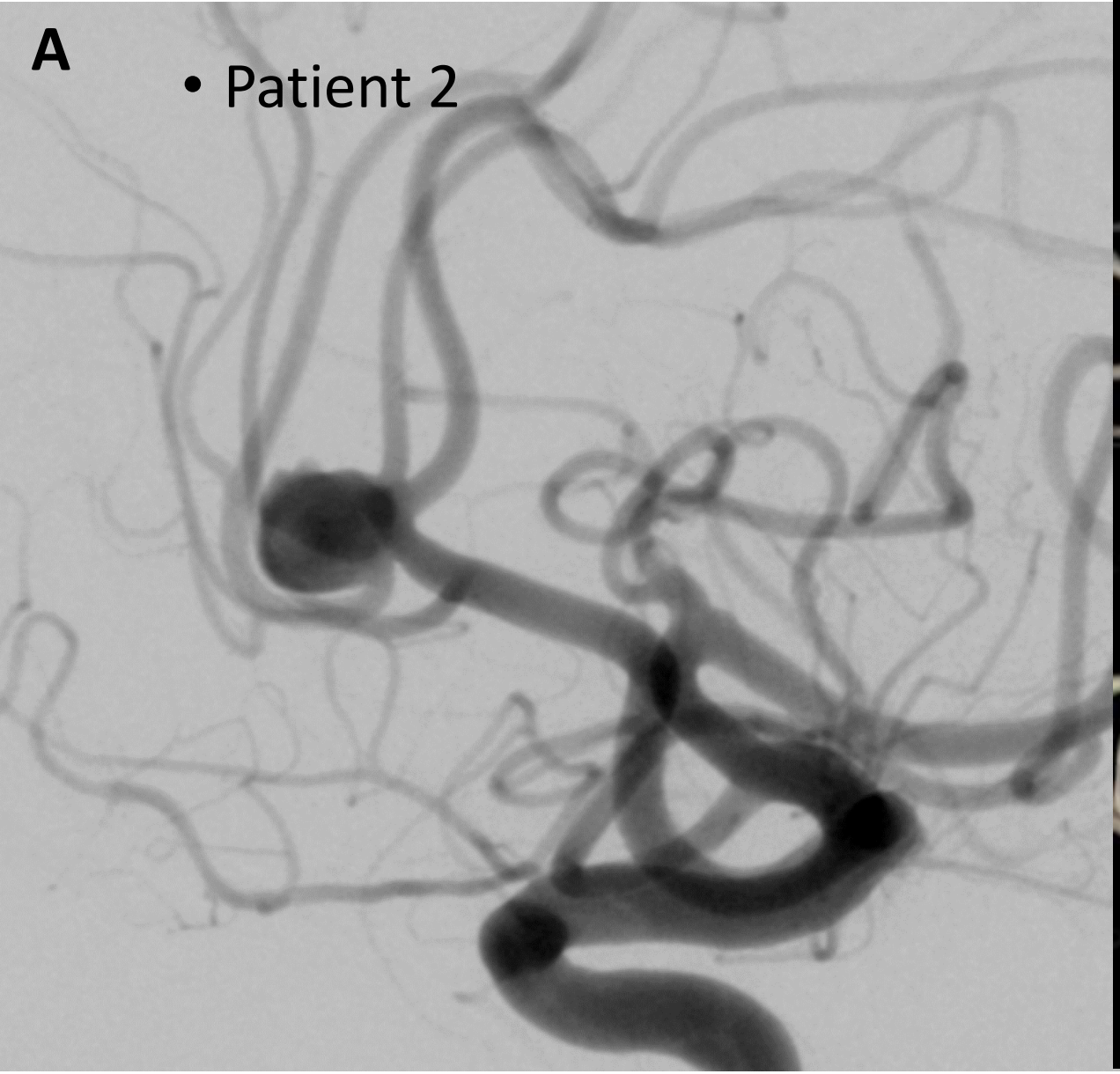


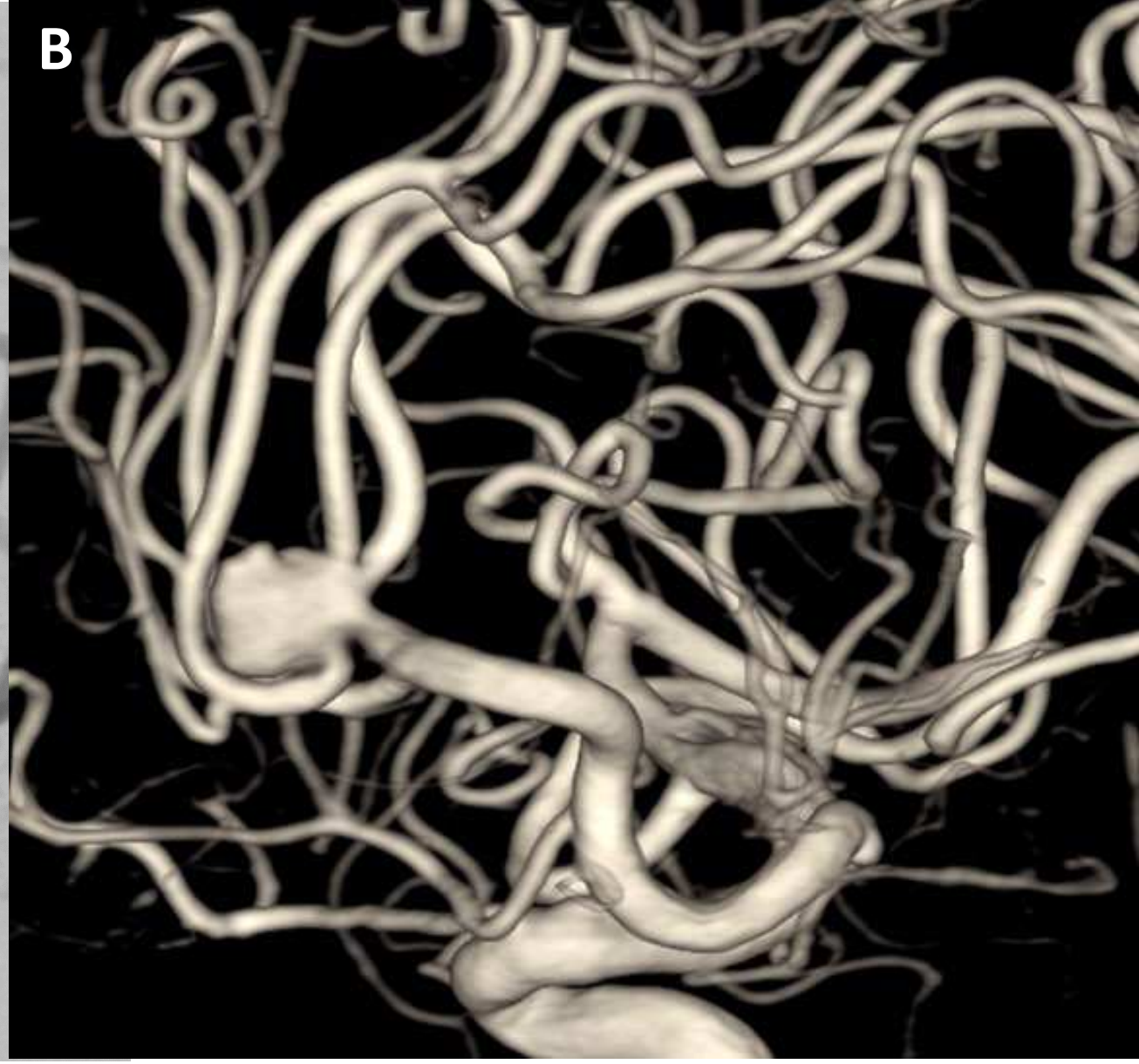

Preprocedure left internal carotid arteriogram in the anteroposterior (A) and working projections (B) depicting a wide-neck middle cerebral artery aneurysm



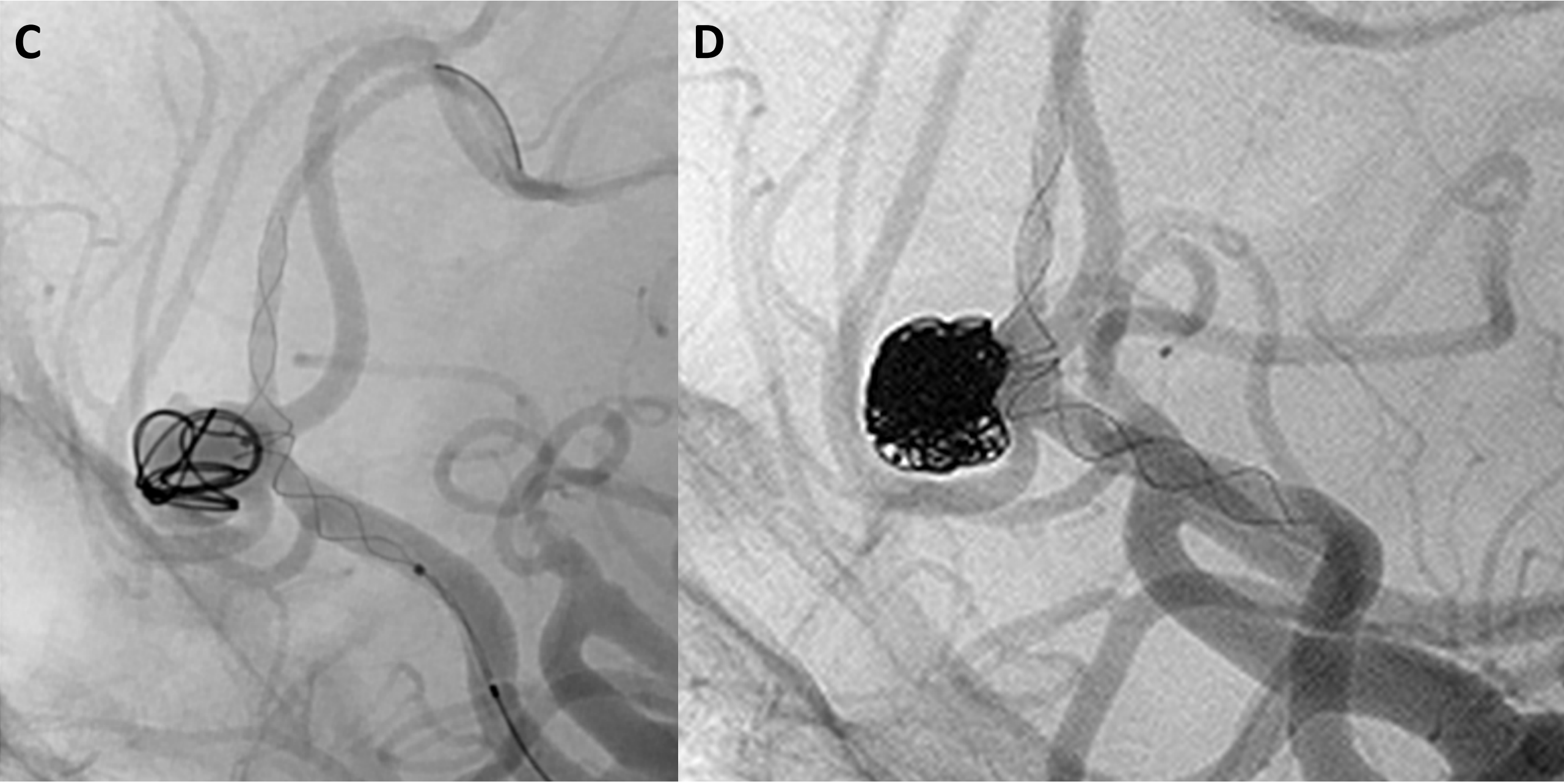

Native view of the compressed stent during coiling (C) and the subtracted view in the working projection on 6-month follow-up (D) show the stent and an approximately 50 % stenosis of the middle cerebral artery, adjacent to its bifurcation. The aneurysm is totally obliterated.



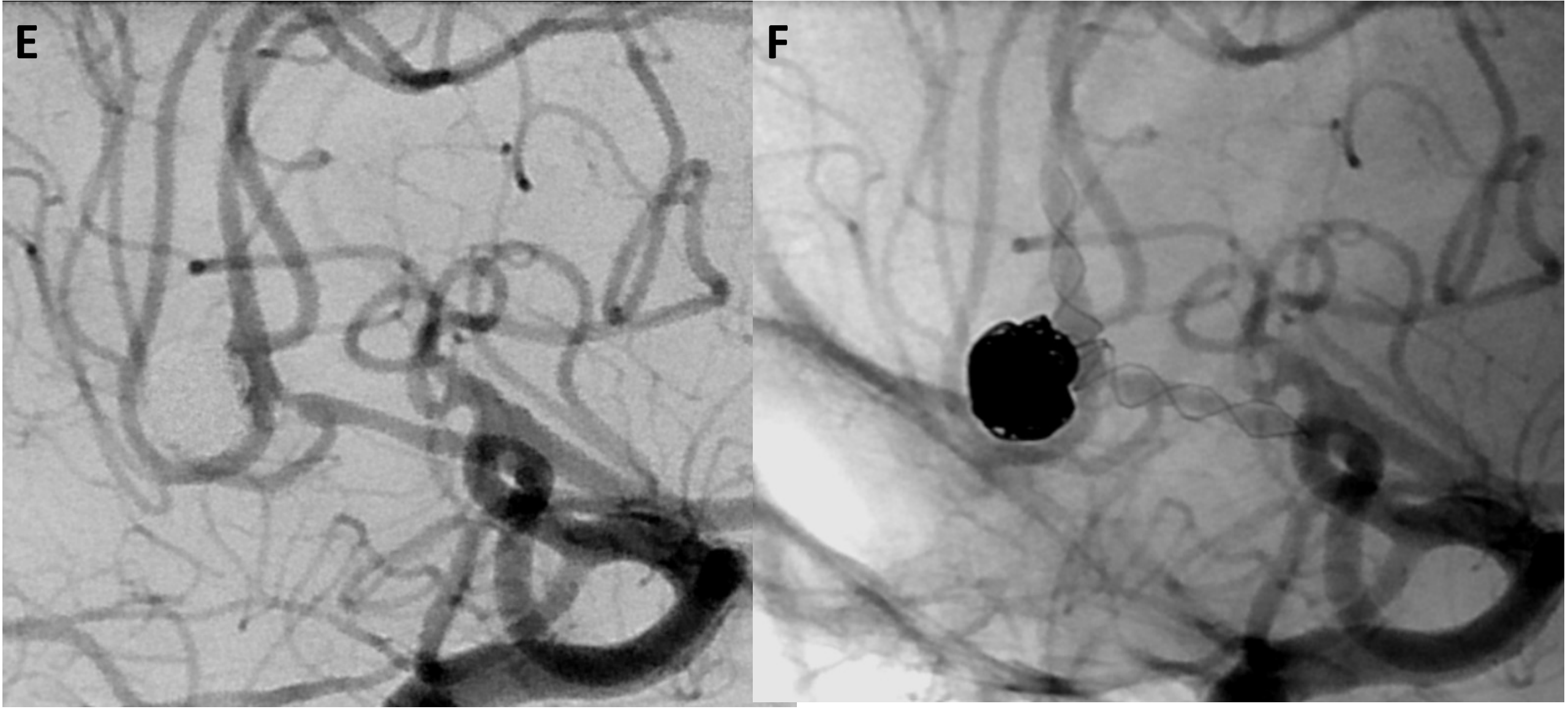



Anterior communicating artery aneurysm as seen in the working projection in subtracted (A) and 3D (B) views




Intraprocedural images show the bulging of the stent (C) and how the stent enables coiling of the aneurysm with protection of the inferior branch (D)




Subtracted (E) and native (F) views of the 6-month follow-up arteriogram in the same working projection demonstrate no evidence of a residual aneurysm. Again approximately 60 % narrowing of the distal parent artery is visible.