Cerebral Spinal Fluid Drainage and Distal Aortic Perfusion Decrease the Incidence of Neurological Deficit: The Results of 343 Descending and Thoracoabdominal Aortic Aneurysm Repairs


Objective:
We received our experience of 343 descending and thoracoabdominal aortic aneurysm repairs to determine the impact of the adjuncts distal aortic perfusion and cerebral spinal fluid drainage on neurological deficit and death.

Materials and Methods:
Between January 1991 and March 1996, 104 (30%) patients were operated for thoracoabdominal aortic aneurysm type I, 118 (34%) for type II, 68 (20%) for type III or IV, and 53 (15%) for descending thoracic type.

Before September 1992, simple cross-clamp was used for 94 (27%) patients.

After September 1992, adjuncts were used for 186 (54%) patients.

Results:
Overall neurological deficit was 33/343 (10%). Neurological deficit for simple cross-clamp patients compared to adjunct patients was 15/94 (16%) vs. 12/186 (7%) (O.R. 0.36 p<0.01). For types I and II the incidence was 11/52 (21%) vs. 12/141 (9%) (O.R. 0.35 p<0.02) and for type II, nine out of 22 (41%) vs. 11/85 (13%) (O.R. 0.21 p<0.003).

Overall 30-day mortality was 43/343 (13%), including patients presenting with rupture. Excluding these patients, overall 30-day mortality was 33/322 (10%).

Conclusion:
Cerebral spinal fluid drainage and distal aortic perfusion decreased the incidence of neurological deficit and were particular effective for patients at highest risk with type II thoracoabdominal aortic aneurysm.

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