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Long-term Results After Conducting Transcatheter Cerebral Revascularization in the Treatment of Ischemic Stroke

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Background: The research is devoted to long-term results (2-10 years) of the treatment of patients with ischemic stroke who previously underwent either transcatheter cerebral revascularization or conservative treatment.

Methods: 798 patients were treated: 487 (61.03%) - transcatheter cerebral revascularization (Test Group), 311 (38.97%) - conservative treatment (Control Group). 413 patients aged 35-85 (average age 78) were re-examined. Of these, 255 (61.74%) patients had undergone transcatheter cerebral revascularization, and 158 (38.26%) - conservative treatment.

The examination plan included:

- the clinical dementia rating (CDR), mini-mental state examination (MMSE), the Barthel index (IB) assessment (all patients);
- cerebral CT, MRI, scintigraphy (SG), rheoencephalography (REG) (all patients);
- cerebral MRA (115 (45.10%) Test Group patients and 72 (45.60%) Control Group patients);
- cerebral MUGA 31 (12.16%) Test Group patients and 12 (7.74%) Control Group patients).

Results:

Test Group

- good clinical outcome – 175, of whom re-examined - 98, results maintained - 91 (92.86%);
- satisfactory clinical outcome - 228, re-examined - 112, results maintained - 101 (90.18%);
- relatively satisfactory clinical outcome - 84, re-examined - 45, results maintained - 38 (84.44%);
- reduction of hypotrophic symptoms in the brain - 221 (86.66%);
- preservation of cerebral blood flow rate and perfusional blood filling - 209 (81.96%);
- preservation of the lumen and patency of restored vessels, increased collateral revascularization - 139 (95.21%).

Control Group

- satisfactory clinical outcome was initially obtained in 46 cases, of whom 24 were re-examined, results maintained - 8 (33.33%);
- relatively satisfactory clinical outcome - 96, re-examined - 53, results maintained - 24 (45.28%);
- relatively positive clinical outcome - 169, re-examined - 81, results maintained - 36 (44.44%);
- growing of hypotrophic brain symptoms - 127 (80.38%);
- reduction of cerebral blood flow rate and perfusional blood filling - 118 (74.68%);
- further atherosclerosis progression - 81 (96.43%).

Conclusion:

Transcatheter Cerebral Revascularization is an effective method for treating patients after ischemic stroke. In the long-term period (2-10 years after the treatment), the method can restore the brain blood flow and, in contrast to the conservative method, demonstrates high and stable clinical results maintained for a long time.

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