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Introduction

Due to increasing lifespan, the number of patients with Binswanger's disease is growing.

Aims

The study of the effectiveness of brain transluminal laser revascularization in the treatment of Binswanger's disease.

Methods

6 patients, 4 male (66.7%) and 2 female (33.3%), aged 58-81 (average age 76) with Binswanger's disease were examined. Each patient underwent CT, MRI, SG, REG, cerebral multi-gated angiography (MUGA).

Single postischemic microcysts (3-5 mm) of brain's white matter were detected in 1 case; multiple microcysts including the merged ones - in 5 cases. All the patients had leucoariosis, involutive changes of the cerebral cortex, unocclusive hydrocephalus.

Intracranial atherosclerotic lesion type was detected in all cases. Multiple arteriovenous shunts of brain's white matter were detected in all cases. All the patients underwent transluminal laser revascularization.

Low-energy laser systems were used for revascularization of distal intracranial branches. Postoperatively, the patients underwent desagrigatory, anticoagulatory and vasodilator therapy following advanced interventional radiology schemes.

Clinical evaluation of postoperative results was carried out using the Index Bartels (IB).

Results

Good immediate angiographic outcome manifested in the restoration of lumen and patency of the affected vessels as well as in collateral revascularization was obtained in all cases.

Good clinical outcome (IB-90-100) was obtained in 4 (66.7%) cases; satisfactory clinical outcome (IB-70-80) - in 2 (33.3%) cases. No negative effect was observed after the interventions.

Conclusions

The method of brain transluminal laser revascularization is an effective one in the treatment of atherosclerotic lesions of brain's white matter accompanied by the development of Binswanger disease.