

38. Modern capabilities of large scalp defects reconstruction in neurotraumatology and neurooncology

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Background Scalp defects reconstruction remains a serious challenge for oncologists, neurosurgeons, and plastic surgeons. It is difficult to use standard reconstruction methods for scalp defects due to unique properties of the scalp. When resecting large scalp flaps, the ability of using adjacent relocated flaps is limited.

The aim of our study. We analyzed reconstructive variants of a surgery and give recommendations on scalp reconstruction based on modern literature and own clinical experience.

Methods. The literature for the last 10 years was searched online using the key words; we also analyzed outcomes of recent plastic surgeries in 4 own patients, which were operated in from 2016 to 2019 inclusive.

Results. Scalp reconstructions remain a serious challenge due to unique properties of head tissues, history of previous operations or infectious complications, previous radiation treatment, limited ability of using adjacent flaps. When resecting large scalp flaps, it is appropriate to use free flaps with a vascular pedicle. Usually, patients endure such surgeries satisfactorily and return to their usual lifestyle within a short period. Latissimus dorsi flap is a fundamental method of scalp reconstruction. Recently, an anterolateral thigh (ALT) flap has been widely used. A free radial forearm flap (RFF) is also an extremely reliable thin flap with a long pedicle and is well suited for scalp reconstruction.

Conclusion. The best way to reconstruct 100+ cm² skin defects involves using microvascular free flaps. Latissimus dorsi flap, ALT, and RFF are three recommended variants of scalp defects reconstruction. Each of the stated methods has own advantages and disadvantages, so their use must be thoroughly planned preoperatively. The common feature of these surgical methods is the necessity of using state-of-the-art microsurgery equipment.

KEY WORDS: scalp defects, free skin flap, microsurgery, plastic surgery, latissimus dorsi flap, anterolateral thigh flap, radial forearm flap.

39. Methods for prophylaxis and treatment of subcutaneous cerebrospinal fluid accumulation in the early postoperative period after surgery of skull base meningiomas

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