

Transient Multiple Removal and Subsequent Reimplantation of Abdominal and Retroperitoneal Organs with Multisystemic Neoplastic Lesions

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The aim of the study was to develop simple, minimally invasive method of transient multiple removal and subsequent reimplantation of abdominal and retroperitoneal organs with multisystemic neoplastic lesions, allowing subsequent reimplantation of the organ block after extracorporeal surgery.

Material and Methods. Ten human cadavers of subjects who died of causes unrelated to pathology of the abdominal organs were used in this study.

The anatomical experiment involved transient multiple removal of the abdominal and retroperitoneal organs with multisystemic neoplastic lesions and their subsequent reimplantation. Surgery was performed using the method developed at the Department of Operative Surgery and Topographic Anatomy of I.M. Sechenov First Moscow State Medical University (Patent RU 2601100).

Results. The proposed method showed several advantages: consistency of cold perfusion in deep hypothermia of the patient, hypothermic circulatory arrest of the abdominal organs (up to 4–6 h); feasibility of insertion and subsequent removal of arterial and venous shunts, reimplantation of the abdominal organs; restoration of arterial and venous blood flow in the patient (cadaver) and preserved integrity of the transected anatomical structures.

Conclusion. The proposed method of transient multiple removal and subsequent reimplantation of the abdominal and retroperitoneal organs with multisystemic neoplastic lesions provides sustained viability of the organs and can be recommended as a suitable model for further application in clinical practice.

Key words: transient multiple removal of the abdominal and retroperitoneal organs; reimplantation of the abdominal and retroperitoneal organs; multisystemic neoplastic lesions; extracorporeal surgery.

Treatment of severe multisystemic diseases of abdominal and retroperitoneal organs with multi-organ neoplastic lesions is a complicated problem of modern surgery which still remains unsolved [1–4].

The available literature provides no description of performing multiple autotransplantation in a clinical setting. There are only a few references regarding surgical treatment of the target organ during its autotransplantation [5].

The aim of the study was to develop simple, minimally invasive method of transient multiple removal and subsequent reimplantation of the abdominal

and retroperitoneal organs affected by multisystemic neoplastic lesions, allowing subsequent reimplantation of the organ block after extracorporeal surgery.

Materials and Methods. The method of transient multiple removal and subsequent reimplantation of the abdominal and retroperitoneal organs affected by multisystemic neoplastic lesions [6] was developed on the basis of multiple organ retrieval for transplantation [7] with due consideration of the disadvantages of the latter.

Ten cadavers of the subjects who died from causes unrelated to pathology of the abdominal organs were used in this study.

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