

SV13: CHANGING STRATEGY IN MINIMALLY INVASIVE SPLEEN SURGERY

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Background In recent years there has been increasing interest in the therapeutic treatment of the splenic pathology. Laparoscopic splenectomy has become an established standard in the management of splenic trauma and surgical diseases of the spleen. Postsplenectomy sepsis is the most serious complication of splenectomy. The purpose of this study is to describe the changes that have been made over the past decades and underlines the efficacy and safety of new concept in children, the preservation of the spleen function. Also, to present and analyse practical use of minimally invasive spleen surgery in children.

Materials and methods We analyzed 71 patients with splenic trauma who were treated at the Clinic of Pediatric Surgery in Novi Sad during the period of 1990–2002. A control group of 32 patients was formed as retrospective, and a study group of 39 patients as prospective study. Separated key criteria for the therapeutic decision and treatment algorithm for the splenic trauma were proposed. Then we analyzed the data of 16 consecutive children who underwent the minimally invasive spleen surgery for haematological and other splenic disorders in our Unit, between January 2011 and January 2017. The patients were 6 girls and 10 boys aged between 6 and 18 years. The indications for surgery were cysts (9 cases), hereditary spherocytosis (5 cases), idiopathic thrombocytopenic purpura (1 case), and sarcoidosis (1 case). Laparoscopic splenectomy in 7 patients, laparoscopic partial splenectomy in 5 patients, and unroofing in 3 patients were performed. All five children with hereditary spherocytosis presented with an associated cholelithiasis and were cholecystectomized by laparoscopy during the same anaesthesia.

Results Non-operative treatment in the control group was applied in 7 patients, operative preservation of the spleen in 11, and splenectomy in 14 patients. In the study group, non-operative treatment was applied in 28 patients, operative spleen preservation in 8, and splenectomy only in 3 patients. Non-operative treatment was administered to 71.79% of patients in the study group and to 21.88% of patients of the control group. The new concept of preserving the spleen's function has enabled in saving the organ in 92.18% of cases.

In the last years, no major complications were recorded during application of minimally invasive spleen surgery. Conversion was performed in 5 cases. The alternative spleen vascularisation, the short gastric vessels and ascending branch of the left gastroepiploic artery are useful in the partial splenectomy. Post-operative analgesia and hospital stay was significantly diminished.

Conclusions The priority in preserving the function of the

spleen is possible by applying nonoperative treatments and/or operative preservation of the spleen. The introduction of minimally invasive surgery opened a new field within the surgical methods. Based on our experience, we believe that the minimally invasive spleen surgery is a safe and effective procedure. Bearing in mind that the risk of fatal postsplenectomy sepsis is lifelong, it is necessary to overcome splenectomy as the dominant procedure in the management of splenic pathology.

Key words spleen pathology, non-operative management, laparoscopic splenectomy, laparoscopic partial splenectomy, unroofing, children