

SURGICAL PROCEDURES IN PATIENTS AFTER HEART TRANSPLANTATION - A RETROSPECTIVE STUDY

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Abstract

We have recorded and evaluated data of 13 patients with heart transplantations operated on at the First Department of Surgery between January 1, 1993 and January 1, 2003, aged 50 to 67 years, 9 men and 4 women. We have recorded 16 surgical procedures: 5 hernioplasties, 5 cholecystectomies, 2 osteosyntheses and 1 hydrocele sec. Winckelmann, 1 laparotomic revision of the abdominal cavity, 1 VATS, and 1 hemicolectomy. The time from transplantation to operation ranged from 2 months to 9 years. Twelve operations (75 %) were planned and 4 (25 %) were urgent. Serious complications resulting in the death of the patient were recorded in 1 case (6.25 %), the rest (93.75 %) was without complications. After evaluating the above-mentioned records we came to a conclusion that heart-transplanted patients do not present any higher risk of postoperative complications.

Key words

Heart transplantation, Surgical procedure, Complications

INTRODUCTION

Transplantation is in many cases the last option for patients with serious heart diseases or damage. The majority of the heart-transplanted patients suffer from cardiomyopathy and chronic ischaemic diseases (7).

With an average of 45 heart transplantations per year (IKEM Prague 30/year, Cardiosurgical Centre of St. Anne's Univ. Hosp. 15/year), the Czech Republic falls into the European standard (7).

Among the post-transplantation complications, the most common are graft reactions associated with its denervation and pre- and perioperational damage and graft rejection. Continued immunosuppression is accompanied by higher infection risk and later by higher malignancy rate (7).

Most common surgical complications result in the infliction of gastrointestinal and biliary tract organs. These are mostly associated with the overall patient stress. Abdominal complications are rare, but often life-threatening. The mortality rate is between 0.3-13 %. Among the adverse factors of abdominal pathology belong age (70 and more), preoperational NYHA status (grade IV), duration of cardiopulmonary bypass, and blood transfusion.

The aim of our study was to evaluate the outcome of all heart-transplanted patients operated on at the 1st Dept. of Surgery at the St. Anne's University Hospital between January 1, 1993 and January 1, 2003. We focused on the type of surgical procedure, the time from the transplantation to the procedure, and associated complications.

MATERIALS AND METHODS

Between January 1, 1993 and January 1, 2003 there were 153 heart transplantations at the St. Anne's University Hospital. From these we included 13 patients, operated on at the First Department of Surgery, aged 50 to 67 years, 9 men and 4 women (*Fig. 1*). Median 61 years.

RESULTS

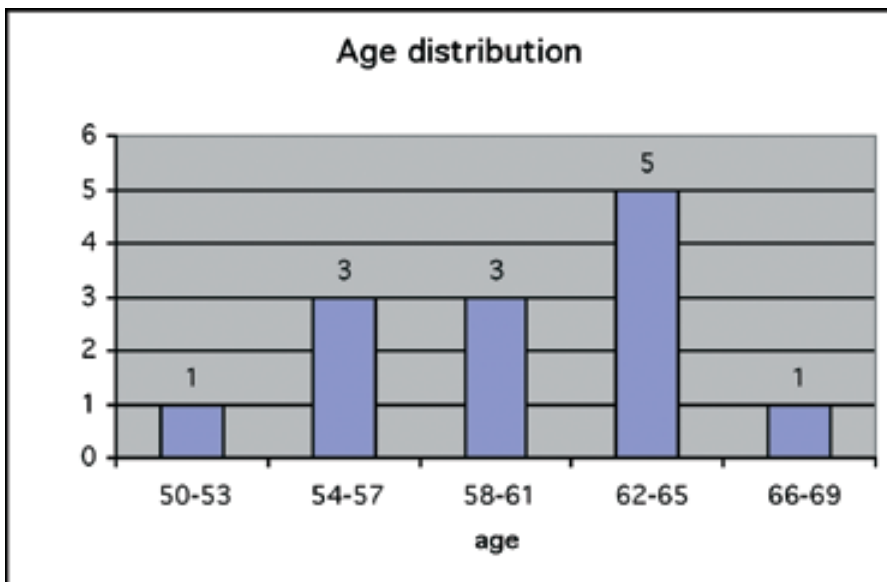


Fig. 1
Age distribution

In this group we recorded 16 surgical procedures: 5 hernioplasties, 5 cholecystectomies, 2 osteosyntheses, 1 hydrocele sec. Winckelmann, 1 laparotomic revision of the abdominal cavity, 1 VATS, and 1 hemicolectomy (*Fig. 2*).

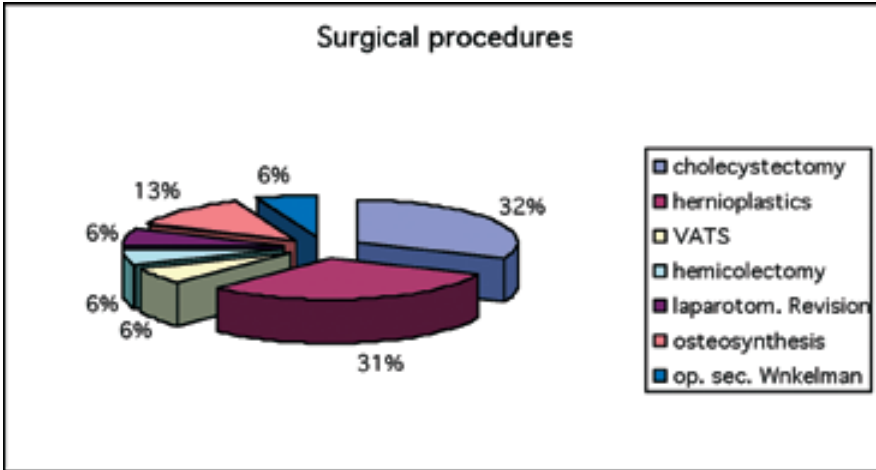


Fig.2
Surgical procedures

The time from transplantation to operation ranged from 2 months to 9 years (Fig. 3). Median 36 months. With regard to the immunosuppression of the patients, antibiotic prophylaxis was used. Preoperational examination included heart ECHO and in several cases myocardial bioptic puncture.

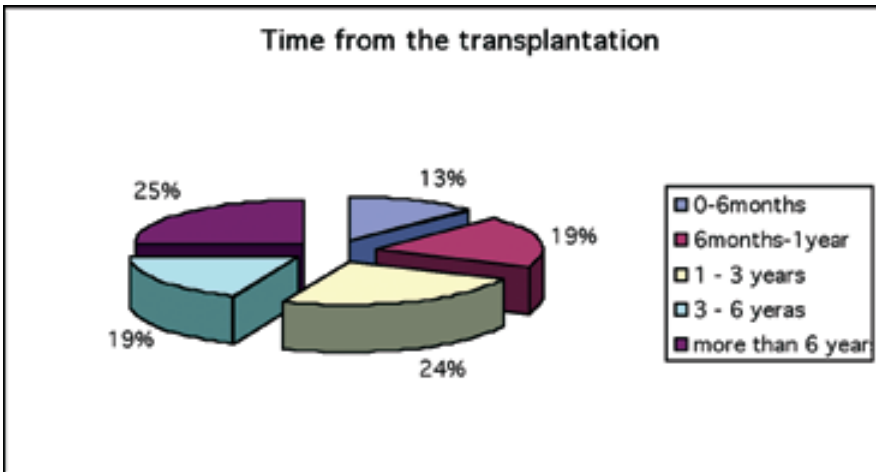


Fig. 3
Time from transplantation

The set was divided and evaluated according to the type of surgical procedure.

CHOLECYSTECTOMY

From the total of 5 surgical procedures 4 were classical cholecystectomies carried out through subcostal incision. Two operations were planned and two were urgent. The last operation was combined with right-side hemicolectomy for a colonic tumour.

The time from the transplantation varied from 9 months to 7 years. Both planned operations were preceded by conservative therapy for cholecystitis followed by surgical procedure. Urgent procedures were indicated for the ongoing acute cholecystitis and obstructive icterus; in these cases the surgical procedure included probing of the biliary tract. The following postoperational complications were recorded: paroxysmal tachycardia, one case of oliguria treated with continued application of furosemide. No serious complications were noted and the patients were discharged at standard time.

HERNIAS

All cases involved inguinal hernias, free, without any signs of incarceration, fully reposable. Planned hernioplastics sec. Mc Vay - Lotheissen, in one case bilateral, were carried out. Two procedures were performed in spinal anaesthesia. No complications were recorded.

OTHERS

One laparotomic revision was performed in a female patient, 56 years old, 3 years after the transplantation with present peritoneal signs. There was a solid tubular infiltration discovered in the ileocecal region. (Unfortunately, no histological documentation is available.) No other pathology of the abdominal region was found. However, after two days the patient's condition was gradually getting worse and the patient died. Autopsy defined the reasons of death as sepsis and heart failure.

Two osteosynthetic procedures were carried out in one patient who was operated on for fracture of the femoral collum. DHS fixation was used and had to be reoperated after an excessive weighting leading to prunning of the screw through the femoral cap. However, this complication cannot be connected with a preceding heart transplantation.

The remaining operations were represented by: VATS for the repeating fluid in the thorax, hydrocele testis operation sec. Winkelmann, and sigmoideostomy with drainage and lavage of the periproctal abscess. All the above-mentioned procedures had no complications.

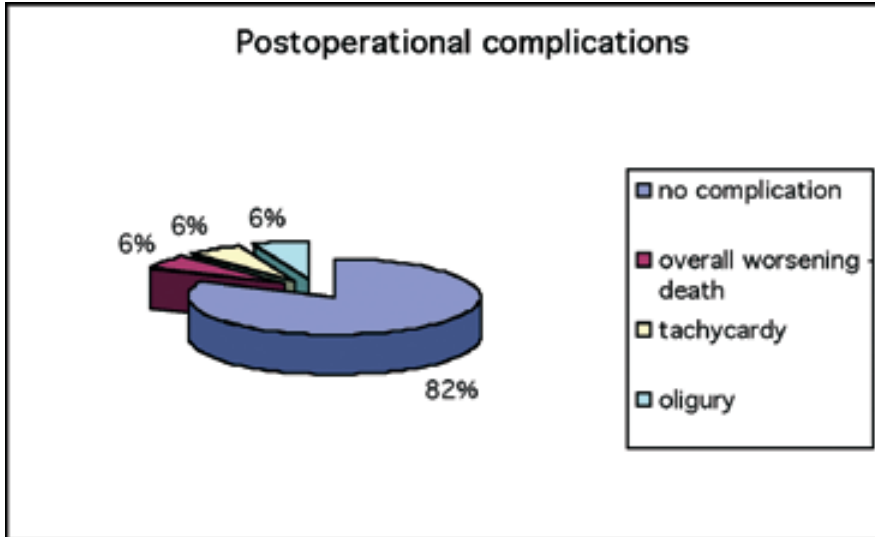


Fig. 4
Postoperational complications

DISCUSSION

There are no clearly given guidelines for the treatment of heart-transplanted patients with biliary stones (4). Some studies (6) recommend, for proved biliary lithiasis, cholecystectomy to be performed whenever possible, regarding the condition of the patient, before the transplantation, regardless of the clinical symptoms. The reasons for this are seen in 36% of the mortality rate recorded at the group operated on after the transplantation. Others (4) prefer to operate only on symptomatic patients. The only clear consent is that biliary stones without any clinical symptoms yet have to be a solved problem (1, 2, 3, 4) (Table 1).

Table 1

Study	No. of patients	Deaths/ complications	Conclusion
Richardson, New Orleans	42	2/13	Operation on stabilised patients before transplantation, after transplantation even without clinical signs
Lord, Sydney	32	1/4	Operation after transplantation, only symptomatic patients
1. SC Brno	5	0/2	Operation after transplantation, only symptomatic patients

Another option for the transplanted patient with cholelithiasis is a systematic ultrasound screening (5). Our recordings do not show any higher risk of postoperative complications. Both planned and acute procedures were without any complications. Therefore we support the theory that asymptomatic biliary stones are not indicated for surgical solution.

Hernioplastics in transplanted patients are a rarely discussed problem. According to our findings they do not pose a greater problem.

After evaluating the above-mentioned records we came to a conclusion that heart-transplanted patients do not present any higher risk of postoperative complications. It is necessary to perform a detailed cardiological examination before the operation. These results may be affected by a relatively small group of patients.

A c k n o w l e d g e m e n t

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OPERACE U PACIENTŮ PO TRANSPLANTACI SRDCE - RETROSPEKTIVNÍ STUDIE

S o u h r n

Do souboru bylo zahrnuto celkem 13 pacientů po transplantaci srdce ve věku 50 až 67 let (z toho 9 mužů a 4 ženy), u kterých bylo provedeno 16 operací (5 hernioplastik, 5 klasických cholecystektomií, 2 osteosyntézy, 1 VATS, hemikolektomie, laparotomická revize, hydrokéla).

Z provedených operací bylo 12 (75 %) plánovaných výkonů a 4 (25 %) urgentních. Doba od transplantace k výkonu se pohybovala od 2 měsíců do 9 let. Všechny operace byly prováděny po náležitém interním vyšetření. 15 operací (93,75 %) proběhlo bez komplikací, pouze u jediné (6,25 %) došlo k úmrtí pacientky 2 dny po operaci. Na základě zjištěných skutečností lze konstatovat, že doba od transplantace po operační výkon nemá vliv na případné komplikace.

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