Laparoscopic Splenectomy. Initial Experience.

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Abstract

Introduction: Laparoscopic splenectomy has become the gold standard technique for the treatment of benign splenic pathology. Due to spleen anatomical position, fragility and blood flow, this procedure should be performed by a team trained in laparoscopic surgery.

Objectives: Presentation of the initial experience in laparoscopic splenectomy performed in a closed medical care system by a team trained in advanced laparoscopic surgery.

Setting: General Surgery Service. Policlinico del Docente (General Teaching Hospital).

Design: Retrospective, observational, cross-sectional study.

Population: 6 scheduled laparoscopic splenectomies carried out between August 2010 and June 2012.

Material and Methods: 6 laparoscopic splenectomies were performed between August 2010 and June 2012. The surgical approach was laparoscopy with 3 trocarcs.

Results: In all cases, three access ports were used, and conversion to open surgery was not required. Morcellation of the spleen was carried out in 2 cases and in 4, the umbilical incision was extended to allow for extraction of the piece.

Conclusions: Laparoscopic splenectomy is a safe and effective technique. In our case history, none of our patients required conversion to traditional open surgery and there was no morbidity. This technique must be performed by a team trained in advanced laparoscopic surgery.

Keywords: Laparoscopic Splenectomy.

Received: May 28th 2013. Accepted: August 20th 2013.
Introduction

The first reported laparoscopic splenectomy was carried out by Delaître and Maignien in 1991. It has become the Gold Standard technique for the treatment of benign splenic pathology since it reduces abdominal wall trauma, similarly to what occurs with laparoscopic cholecystectomies; however, due to spleen anatomical position, fragility and high blood flow, this procedure should be carried out by a team trained in advanced laparoscopic surgery.

Objective

Presentation of the initial experience in laparoscopic splenectomy performed in a closed medical care system by a team trained in advanced laparoscopic surgery.

Material and Methods

6 laparoscopic splenectomies were performed between August 2010 and June 2012. Said splenectomies were scheduled and agreed by consensus with the Hematology and Infectious Disease Department.

Spleen size was assessed by ultrasound and/or tomography. In order to supplement the search of accessory spleens, a bone scan was performed. Prophylaxis for capsulated germs was indicated 2 weeks before. The surgical approach was laparoscopy with 3 trocars and, if necessary, conversion to hand-assisted technique.

Technique: The patient is placed in the intermediate right lateral decubitus position. Pneumoperitoneum is carried out and the first umbilical trocar of 10mm is put in place. Then, a 5mm trocar is placed in the epigastric region and a third 12mm trocar is placed on the left flank. The colosplenic ligament is divided, as well as the lower part of the splenorenal ligament and the inferior polar vessels. Once dissected free, arterial branches are clipped and then divided; the same procedure is followed with venous branches. Then, the cephalic part of both the splenorenal and splenophrenic ligaments is divided using a harmonic scalpel. In this way, the released spleen is introduced into a sample protective bag and morcellated before extraction, or the incision is extended to extract it. Finally, an exploration is carried out seeking for accessory spleens.

Results

6 laparoscopic splenectomies were carried out. From the 6 patients, 4 were women and 2 men.

Figure 1: Incidence by gender.

Mean age was 35.6 years (ranging between 6 and 63 years old).

The procedure was indicated due to the following pathologies: 3 cases of idiopathic thrombocytopenic purpura, 1 simple symptomatic splenic cyst, 1 case of systemic lupus erythematosus and 1 case of hereditary spherocytosis.
In all cases, 3 access ports were used and no conversion to open surgery was required. The surgical time was 110 min (range 45-180 min). In 2 cases, the spleen was morcellated and in 4 cases the umbilical incision was extended to extract the piece. One patient showed 2 accessory spleens at the greater omentum. Discharge was indicated 48hs afterwards; 2 patients remained hospitalized so that their underlying pathology could be followed up. Neither intra nor postoperative red cell transfusion was required. At the preoperative stage, one patient required platelet transfusion. No patient showed postsurgical complications. In all cases, spleen size was less than 20cm.
Conclusions

At present, splenectomy indications are limited by the use of monoclonal antibodies, corticoids and immunosuppressants; therefore, surgical indication has decreased. Within 24 months, only 6 patients underwent interventions. Laparoscopic splenectomy has become the gold standard technique for benign pathology of a normal to medium size spleen; this is reflected in the number of patients whose cases were solved through laparoscopic procedure. It is a safe and effective technique. In our case history, none of our patients required conversion to traditional open surgery and there was no morbidity. This technique must be performed by a team trained in advanced laparoscopic surgery.

Literature