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Original Article

Results of the Laparoscopic Approach in Left-Sided Pancreatectomy☆

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ABSTRACT

Introduction: Laparoscopic left-sided pancreatectomy (LLP) is an accepted technique for the treatment of benign and pre-malignant lesions of the left side of the pancreas, but there is still controversy on its use for malignant ones.
Objective: To evaluate our results in LLP as a routine technique for primary lesions of the left pancreas.
Patients and methods: We performed LLP in 15 patients for primary lesions of the pancreas from November 2007 to November 2011. An intra-abdominal drainage was left in all cases, and the recommendations of the International Study Group for Pancreatic Fistula were followed.
Results: The mean age of the patients was 64±13 years. Six radical spleno-pancreatectomies, 3 corporocaudal with preservation of the spleen, and 6 pure distal (4 with preservation of the spleen). There was one conversion. The mean surgical time was 230±69 min. The mean post-operative stay was 8.1±7.6 days. At 90 days, complications were detected in 4 patients; 3 grade II and one grade V according to the modified classification of Clavien. There was one grade B pancreatic fistula. The diagnosis was a malignant neoplasm in 53% of cases. The number of resected lymph nodes in the cases where a radical resection was planned due to cancer was 21.7±11.5, there being negative margins in all cases.
Conclusions: LLP may be considered as a suitable technique for the treatment of primary pancreatic lesions, including malignant ones, provided that it is performed by groups with experience in pancreatic surgery and highly trained in laparoscopic surgery.

Resultados del abordaje laparoscópico en la pancreatectomía izquierda

Palabras clave:
Pancreatectomía distal laparoscópica
Pancreatectomía izquierda

RESUMEN

Introducción: La pancreatectomía izquierda laparoscópica (PIL) es una técnica aceptada para el tratamiento de lesiones benignas y premalignas del páncreas izquierdo, existiendo todavía controversia en su uso para las malignas.

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Objetivo: Evaluar nuestros resultados en la PIL como técnica de rutina para el tratamiento de las lesiones primarias del páncreas izquierdo.
Pacientes y métodos: Desde noviembre de 2007 hasta noviembre de 2011 hemos intervenido 15 pacientes de PIL por lesiones pancreáticas primarias. En todos los casos se dejó un drenaje intraabdominal y se siguieron las recomendaciones de la International Study Group for Pancreatic Fistula.
Resultados: La edad media fue de 64 ± 13 años. Se realizaron 6 espleno-pancreatectomías radicales, 3 córporo-caudales con preservación del bazo y 6 distales puras (4 con preservación del bazo). Hubo una conversión. El tiempo operatorio fue de 230 ± 69 minutos. La estancia media postoperatoria fue de 8,1 ± 7,6 días. A 90 días, según la clasificación modificada de Clavien se detectaron complicaciones en 4 pacientes: 3 grado II y 1 grado V. Hubo una fístula pancreática grado B. En el 53% de los casos el diagnóstico fue de neoplasia maligna. El número de ganglios resecados en los casos que se planificó una resección radical por carcinoma fue de 21,7 ± 11,5, siendo en todos los casos los márgenes negativos.
Conclusiones: La PIL puede considerarse como una técnica adecuada para el tratamiento de las lesiones primarias del páncreas, incluyendo las malignas, siempre que se realice por grupos con experiencia en cirugía pancreática y alta cualificación en cirugía laparoscópica.

Introduction

Laparoscopic distal and subtotal pancreatectomy (left pancreatectomy, LP) is a formally accepted technique for the treatment of left-sided pancreatic pathology, especially cystic, benign or premalignant lesions and neuroendocrine tumours (NET).[1–3] Several groups have shown that the advantages inherent to laparoscopy, previously tested for other surgical techniques, are also applicable in these cases.[3,4] However, there is still controversy on its use for the curative treatment of malignant lesions, especially in invasive ductal carcinoma of the pancreas, for which a pancreatic resection with extended lymphadenectomy and appropriate safety margins is required.[4,5] In addition, the technical difficulty involved in the laparoscopic approach for the pancreas, including distal pancreatectomy, makes LP not be considered currently as the technique of choice in most centres, and is only used for specific selected cases.[3,4,6–8]

The aim of our study is to evaluate *the effectiveness and safety* of LP, by analysing the results of our series, when it is considered as the routine technique for treating primary pancreatic lesions located in the body and tail of the pancreas, regardless of their degree of malignancy.

Patients and Methods

Since November 2007, the laparoscopic approach has been systematically considered for performing subtotal and distal pancreatectomies (LP). LP is considered any resection that requires a glandular section to the left of the portal vein, either in the pancreatic neck, body or tail. In this context subtotal pancreatectomy (STP) is defined as complete resection of the body and tail of the pancreas with parenchymal section at the pancreatic neck, and distal pancreatectomy (DP) when transection is carried out at the body or tail of the pancreas. Pancreatic parenchymal section was performed with an endoscopic linear stapler with staple depth of 2.5 mm (blue load) except in two cases, in which due to difficulty in placing the stapler, a bipolar sealing device was used: one, for a lesion located in the neck, and the other, for a well-circumscribed lesion very close to the splenic hilum. In 5 cases, the pancreatic transection edge was reinforced a hand-sewn continuous suture using 3/0 monofilament. In all cases, a low pressure aspiration drain was left by the transected edge of the pancreatic parenchyma. *Amylase determination was performed from the third day onward only if the drain was productive at that time. It was withdrawn if it was not productive or if amylase determination was negative. When there was a preoperative suspicion of malignant pancreatic neoplasm, a pancreatosplenectomy was scheduled with en bloc standard lymphadenectomy, in accordance with RAMPS technique (radical antegrade modular pancreatosplenectomy)* previously described by Strasberg[9] and by our group using a fully laparoscopic approach.[10] All patients underwent intraoperative anatomopathological analysis of the resected specimen and of its pancreatic and retroperitoneal margins.

We followed the recommendations of the ISGPF (International Study Group for Pancreatic Fistula) for the diagnosis and classification of postoperative pancreatic fistula.[11] We used the modified Clavien classification for pancreatic resection surgery for the diagnosis and grading of postoperative complications,[12] which were recorded at 90 days postoperatively.

Results

Up to November 2011, 22 LPs were performed. The study excluded 7 patients, of which 6 had direct open surgery and one after an exploratory laparoscopy to rule out peritoneal