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Original Article

Outcomes of Pancreatogastrostomy With Gastric Partition After Pylorus-Preserving Pancreaticoduodenectomy With Gastric Partition☆

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ABSTRACT

Introduction: Pylorus-preserving pancreatoduodenectomy with gastric partition (PPPD-GP) seems to be associated to a better postoperative outcome than conventional pancreaticojejunostomy in the setting of a prospective-randomised study. The aim of this study is to further evaluate the surgical outcome in a series of 129 consecutive patients.

Methods: Between 2007 and June 2013, 129 patients with periampullary tumours surgically treated with PPPD-GP were retrospectively analysed. Surgical complications (Clavien–Dindo score), as well as pancreatic and non-pancreas related complications were analysed.

Results: Overall postoperative complication rate was 77%, although 50% of complications were graded I–II by the Clavien–Dindo classification. Incidence of clinically relevant pancreatic fistula was 18%: ISGFP type B: 12%, and type C: 6%. Other pancreas specific complications such as delayed gastric emptying and pospancreatectomy haemorrhage were 27% and 15%, respectively, similar to results published in the literature. Overall perioperative mortality rate was 4.6%.

Conclusion: PPPD-GP results show that it is a technique with an acceptable morbidity, low mortality and pancreatic fistula rate similar to other techniques currently described of pancreaticoenteric reconstruction.

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Resultados de la pancreatogastroanastomosis con bipartición gástrica después de duodenopancreatectomía con preservación pilórica

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RESUMEN

Introducción: La técnica de la reconstrucción pancreática tras duodenopancreatectomía cefálica con conservación del píloro mediante bipartición gástrica (DPC-BG) parece asociarse a una mejor evolución postoperatoria en comparación con la pancreaticoyeyunostomía convencional en el marco de un estudio aleatorizado prospectivo. El objetivo de este estudio es evaluar aún más el resultado quirúrgico en una serie de 129 pacientes consecutivos.

Métodos: Entre 2007 y junio de 2013, se analizaron retrospectivamente un total de 129 pacientes con tumores periampulares tratados quirúrgicamente con DPC-BG. Se analizaron los resultados a partir de las complicaciones precoces quirúrgicas (escala de Clavien-Dindo), así como las complicaciones relacionadas y no relacionadas con el páncreas.

Resultados: La tasa de complicación postoperatoria global fue del 77%, aunque el 50% de las complicaciones se clasificaron I–II en la clasificación Clavien-Dindo. La incidencia de la fístula pancreática clínicamente relevante fue del 18% (tipo ISGFP B: 12%, tipo ISGFP C: 6%). Otras complicaciones específicas del páncreas tales como retraso del vaciamiento gástrico y hemorragia pospancreatectomía fueron del 27 y del 15%, respectivamente, similares a los resultados publicados en la literatura. La tasa de mortalidad perioperatoria global fue del 4,6%.

Conclusión: Los resultados de la DPC-BG muestran que es una técnica segura, con una morbilidad aceptable, baja mortalidad y tasa de fístula pancreática similar a otras técnicas actualmente descritas de reconstrucción pancreaticoentérica.

Introduction

Pancreatic neoplasms have shown a growing prevalence in recent years. In 2011, pancreatic cancer was diagnosed in 8773 patients, and was responsible for 8320 deaths in the United Kingdom, with an overall survival rate after 5 years of 3.7% in 2005–2009.[1] In the US, estimates for newly diagnosed cases and deaths for 2014 were 46,420 and 39,590, respectively.[2]

The surgical treatment of pancreatic neoplasms has traditionally been considered a challenge, mainly due to 2 factors: on the one hand, the survival rate of patients with a pancreatic ductal adenocarcinoma after suitable surgical and cancer treatment is poor, with a survival rate of approximately 20% after 5 years, in most studies. On the other hand, complications after pancreatic surgery are frequent. In all the samples of patients with pancreatic resection, specific complications of the pancreas, such as delayed gastric emptying (DGE), pancreatic haemorrhage or fistula (PF), constitute a major source of morbidity which may ultimately affect the results. With the aim of avoiding or minimising these complications, efforts have been focused on amending this scenario. Since one of the main sources of morbidity is the appearance of PF, various pancreaticoenteric reconstruction techniques have been described. Currently, the use of different types of pancreatic anastomosis used in each centre shows the absence of a consistent and reliable technique. Traditionally, the preferred site of pancreatic anastomosis after a pancreaticoduodenectomy (PD) has been the jejunum (pancreaticojejunal anastomosis [PJA]), but there is a growing trend in recent years towards pancreatico-gastric anastomosis (PGA), due to the publication of several randomised, controlled studies as well as of meta-analysis supporting the superiority of a PGA.

In 2007, we described our pancreatic reconstruction technique with a PGA after a pylorus-preserving PD with gastric partition (PPPD-GP), in the setting of a randomised, controlled trial that showed its superiority compared to a conventional PJA.

In this study, our aim is to describe the outcome for the period between 2007 and 2013 for 129 patients treated with PPPD-GP.

Methods

Patients

This article is a retrospective analysis of a database built prospectively. From 2007 to 2013, 129 patients were treated with PPPD-GP due to pathological findings in the head of the pancreas. Surgical indications for these patients were based on the presence of lesions located to the right of the mesenteric vessels, symptomatic or not, and were confirmed by a multidisciplinary committee. Demographic data of these patients is shown in Table 1.

Surgical Technique

During the time period between 2007 and 2013, surgical interventions were conducted by 5 surgeons (LFC, SSC, MLB, JF, DC), all of them with the same surgical technique