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ORIGINAL ARTICLE

Training minimal invasive approaches in hepatopancreatobilliary fellowship: the current status

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Abstract

Background: There has been an increasing role of advanced minimally invasive procedures in hepato-pancreatobilliary (HPB) surgery. However, there are no set minimum laparoscopic case requirements.

Methods: A 14-question electronic survey was sent to 82 worldwide HPB fellowship programme directors.

Results: Forty-nine per cent ($n = 40$) of the programme directors responded. The programmes were predominantly university based (83%). Programmes had either one (55%) or two fellows (40%) each year. Programmes (35–48%) had average annual volumes of 51–100 hepatic, 51–100 pancreatic and 25–50 biliary cases. For many programmes, <10% of hepatic (48%), pancreatic (40%) and biliary (70%) cases were done laparoscopically. The average annual fellow case volumes for hepatic, pancreatic and biliary surgeries were 25–50 (62%), 25–50 (47%) and <25 (50%), respectively. The average annual number of hepatic, pancreatic and biliary cases done laparoscopically by a fellow was 9, 9 and 4, which constitutes 36%, 36% and 16%, respectively, of the International Hepato-Pancreato-Billiary Association (IHPBA) requirement.

Conclusion: We surmise that the low average number of surgeries performed by minimally-invasive techniques by HPB fellows is not sufficient in today's practice. Should there be an increase in the minimal number of hepatic, pancreatic and complex biliary cases to 50, 50, and 25, with at least 50% of these performed laparoscopically?

Keywords

HPB fellowship, MIS training, minimum requirements, laparoscopy

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Introduction

Sub-specialization has changed the way that general surgery is practiced. Hepatobiliary and pancreatic surgery is maturing as a subspecialty.[1] There has been an increasing role of advanced minimal invasive procedures in hepatopancreatobilliary (HPB) surgery such as laparoscopic, robotic and natural orifice surgery (NOTES). Hence HPB fellowship in today's world should provide expertise in both minimally invasive and open HPB surgery. According to the International Hepato-Pancreato-Biliary Association (IHPBA), the minimum number of cases required to graduate from HPB fellowship is 25 cases of each hepatic, pancreatic and complex biliary procedures. However, there are no set minimum laparoscopic case requirements. We conducted a survey to look at the current state of minimal invasive techniques training in the HPB fellowship programmes worldwide.

This paper was presented at the International Hepato-Pancreato-Biliary Association Meeting, 18–22 April 2010, Buenos Aires, Argentina.

Methods

A 14-question electronic survey was created using http://www.surveymonkey.com. This was sent to 82 worldwide HPB fellowship programme directors (PDs). This included 30 programmes from the United States and Canada, and 52 international programmes mentioned in the fellowship register on the IHPBA website. We looked into the number of fellows each year, duration

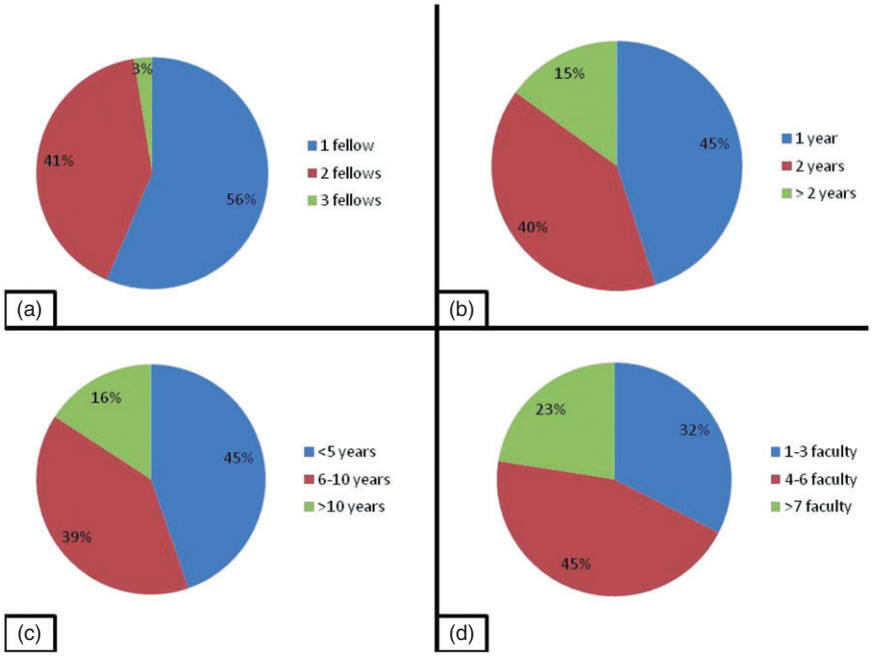

Figure 1 (a) Number of fellows each year. (b) Duration of fellowship. (c) Years programmes were functional. (d) Number of faculty in each programme

of fellowship, HPB trained faculty, annual case volume, fellow case volumes, percentages of minimally invasive procedures and the use of robotic surgery and NOTES.

Results

Forty-nine per cent ($n = 40$) of the programme directors responded. The programmes were predominantly university based (University/Community, 33 : 7). Most of the programmes had either one (55%) or two fellows (40%) each year (Fig. 1a). The duration of fellowship was 1 year (45%), 2 years (40%) and >2 years (15%) (Fig. 1b). Number of faculties with formal HPB training in most of the programmes was 4–6 (45%) (Fig. 1c). The majority of the programmes were functional for less than 5 years (45%, $n = 17$), this was followed by programmes functional for 6–10 years (39%, $n = 15$) and only 16% ($n = 6$) were functional for >10 years (Fig. 1d).

The average annual case volumes for most of the programmes were: hepatic 51–100 (35%), pancreatic 51–100 (48%) and complex biliary cases 25–50 (45%) (Fig. 2a). In the majority of the programmes only less than 10% of hepatic, pancreatic and complex biliary cases were done laparoscopically (48%, 40% and 70%, respectively) (Fig. 2b). The majority of the average annual fellow case volume for hepatic, pancreatic and complex biliary surgeries were 25–50 (62%), 25–50 (47%) and <25 (50%), respectively (Fig. 3a). For the majority of the programmes, the fellows performed less than five cases of hepatic, pancreatic and complex biliary surgeries laparoscopically (Fig. 3b). The average annual number of hepatic, pancreatic and complex biliary cases done laparoscopically by a fellow was 9, 9 and 4, respectively. This constitutes 36%, 36% and 16% of the minimum 25 cases in each category as required per IHPBA.

Only less than half of the programmes were performing robotic (40%), single port (40%) and natural orifice (23%) surgeries. Fifty-five per cent ($n = 22$) of these programmes had a transplant service and 48% ($n = 19$) had bariatric services attached to their programmes.

In only 28% of the programmes, the fellows were involved in basic science research.

Discussion

HPB diseases involve cases of high complexity and generally low volume, with associated high patient morbidity and mortality.[2] HPB surgeries have always been a challenge for general surgeons. They require comprehensive knowledge, meticulous surgical technique and a good institutional support system. In 2008, a consensus conference on the international position of laparoscopic liver surgery concluded that laparoscopic liver surgery is a safe and effective approach in the management of surgical liver disease in the hands of trained surgeons with experience in hepatobiliary and laparoscopic surgery. National and international societies, as well as governing boards, should become involved in the goal of establishing training standards and credentialing, to ensure consistent standards and clinical outcome.[3]

There are merely 82 programmes worldwide that follow IHPBA training recommendations. Advanced training standards are determined by the Educational Committee of the IHPBA. Train-