

THE USE OF INTRAOPERATIVE ULTRASOUND IN ABDOMINAL SURGERY

Vasile SÂRBU¹, Guido TORZILLI², Florin BOTEĂ¹

Abstract. *Introduction* Intraoperative ultrasound (IOUS), introduced in abdominal surgery by Makuuchi is an important imaging tool in the operating room with standardized applications for diagnosis and ultrasound guided procedures during surgery. *Material and Method* The studied group consisted of 449 patients operated between January 2002 - January 2009 for hepato - biliary, splenic and renal pathology, of which 93 were treated and prospectively studied in the 2nd Clinic of Surgery, Clinical Emergency Hospital (Constanta), and 356 patients with liver pathology were treated, and retrospectively and prospectively studied in the Department of Liver Surgery, Humanitas Clinical Institute (Milan). *Results.* In Constanta study group, IOUS was performed in 77 cases with liver pathology (82,8%) (48 cases with hydatid cyst, 9 with abscesses, 12 with metastasis, 7 with hemangiomas and 1 with hepatocellular carcinoma), 9 cases with biliary disease (9,7%) (8 cases with lithiasis, one with cholangiocarcinoma), and 6 cases with renal lithiasis (6,4%); there were no major complications and mortality. In the Milan group, IOUS with and without contrast detected a total number of 1068 lesions (average 3, 2; median 2; range 1 - 48). The postoperative morbidity rate was 23,2% (83 cases); major complications were recorded in 6,4% (23 cases) and minor complications in 16,8% cases (60 cases). The reintervention rate was of 1,4% (5 cases). The postoperative mortality rate was 1,1% (4 cases). *Conclusions.* IOUS is a method of diagnosis and guidance of surgical procedures, which has to be part of the modern abdominal surgery arsenal in generally, and of hepatic surgery in particular, being optimally exploited when performed by the surgeon.

Keywords: intraoperative ultrasound, abdominal surgery, diagnosis.

1. Introduction

Intraoperative ultrasound (IOUS), introduced in abdominal surgery by Makuuchi [1] is an important imaging tool for the operative room with standardized applications for diagnosis and also with ultrasound guiding procedures for surgical techniques. That is the reason for which IOUS has a significant importance in the management and treatment of abdominal pathology [2]. IOUS is used nowadays in completing some extracorporeal diagnostic methods (such as CT, RMN), existing significant proofs that IOUS, with and without contrast, is superior to those, with higher sensitivity and specificity in detecting certain lesions [3]. Nowadays,

¹ 2nd Clinic of Surgery-Clinical Emergency Hospital, Constanta; Ovidius University of Constanta

² Liver surgery department - Humanitas Rozzano Clinical Research Institute; Milan University of Medicine

Corresponding author: Botea Florian, Clinical Emergency Hospital of Constanta, B-dul Tomis, nr 145, Constanta, e-mail:boteaflorian@yahoo.com