

# Endoscopic retrograde cholangiopancreatography in elderly patients: A reliable alternative in sepsis

Ebru Tarikci Kilic,<sup>1</sup> Levent Doganay,<sup>2</sup> Kamil Ozdil<sup>2</sup>

<sup>1</sup>Department of Anaesthesiology, Health Sciences University, Umraniye Training and Research Hospital, Istanbul, Turkey

<sup>2</sup>Department of Gastroenterology, Health Sciences University, Umraniye Training and Research Hospital, Istanbul, Turkey

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To the Editor,

With the increase in the average life span, endoscopic examinations and endoscopic retrograde cholangiopancreatography (ERCP) are now more frequently performed in the elderly. Since the incidence of biliary tract and pancreatic cancers increases with age, and because surgical interventions demonstrate a very high morbidity and mortality in this age group, ERCP is an important, effective, and reliable method of diagnosis and treatment [1]. Complications related to the procedure and to anesthesia increase in direct proportion to age. This is a description of our experience with an 85-year-old patient who underwent ERCP as a result of sepsis developing secondary to cholangitis.

An 85-year-old male patient who presented at the emergency service with abdominal and epigastric pain, nausea, and a high fever was admitted with the diagnosis of cholangitis. The most important laboratory test results were as follows: aspartate aminotransferase: 219 U/L, alkaline phosphatase: 560 U/L, gamma-glutamyl transpeptidase: 1200 U/L, white blood cell count: 30000 K/mm<sup>3</sup>, C-reactive protein level: 100.8 mg/L, and total bilirubin value: 2.5 mg/dL. Hepatobiliary sonography

revealed a 25-mm dilation of the proximal part of the choledochus. Given the appearance of sepsis, ERCP was planned for the patient.

The preoperative evaluation revealed the presence of comorbidities: type II diabetes, hypertension, peripheral vascular disease, and dilated cardiomyopathy, and an echocardiographic examination demonstrated advanced mitral insufficiency and moderate tricuspid insufficiency. The cardiac ejection fraction recorded was 30%. Based on the available findings, the patient was classified as American Society of Anesthesiologists physical status class IV. A beta-blocker (metoprolol, 5 mg intravenously [IV]) was administered preoperatively. His vital signs, peripheral oxygen saturation and end-tidal carbon dioxide pressure were monitored, and a 5-lead electrocardiogram was obtained. Before the procedure, his blood pressure was 100/70 mmHg and his pulse rate was 120 bpm. The patient, who weighed 78 kg, was given sedoanalgesia with midazolam (1mg IV) and ketamine (30 mg IV). Oxygen was delivered through the nasal route at a rate of 6 L per minute. Sedoanalgesia was maintained with a mixture of ketamine and propofol (0.75 mg/kg/hr, 1/1), which was titrated and infused throughout the procedure. The choledochus was cannulated using a sphincterotome, and

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Correspondence: Dr. Ebru TARIKCI KILIC. Umraniye Egitim ve Arastirma Hastanesi, Saglik Bilimleri Universitesi, Anesteziyoloji Anabilim Dalı, Istanbul, Turkey.

Tel: +90 216 632 18 18 e-mail: ebru.tarkc@yahoo.com

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following lithotripsy, the calculi were extracted. The procedure was completed within 40 minutes without the occurrence of apnea, hemodynamic instability, or any other complication. Although preoperative blood cultures did not reveal any bacterial growth, IV antibiotherapy and fluid therapy were administered for 5 days in the hospital, after which the patient was discharged.

ERCP has been used with increasing frequency in the geriatric population in the diagnosis of pancreatobiliary diseases and in the treatment of common biliary duct obstruction secondary to malignancy or a stone. In one study, the success rate of ERCP was 88% in patients aged >80 years, and 86% in patients aged <80 years, and the corresponding complication rates were 6.8% and 5.1%, respectively [2]. The mortality and complication rates of biliary surgery have been reported to be 9.5% and 62%, respectively [2]. Complications have been observed during the early postoperative period in 1.6% of patients older than 90 years [2, 3]. In a retrospective single-center study conducted by Sobani et al. [4] performed with 1389 patients, 74 patients were  $\geq 90$  years of age, and the success rate of ERCP was 89.2%. The authors empha-

sized the safety of this procedure, even in this age group, provided that the necessary preparation is performed.

Sepsis secondary to cholangitis is an important cause of morbidity and mortality in older patients. ERCP performed with the appropriate indications, the proper preparation, and with good postprocedural follow-up has become a life-saving treatment alternative in this age group.

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