

## “Steinstrasse” in the Biliary Tract

Safra Yolunda Steinstrasse (Taş Yolu)

Edson Guzmán-Calderón<sup>1,2,3</sup>



<sup>1</sup>Gastroenterology Unit, Nacional Edgardo Rebagliati Martins Hospital, Lima, Peru

<sup>2</sup>Medical School of Universidad Peruana de Ciencias Aplicadas (UPC)

<sup>3</sup>Gastroenterology Unit, Clinica Internacional, Lima, Peru

Received: April 14, 2017

Accepted: April 17, 2017

Correspondence to: Edson Guzmán-Calderón

E-mail: edson\_guzman@hotmail.com

DOI 10.5152/eurasianjmed.2017.17098

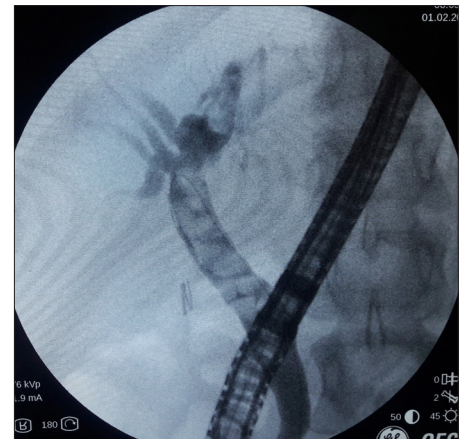
©Copyright 2017 by the Atatürk University School of Medicine - Available online at [www.eurasianjmed.com](http://www.eurasianjmed.com)

The presence of a stone or stones within the common bile duct (CBD) is known as choledocholithiasis. Choledocholithiasis is reported in 3%-22% of patients undergoing cholecystectomies [1]. A confirmatory diagnosis of choledocholithiasis is made using advanced imaging, including magnetic resonance cholangiopancreatography and endoscopic retrograde cholangiopancreatography (ERCP). Treatment varies locally; however, ERCP with sphincterotomy is most commonly employed with a high degree of success. Difficult anatomy and difficult stone burden require advanced surgical, endoscopic, and percutaneous techniques to extract or expel biliary stones.

Choledocholithiasis is classified as primary or secondary based on the site of stone origin. In primary choledocholithiasis, stones are formed directly within the biliary tree, whereas in secondary choledocholithiasis, stones are originated and expelled from the gallbladder. Primary choledocholithiasis generally involves brown stones and is rare in Western populations. The stone composition in secondary choledocholithiasis parallels that in cholelithiasis, with cholesterol as the most common component [2].

“Steinstrasse” is German word for “stone street”, a term coined in the 1980s by Egbert Schmiedt and Christian Chaussy, the pioneers of extracorporeal shock wave lithotripsy (ESWL). The term describes a complication of ESWL for urinary tract calculi in which stone fragments block the ureter by forming a “stone street”. A similar stone street can sometimes be seen in the biliary tree during ERCP.

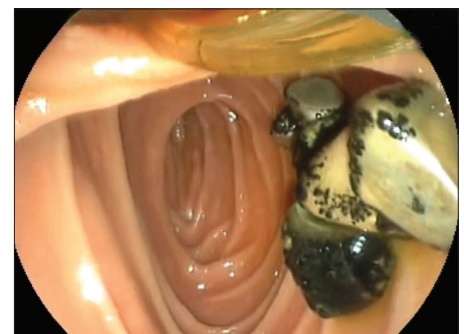
Here we report a 34-year-old female who presented with jaundice and abdominal pain.



**Figure 1.** “Steinstrasse” in the biliary tract.



**Figure 2.** Stones in the duodenum before extraction.



**Figure 3.** Stones in the duodenum before extraction.

An ultrasound showed stones in the gallbladder and bile duct. An ERCP was performed, which revealed a bulging papilla; cannulation was easy and quick. Approximately 15 stones, including one from the intrahepatic duct, were extracted in a single session (Figure 1-3). The patient recovered satisfactorily.

**Ethics Committee Approval:** Ethic committee approval was received for this study from the Ethics Committee of Edgardo Rebagliati Martins Hospital (Decision Date: 15.01.2017/Decision No: 0132-17).

**Informed Consent:** Written informed consent was obtained from patient who participated in this study.

**Peer-review:** Externally peer-reviewed.

**Conflict of Interest:** No conflict of interest was declared by the author.

**Financial Disclosure:** The author declared that this study has received no financial support.

## References

1. Williams EJ, Green J, Beckingham I, et al. Guidelines on the management of common bile duct stones (CBDS). Gut 2008; 57: 1004-21. [\[CrossRef\]](#)
2. European Association for the Study of the Liver (EASL). EASL Clinical Practice Guidelines on the prevention, diagnosis and treatment of gallstones. J Hepatol 2016; 65: 146-81. [\[CrossRef\]](#)