White (or rather clear) bile related to papillary stone impaction

As a typical misnomer, “white bile” refers to a translucent, “clear” aspect of the bile fluid largely devoid of bilirubin and bile acids, and has traditionally been linked to malignant biliary obstruction [1]. By contrast, its occurrence in short-term, albeit high-grade biliary obstruction related to papillary stone impaction has not been specifically reported.

A 59-year-old woman underwent urgent endoscopic retrograde cholangiopancreatography. She had undergone laparoscopic cholecystectomy due to acute cholecystitis 3 days earlier. At the time, transabdominal ultrasound indicated marked wall thickening of a stone-containing gallbladder, while the common bile duct (CBD) was not dilated and liver enzymes were in the normal range. After an initial uncomplicated postoperative course, the patient experienced significant recurrent right abdominal quadrant pain with marked increases in cholestasis and inflammation parameters (bilirubin 3.9 mg/dL, alanine aminotransferase 546 U/L, gamma glutamyl transferase 799 U/L), and CBD width increased to 13 mm. Duodenoscopy indicated papillary stone impaction with exuberant edema (► **Fig. 1 a**). A primary needle-knife excision (NKE) of the impacted stone under marked pressure was performed with minor putrid secretions initially visi-

► **Video 1** White (or rather clear) bile related to papillary stone impaction.

ble (► **Fig. 1 b**, ► **Video 1**). Following this, copious amounts of clear, colorless bile fluid emptied abundantly into the duodenum (► **Fig. 1 c**). Residual bile duct stones and/or cystic duct leakage were ruled out on cholangiogram.

Available data concerning putative pathomechanisms causing bile fluid to become lighter in color attribute a decisive role to an anatomic and/or functional lack of a gallbladder in communication, potentially decompressing the biliary system and concentrating bile fluids (“black

bile”). In line with the presented scenario, excessively high intrabiliary pressure levels in conjunction with continuous mucus secretion by biliary epithelium may, in addition, reverse bile flow into lymphatics and/or the liver [2]. Finally, albeit unproven, “white” or rather “clear bile” is considered particularly prone to infectious complications due to reduced antimicrobial capacities [3].

Endoscopy_UCTN_Code_CCL_1AZ_2AD

► **Fig. 1** Endoscopy images. **a** Duodenoscopy illustrated papillary stone impaction with marked edema. **b** Primary needle-knife excision of the stone without prior biliary cannulation. **c** Abundant drainage of translucent, clear bile fluid following stone passage.

Competing interests

None

The author

Vincent Zimmer^{1,2}

- 1 Department of Medicine, Marienhausklinik
St. Josef Kohlhof, Neunkirchen, Germany
- 2 Department of Medicine II, Saarland
University Medical Center, Saarland
University, Homburg, Germany

Corresponding author

Vincent Zimmer, MD

Department of Medicine, Marienhausklinik
St. Josef Kohlhof, Klinikweg 1-5, 66539
Neunkirchen, Germany
Fax: +49-6821-3632624
vincent.zimmer@gmx.de

References

- [1] Yarze JC. White bile: a “clear” misnomer.
Gastrointest Endosc 2002; 56: 782–783
- [2] Hashmonai M, Kam I, Schramek A. The
etiology of “white bile” in the biliary tree.
J Surg Res 1984; 37: 479–486
- [3] Gremida A, Rustagi T. White bile in malign-
ant biliary obstruction: a poor prognostic
marker. Clin Endosc 2018; 51: 109–110

Bibliography

DOI <https://doi.org/10.1055/a-1046-1549>
Published online: 2.12.2019
Endoscopy 2020; 52: E160–E161
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>

Endoscopy E-Videos is a free access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online.

This section has its own submission website at
<https://mc.manuscriptcentral.com/e-videos>