Can Mucosectomy be Always Performed in Complicated Cases of Choledochal Cysts

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Abstract

Introduction: If the surgical dissection is too risky in choledochal cyst, mucosectomy is defined as a beneficial technical method in the literature. To discuss in this manner, we present this case.

Case: 9 years old girl was referred to our clinic due to multipl stones in the gallbladder. History and physical examination could not be performed effectively because of her cerebral palsy. Ultrasonography showed choledochal cyst containing multipl stones. MR cholangiography showed multipl stones in the dilated choledochus. During the dissection, the cyst appeared extremely adherent to the adjacent structures and cyst wall was so thin and transparent. The mucosectomy was not thought to be a good option to carry out for this case. For this reason, cyst was totally excised.

Discussion: The preferred method for choledochal cyst is total cyst excision and Roux-en Y hepaticoenterostomy. When the dissection is unsafe to perform, posterior wall mucosectomy may be performed. However, like in our case, when the diagnosis is delayed, the cyst wall may become too thin and may be attached very strongly to the adjacent structures. So, mucosectomy is impossible and full layer total cyst excision remains as the only alternative in spite of its high risks.

Keywords: Mucosectomy, Choledoch, Cyst

1. Introduction

Choledochal cysts are rare congenital anomalies of the biliary tree [1]. Since every piece of unresected remains of the cystic wall is associated with malignancies [2], the method of choice for the treatment of choledochal cysts in children is total resection and Roux-en-Y (RY) hepaticoenterostomy to prevent carcinogenesis of biliary ducts [3]. If there is inflammation in the cystic wall, if the cyst is excessively inflated and if it is adhered to surrounding tissue excessively, total resection may not be possible. Since surgical resection of the posterior wall may cause excessive risk in such cases, excision of the cyst mucosa (mucosectomy), a technique which facilitates the operation and renders excision more successful, has been described [4,5].

We will present a case of choledochal cyst found to have no specific findings, but difficulty in orientation due to cerebral palsy on history and physical examination and treated with full thickness total resection.

2. Case

A nine-year-old girl was referred to our center for multiple calculi in her gallbladder detected on abdominal ultrasonography (USG) and computed tomography (CT). On history, she frequently presented with restlessness to several health centers; however, it turned out that effective examination could not be performed and that history could not be taken because she had cerebral palsy since she was two years old.

In our emergency department, physical examination could not be carried out properly. Direct abdominal x-ray taken when the patient was standing showed two air-fluid levels on the right upper quadrant. Therefore, abdominal USG was repeated and then magnetic resonance (MR) cholangiography was performed. USG and MR cholangiography demonstrated a choledochal cyst containing multiple calculi (Figure 1). The patient underwent operation. On intraoperative USG and cholangiography, the cyst was about 7-8 cm in length and 5 cm in width and connected to the pancreas via 1.5 cm-
common bile duct and intrahepatic bile ducts were di-
lated (Figure 2). While we were removing the cyst, the
cyst wall was quite thin and so much adhered to the sur-
rounding tissue that surgical dissection was impossible
(Figure 3). We thought that dissection of the cyst wall is
riskier in such cases and decided to perform mucosec-
tomy. However, the cyst wall was too thin to allow mu-
cosectomy and cystic fluid became apparent. Due to all
these complexities, we had to perform a total removal of
the gallbladder and the cyst: we carried out total cyst
excision and Roux-en Y choledochojunostomy. On day
14 after the operation, no complications developed and
the patient was discharged. Pathological examination
revealed that the cyst wall was 1 mm in thickness and its
mucosa was occasionally shed (Figure 4).

3. Discussion

Many treatment alternatives have been described for
choledochal cysts and the alternative of choice at present
is total excision of the cyst and extrahepatic bile ducts
and Roux-en Y choledochojunostomy [6]. Although
such complications as recurrent cholangitis, intrahepatic
bile duct stones, pancreatitis, intrahepatic calculi and
malignancy may appear [3], no complications occurred
during one year follow-up of this patient.

If there is excessive adhesion between a cyst and sur-
rounding tissues at the time of total excision of the cyst
and bile ducts, dissection can be very difficult. Actually,
if the diagnosis is delayed, there may be an increase in
adhesions. Cyst mucosectomy is recommended for the
treatment of such cases in order to decrease surgical risk
and complications. It is claimed that this method pre-
vents postoperative pancreatitis and/or stone formation
due to residual cyst [5].

However, as in the case presented here, when the cyst
wall became too thin and its mucosa was shed, muco-
sectomy can be technically impossible. Therefore, full
thickness total excision can be the only alternative left despite high surgical risk.

4. References


