

Case Report

An unusual complication during papillotomy: Breaking of papillotome cutting wire and its subsequent penetration of papilla

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Abstract

Thousands of papillotomies are done world wide in day today practice by Gastroenterologists. Papillotomy is a procedure which is fascinating by its results but frightening by its complications. There are some usual, unusual and unknown complications. The usual ones are Pancreatitis, hemorrhage, perforation and biliary sepsis. The unusual complications include subcutaneous emphysema, pneumothorax, pneumomediastinum, pneumoperitoneum, migration of stents, systemic air embolism, portobiliary fistula, placement of ENBD in portal vein, basket impaction and breakage of basket etc. We report a forty year old female with an unknown complication; the breakage of papillotome cutting wire and its subsequent penetration of papilla.

Key words

Cannula cutting wire fracture, sphincterotomy complications, reusable ERCP accessories

Introduction

Endoscopic retrograde cholangiopancreatography (ERCP) and sphincterotomy are widely practiced useful treatment modalities of biliary and pancreatic diseases. However, the diagnostic utility of ERCP is diminishing very fast because of the complications associated with it. The potential major complications include pancreatitis, hemorrhage, perforation and biliary sepsis. Other complications are rare. Fracture of Cannula cut wire, and its subsequent penetration of papilla is not reported. We describe a 40-year-old female patient who developed such complication.

Case Report

A 40-year-old female presented to our hospital with recurrent biliary colic 6 months after a laparoscopic cholecystectomy. She

was evaluated and found to have a single stone in Common Bile Duct (CBD) for which she was subjected to ERCP and stone extraction. A Microvasive papillotome (Ultratome XL, Triple lumen sphincter REF catalogue no. 3590 × UPN product no. M00535900-5 mm, short nose 20 mm cut wire), manufactured 7 months back, which was being used third time was used for papillotomy. Papillotomy was tried after wire guided the cannulation. Papilla was normal, and cannulation was easy. But as soon as papillotome was positioned normally and current passed, the wire of the papillotome broke [Figure 1] and the distal end of the wire penetrated the Papilla [Figure 2]. No apparent excessive traction was used during the passage of current. Papillotome was slowly withdrawn and fortunately successfully disengaged by simple withdrawing only, except for minor ooze, possibly because the point of penetration was very close to papillary opening. To avoid the damage to scope channel, the scope along with papillotome was taken out of the patient. We felt that if the piece of wire had got impacted in papilla, we would have done papillotomy in the direction of impacted wire and taken the broken piece with the help of a forcep. We were also ready with a hemoclip and Argon Plasma Coagulation (APC) coagulation if severe bleeding would occur. It could have been more problematic if point of penetration was more proximal. Papillotome was exchanged, and procedure completed successfully.

Access this article online

Website: www.jdeonline.in	Quick Response Code 
DOI: 10.4103/0976-5042.150665	

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Figure 1: Broken Cutting wire penetrating the papilla



Figure 2: Tip of broken wire coming out through injured papilla

Discussion

Since the inception of ERCP in 1968, its technique, understanding of its complications^[1] and technology related to it has markedly evolved.^[2] ERCP is now being done with therapeutic intention only. ERCP remains among one of the invasive endoscopic procedures with significant complications, some of them potentially dangerous. The more common complications include pancreatitis, hemorrhage, perforation, cholangitis, and cholecystitis. The rare complications include subcutaneous emphysema;^[3] pneumothorax, pneumomediastinum, pneumoperitoneum;^[4] migration of stents;^[5] systemic air embolism;^[6] portobiliary fistula;^[7] placement of ENBD in portal vein;^[8] basket impaction and breakage of basket.^[9] However, breakage of papillotome cutting wire and its subsequent papillary injury is not reported to our knowledge. This may become a more common complication in future in view of frequent reuse of disposable accessories. ERCP accessories especially retrieval baskets, guidewires and papillotomes are frequently used at many centers including our center. Many endoscopy centers, realizing the cost disadvantages of disposable accessories have tried to further reduce costs by reprocessing and reusing single-use devices.^[10] This practice grew after some studies suggested that reuse of some single-use devices could be done safely and cost effectively, leading to the emergence of an industry of third-party pre-processor.^[11-14] Primary problem concerning reuse of these accessories is sterility and proper performance subsequent to reprocessing.^[11,15] We have been using these instruments after proper sterilization from last 3 years without any major problems. We use them on an average 3–4 times before they are discarded, but every instrument is sterilized before second use. We had no problems with papillotomes, baskets, guidewires or needle knife papillotomes before this event. What is the exact cause of breakage of wire is difficult to answer. Possible explanations can be excessive use, faulty voltage, unnoticed technical problems like excessive traction or a manufacture problem.

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How to cite this article: Shah NA, Kadla SA, Khan BA, Ali I, Bindroo MA. An unusual complication during papillotomy: Breaking of papillotome cutting wire and its subsequent penetration of papilla. *J Dig Endosc* 2014;5:157-8.

Source of Support: Nil, **Conflict of Interest:** None declared.