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DEN Video Article

Percutaneous endobiliary radiofrequency ablation for tumor ingrowth causing metal stent obstruction

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BRIEF EXPLANATION

CHEMOTHERAPY IS A first-line treatment option for unresectable biliary cancers; however, it has shown suboptimal results.[1] Thus, combination with local therapies has been attempted to improve patients' survival and quality of life. Radiofrequency ablation (RFA) is a local ablative therapy using heat that leads to coagulative necrosis and local tumor destruction.[2,3] We describe a case of percutaneous endobiliary RFA for recurring bile duct cancer after surgery causing metal stent obstruction.

A 60-year-old woman presented with recurrent obstructive cholangitis. She had a history of bile duct resection with hepaticojejunostomy for common bile duct cancer 10 years prior. Cholangiocarcinoma occurred in the hilum three years ago. Percutaneous bilateral metal stents were inserted, and systemic chemotherapy containing gemcitabine and cisplatin was performed at another hospital. After one year, she suffered from recurrent cholangitis and underwent percutaneous transhepatic biliary drainage (PTBD). A cholangiogram showed stent obstruction due to tumor ingrowth (Fig. 1a), and she was transferred to our hospital. Cholangioscopy showed an intraductal papillary tumor causing stent obstruction from the hepaticojejunostomy site to the proximal left intrahepatic duct (Fig. 2a). After a multidisciplinary discussion, we performed the percutaneous endobiliary RFA (Video S1). After cholangioscopic evaluation (CHF-V; Olympus Medical System Co. Ltd., Tokyo, Japan) of disease extent, an RF catheter (ELRA, Taewoong Medical, South Korea) was introduced over the guidewire. We used 7-Fr., 11-mm RF catheter and RFA was applied at a setting of 7W, 80°C for 2 minutes each time under fluoroscopic guidance using the VIVA Combo generator (Taewoong Medical, South Korea). The post-RFA cholangioscopy showed ablated tumors (Fig. 2b), and cholangiogram showed improvement of the stricture (Fig. 1b). After RFA, the patient remained asymptomatic without stent malfunction during a 5-month follow-up period. Our results suggest that endobiliary RFA can be applied for resolving stent obstruction due to tumor ingrowth in bile duct cancer.

Authors declare no conflicts of interest for this article.

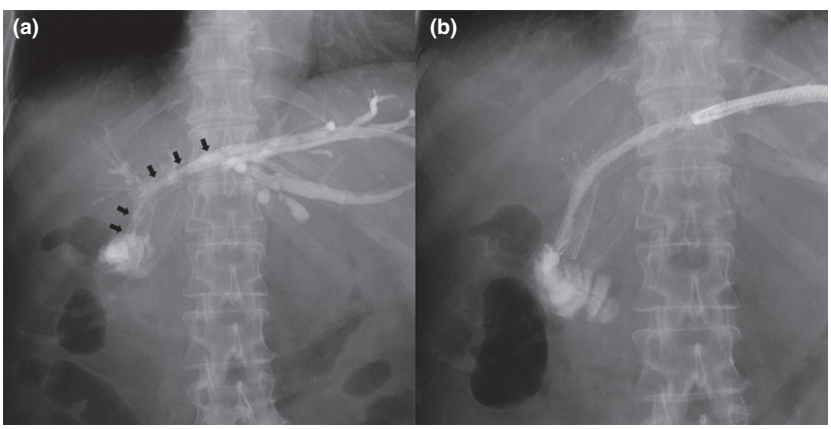

Figure 1 Cholangiographic images. (a) Pre-RFA cholangiogram shows the stent occlusion (arrow); (b) Post-RFA cholangiogram shows improved stricture.

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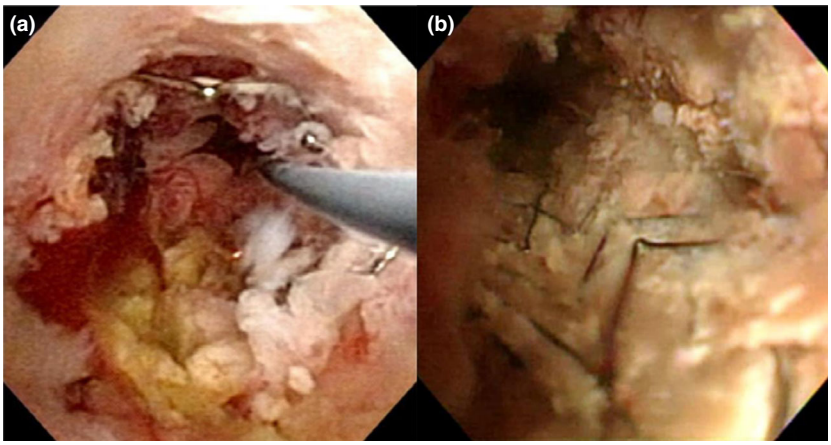

Figure 2 Cholangioscopic images. (a) Pre-RFA cholangioscopy shows stent obstruction by intraductal papillary tumor; (b) Post-RFA cholangioscopy shows ablated tumors.

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SUPPORTING INFORMATION

ADDITIONAL SUPPORTING INFORMATION may be found in the online version of this article at the publisher's web site.

Video S1 Cholangioscopy shows the intraductal papillary tumor with metal stent occlusion and RFA was applied. Post-RFA cholangioscopy shows ablated tumors and cholangiogram shows improvement of the stent obstruction.