

Hilar Malignancy: A New Approach For Double Metallic Wallstent Placement by Using Combined Percutaneous & Endoscopic Techniques

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Özet: HILER MALİGNİTE: KOMBİNE PERKÜTAN VE ENDOSKOPIK TEKNİKLER KULLANILARAK İKİLİ METALİK "WALLSTENT" YERLEŞTİRİLMESİ.

Hiler kalanjiokarsinoması olan 3 hastada aynı seansa perkütan transhepatik ve endoskopik yaklaşımlar kullanılarak ikili metalik "wallstent" yerleştirildi. İşleme ait komplikasyon görülmedi. Bütün hastalarda bilirubin düzeyleri normal sınırlara yaklaştı. Takip süreleri 1-9 aydır.

Anahtar Kelimeler: Malign biliyer hiler obstrüksiyon, metalik stent, endoprotez.

Although it has been shown that a 25% drainage of the liver lessens the symptoms of cholestasis (1), the risk of the development of cholangitis in undrained lobes or segments of the liver is high and worsens the prognosis in patients with type 2 or type 3 cholangiocarcinoma, for this reason studies on the application of two or more stents for the management of hilar cholangiocarcinoma disease are present (2,3).

MATERIALS and METHODS

We prefer self-expandible stents (Wallstent, Medinvent SA, Lausanne, Switzerland) rather than conventional ones for inoperable cases in Radiology and Gastroenterology Departments of our hospital since 1990. Within this period,

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Summary: Double wallstent placement in the same session has been carried out by both percutaneous transhepatic and endoscopical approaches for 3 patients with hilar cholangiocarcinoma disease. No complications related to the procedure was observed. In all patients bilirubin levels fell down to near normal. Follow up period was 1-9 months.

Key words: Malign biliary hilar obstruction, metallic stent, endoprosthesis.

30 patients were applied wallstents for 26 malignant and 4 benign diseases. Of 26 malignant cases, percutaneous transhepatic approach was used in 19 and endoscopical approach was used in 4 cases for the placement of a single wallstent were placed. Double wallstent placement in the same session has been carried out by both percutaneous transhepatic and endoscopical approaches for 3 patients with hilar cholangiocarcinoma disease.

Obstructed area was detected by ERCP (Endoscopic Retrograde Cholangio Pancreatography) and PTC (Percutaneous Transhepatic Cholangiography). After performing the diagnostic ERCP to inspect which main hepatic duct to enter endoscopically. In the main duct which was hard to approach endoscopically, stenosed segment was crossed by entering the hepatic duct by percutaneous transhepatic

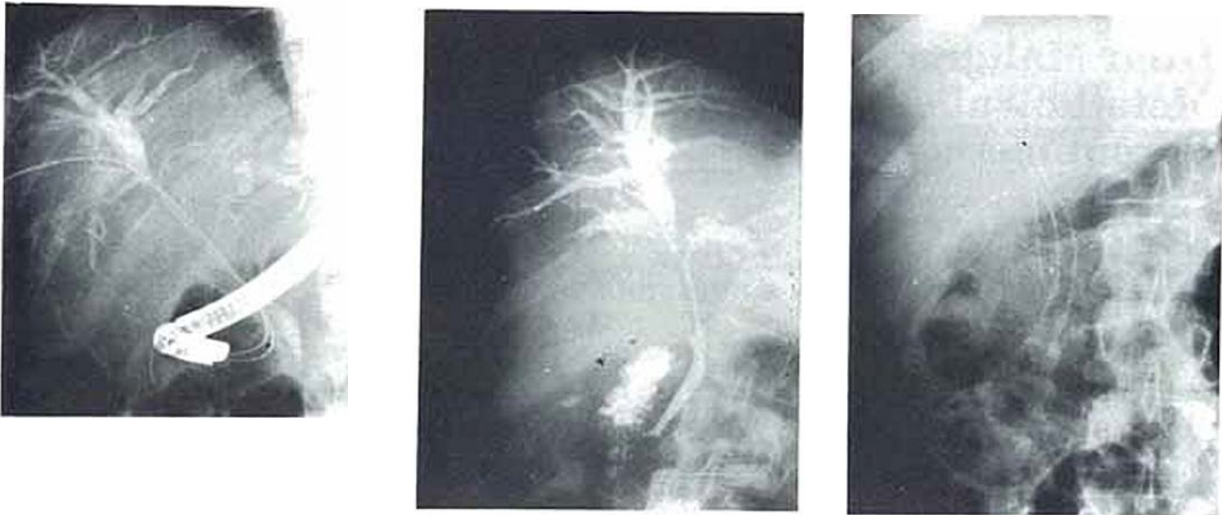


FIGURE 1-A Hilar biliary malignancy
 1-B Wallstents placed endoscopically to the left side and transhepatically to the right side.
 1-C Control graphy

way and a catheter was placed. Balloon dilatation was performed in heavily stenosed segments.

A Back Up guide wire was passed inside the catheter and advanced to the distal of choledochus and an 8F sheath was placed over this guide wire. Having patient in a left lateral decubitus position endoscope was advanced again and wallstent mounted on a 9F catheter was placed into the hepatic duct inspected before. After the removal of the endoscope patient was asked to take a dorsal decubitus position and another wallstent mounted on a 7F catheter was placed into the stenosed segment via the 8F sheath. The sheath was withdrawn while the wallstent was being deployed and it was totally removed after complete deployment of the wallstent, A 5F drainage catheter was placed into one of the main hepatic ducts for control purposes. In the 1st, 2nd, and 3rd days after the operation, the stents were visualized to check if they are open and then the drainage catheter was removed.

CASE I

Aged 36, male H.G. had been performed a cho-

langiojejunostomy using right intrahepatic bile ducts to overcome a tumoral obstruction of the biliary hilus. However jaundice appeared 6 month later and advanced stenoses were observed at common and left main hepatic ducts in the ERCP performed. A nasobiliary drainage catheter and following this a conventional endoprosthesis was placed into the left main hepatic duct. But after the observation that the bilirubin levels were not falling down, the conventional endoprosthesis was removed endoscopically and in the same session double wall stent placement was performed using percutaneous transhepatic approach for the right and endoscopic approach for the left main hepatic duct on 27.5.1991 (Figure 1 a b c d). Bilirubin levels were observed to fall down two weeks later. Total bilirubin level was 20 mg/dl, direct bilirubin level was 13.6 mg/dl, indirect bilirubin level was 6.4 mg/dl and alkaline phasphatase level was 625 U/L before the procedure. These levels become 13.5mg/dl, 8.4 mg/dl, 5.1mg/dl and 501 U/l respectively two months later. 9 Months follow up revealed nearly normal bilirubin levels (1.5 mg/dl, total bilirubin 0.6 mg/dl direct bilirubin, 0.9 mg/dl indirect bilirubin, 96 U/l alkaline phosphatase)



FIGURE 2-A: Conventional stents placed into the extrahepatic biliary way.



2-B: Application balloon dilatation in heavily stenosed segments.



2-C.D:
Wallstents placed
endoscopically
to the right side and
transhepatically
to the left side.



CASE II

Aged 30, female P.U. had been under taken an operation because of a type 2-3 hilar cholangiocarcinoma at 16.03.1989 but the lesion had been detected to be inoperable and a transtumoral T-Tube had been left in place. She was hospitalized again because of a rise in bilirubin levels on 29.06.1989 the proximal and of the T-tube was observed to be obstructed in T-cholangiography, a guide wire was passed into right intrahepatic ducts via the T-tube and the external drainage was gained using a catheter placed over this guide wire. In the same session, using anterior approach, an external drainage catheter was placed into left intrahepatic ducts. After balloon dilation of the heavily obstructed left and right main ducts, both were placed conventional endoprosthesis using endoscopic and combined percutaneous transhepatic and endoscopic ways respectively. In the 28 months time, up to 16.10.1991, various changings in or additions to those prostheses were performed (Fig 2a) but at that time all the conventional catheters were removed after the repeated signs of obstruction and after the balloon dilation of the obstructed segments (Figure 2 b) two wall-

stents were placed by percutaneous transhepatic approach to the left side and endoscopically to the right side (Figure 2 C. D.) in the same session at 23.10.1991 Preprocedural total bilirubin level was 22.3 mg/dl, direct bilirubin level was 13.5 mg/dl, indirect bilirubin level was 8.8 mg/dl and alkaline phasphatase level was 1622U/l. After a mounth the levels were found to fall down to 6.4mg/dl, 3.7 mg/dl 2.7mg/dl and 1020U/l. After two mounths the levels were found to fall down to 2.4 mg/dl 1.4 mg/dl, 1.0 mg/dl and 720 U/l respectively and general situation of the patient improved.

CASE III

Aged 55, Male A.Ş. underwent ERCP because of cholangiocarcinoma. Left intrahepatic biliary ducts were found dilated and a nasobiliary drainage catheter was placed into this area. Then a PTC was performed and an internal external drainage catheter was placed into the right intrahepatic biliary ducts which were also dilated. 15 days later double wallstent placement was performed into both main ducts using percutaneous way for the left one. After 5 days, the bilirubin levels of the patient were observed to fall down. Total bilirubin level was 35.2 mg/dl, direct bilirubin level was 19.3 mg/dl, indirect bilirubin level was 15.9 mg/dl, and alkaline phosphatase level was 262 U/l before the procedure, after a month the levels were being found as 6.7 mg/dl, 4.2 mg/dl,

2.5 mg/dl and 195 U/l respectively.

DISCUSSION

Recently selfexpandible metallic stent applications for inoperable biliary obstructions gained popularity (4-8). In obstructions due to hilar cholangiocarcinomas both left and right biliary drainage must be obtained because of the high risk of cholangitis in the undrained lobe which worsens the prognosis. Various authors placed double wallstents using different percutaneous techniques (2,3) in those patients. We think that double biliary wallstent placement using endoscopic and percutaneous transhepatic approaches in hilar tumors where it is possible to reach the bile ducts endoscopically is a different and valuable method because it is less invasive.

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