Percutaneous Transhepatic Drainage: 
Technique, Results, and Special Applications

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1 Introduction

Extrahepatic biliary surgery, including surgery of the papilla and gallbladder, has made great advances in recent decades. All the same, long-term success rates in the treatment of malignant obstructive jaundice are little better than 50 years ago, so that even today biliary tract and gallbladder carcinoma continues to have one of the worst prognoses amongst malignant tumours of the digestive tract. The reasons for this lie partly in the uncharacteristic symptomatology of these malignancies, which allows an early diagnosis in only a few cases, and partly in the high grade of the malignancy.

As the main symptoms are atypical upper abdominal pain and digestive complaints, most patients do not present for diagnostic assessment until jaundice has appeared. As a rule, this occurs late in biliary tract and gallbladder carcinomas, when extensive tumour or metastatic growth has already taken place. With carcinoma of the papilla, jaundice occurs earlier but is often intermittent, which delays the diagnosis. Recently developed methods of investigation such as ultrasonography and computer tomography (CT) have not led to earlier diagnosis of these malignancies. As long as no means of early diagnosis has been developed no improvement can be expected in the results of surgery.

With the introduction of percutaneous transhepatic biliary drainage it became possible for radiologists to make a better diagnostic assessment of obstructive jaundice and also to relieve biliary obstruction on a temporary or long-term basis.

This volume is concerned with the current status of percutaneous transhepatic cholangiography (PTC) and percutaneous transhepatic drainage (PTD) in the diagnosis and treatment of malignant and benign obstructive jaundice and the options for therapy that have arisen from these techniques. In particular, the influence of PTD on current surgical procedures and the development of a small-volume, high-dose form of radiotherapy based on an afterloading technique are described. In addition, the effect of intrahepatic biliary congestion on the portal circulation is demonstrated and discussed.