

Digestive Surgery

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Diagnosis and Surgical Therapy of Dependent and Pedunculated Hepatic Tumours

Key Words

Colorectal carcinoma
Dependent/pedunculated hepatic tumour
Encapsulated carcinoma
Focal nodular hyperplasia
Hepatocellular carcinoma

Abstract

Hepatic resection for large solitary tumours but particularly for hepatocellular cancer (HCC) produces the best palliation, improves the prognosis, and offers the only chance of cure. Nevertheless, resectional surgery can be difficult due to the large size of many of these lesions, and underlying cirrhosis often makes it essential to preserve the maximum amount of parenchyma. Pedunculated or dependent hepatic tumours represent a rare subgroup of hepatic tumours: a favourable group for resection in most cases because of their anatomical configuration and their morphological characteristic to be often encapsulated. The aim of this study was to review our experience of 20 patients referred from October 1986 to April 1995 with pedunculated or dependent hepatic tumours considered suitable for resection. This group consisted of 14 patients with HCC, 3 with colorectal metastases, and 3 patients with focal nodular hyperplasias. Fifteen of these patients underwent laparotomy, and 13 tumours were resectable. There was no operative or 30-day mortality. From the HCC-operated group 2 patients remain alive for 73 and 60 months, respectively, without tumour recurrence. In our series we found a possible relationship between survival and the different histomorphological findings in the transition zone between the tumour and the liver tissue. Pedunculated lesions other than HCC have not previously been described but were found in 3 patients with colorectal metastases and in 3 patients with focal nodular hyperplasias. It is important that this favourable anatomical configuration is recognized when assessing patients with large hepatic tumoral lesions because it offers a great chance for tumoural resection.

Introduction

Hepatic resection for large solitary tumours of the liver but particularly for hepatocellular cancer (HCC) produces the best palliation, improves survival, and offers the only chance of a possible cure [1, 2]. There is a wide range of surgical options, including formal, segmental, subsegmen-

tal, and atypical hepatic resections. The choice of these various approaches is often limited not only by the gross distribution of the malignant hepatic process, but by the underlying hepatic parenchymal damage and the consequently impaired reserve capacity of the liver. Cirrhosis is the most important of these pathologies and especially in the Far East is a major consideration in over 75% of the

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patients presenting with HCC. In these cases, the poor hepatic reserve mandates that, in order to avoid an unacceptably high mortality, only limited or even local resections be undertaken [3]. These limited resections can occasionally give excellent results. This is particularly true in patients with dependent or pedunculated hepatic tumours which due to their anatomical configuration allow limited resection combined with total tumour removal and minimal loss of functional reserve. In our study we classified our tumours as pedunculated if they showed a real pedicle with pedicle vessels and as dependent if over 50% of their surface growth extrahepatically. In patients with HCC these lesions are reported to be extremely rare with an occurrence rate of 0.3–2.4% in Japan [4], being even more rare in the United States and Europe. However, their ability to grow to a considerable size whilst attached to the liver by a relatively narrow pedicle makes them most favourable for resection [4, 5]. As a consequence, it has become increasingly important to recognize these tumours as a separate group to avoid a nihilistic approach to their treatment in the presence of underlying liver disease such as liver cirrhosis. While the gross anatomical feature may be assessed with little effort, the exact nature of these lesions can be surprisingly difficult to determine preoperatively. To identify hepatic lesions that are relatively easy to resect even in the presence of diffuse parenchymal liver disease, we prospectively evaluated all hepatic resections performed in our unit from October 1986 to April 1995.

Patients and Methods

From October 1986 to April 1995, 214 patients were referred with hepatic tumours considered suitable for resection. Twenty of these tumours proved to be dependent (15 cases) or pedunculated (5 cases). Our preoperative classification based on imaging investigations and our preoperative assessment of resectability has been published earlier [6]. All patients were fully assessed clinically and biochemically. The morphological classification was determined by ultrasound (fig. 1a), computed tomography (fig. 1b), or magnetic resonance imaging, with additional selective angiography (fig. 1c). Clinical features, histomorphological findings, choice of operative procedure

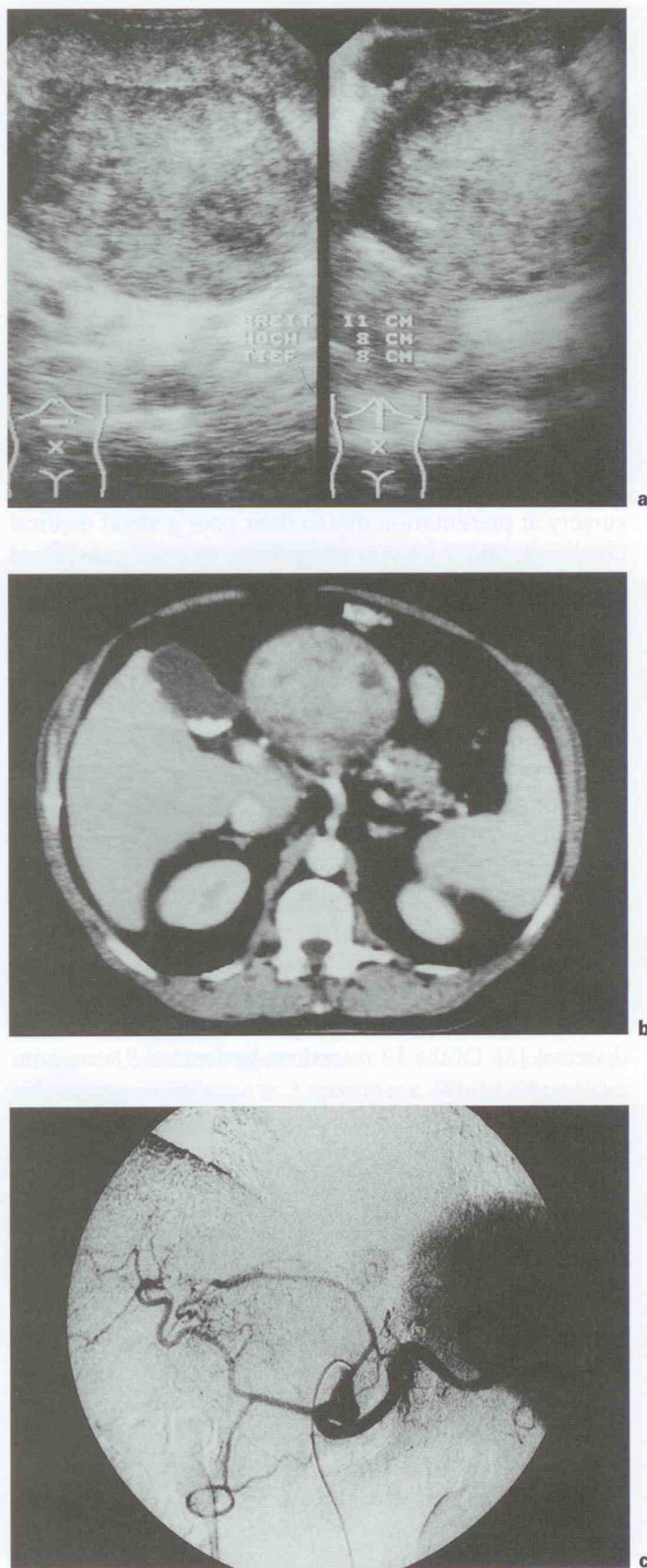


Fig. 1. **a** Ultrasonogram of a 70-year-old patient with a hepatocellular cancer and liver cirrhosis, showing a dependent lesion on the free edge of segment 3. **b** CT scan of the same patient, showing a spherical lesion with no apparent connection to the liver in a caudal CT cut. **c** Typical angiographic findings in a pedunculated hepatocellular carcinoma (same patient).

