39.1. Introduction

It is estimated that benign liver tumours affect about 20% of the general population. A great variety of benign liver tumours of different embryological origin can be encountered. The most common are listed in table 39.1.

Despite modern diagnostic techniques many benign liver tumours continue to represent an often difficult diagnostic dilemma, mainly because of overlapping radiographic and sometimes histological features [1]. Hemangiomas and cystic lesions are the exceptions to the rule of diagnostic uncertainty since they manifest very specific radiographic features. More than one third of benign liver tumours is estimated to require surgical exploration because of difficulty in achieving an accurate diagnosis. It must be stressed that benign liver disease could cause diagnostic confusion with both primary hepatocellular carcinoma or metastatic liver disease [2].

Diagnostic strategy: The diagnostic tools available when dealing with benign liver disease are listed in table 39.2. Complete history and a thorough physical examination accompanied by basic line blood tests, liver function tests and hepatic serology are imperative as well as tumour markers namely AFP, CEA and CA 19-9.

Ultrasound is very helpful in distinguishing between solid and cystic lesions but further radiographic assessment with CT is usually necessary before establishing diagnosis. MRI could add further information in some cases. Positron emission tomography (PET) does not seem to be of much help in the differential diagnosis of benign liver lesions. Scanning with tagged red blood cells could sometimes be helpful in otherwise undiagnosed hemangiomas.

Liver biopsy should be the final step in the process of establishing diagnosis. All types of closed or open biopsies are used as well as laparoscopic needle biopsies. As stated by Crawford and recently by Gibbs et al., liver biopsies although extremely helpful might still pose diagnostic dilemmas because of overlapping cytological features between different types of benign liver disease [1, 2].

We shall further discuss some benign liver diseases of special diagnostic or therapeutic interest.
39.2. Haemangiomas

These are the most common benign liver tumors. The majority of lesions arises in the left lobe and is almost always of the cavernous type. Hemangiomas are about five times more common in females and this has been attributed to hormonal reasons. No malignant transformation has been documented. Fever or pain have been reported as the most common symptoms of liver hemangiomas but with lesions less than 4 cm in diameter symptomatology is almost always absent.

CT usually reveals typical peripheral nodular enhancement which when present establishes diagnosis. MRI helps in diagnosing small lesions of fewer than 2 cm in diameter [1].

Patients who manifest symptoms or have a potential hazard of rupture should be considered as candidates for surgery. It must be stated that spontaneous rupture is not frequently reported in literature and usually occurs in large lesions located laterally or in the undersurface of the liver (fig. 39.1, 39.2, 39.3) [1].

Segmentectomy, lobectomy or enucleation are the procedures of choice. Preoperative radiotherapy has also been recommended for the reduction of tumor size.

Excellent results for laparoscopic resections of hepatic hemangiomas as well as other benign liver lesions have recently been reported [3].

39.3. Cystadenoma

Is an uncommon, slow-growing tumor and is considered as a premalignant lesion [4]. Malignant transformation to cystadenocarcinoma is not uncommon, the pathogenesis of which is unknown. A congenital origin from an abnormal intrahepatic bile duct or from misplaced germ cells is possible.

Usually it presents as a large multiloculated cystic tumor [5]. The lesions are located predominantly in the right lobe of the liver, but a third of them are found in the left lobe. It occurs predominantly in female patients between 30 and 50 years of age. It accounts for less than 5% of cystic neoplasm of the liver [6].

39.3.1. Symptoms

They mostly include chronic abdominal pain, abdomi-