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ACHIEVING A PATHOLOGICAL DIAGNOSIS IN BILIARY TRACT CANCER

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Introduction Diagnosing BTC is challenging because of a lack of reliable tumour markers and radiological similarities with benign hepatobiliary disease. Current guidelines advise confirmatory histology and/or cytology should be sought for the diagnosis of biliary tract cancer (BTC) (Khan *et al*, *Gut* 2002;**51**(Suppl VI)). However, tissue sampling for pathological diagnosis is hampered by tumour site and morphology limiting access to diagnostic tissue, with success rates of only 60–70% (Connor S *et al*, 2005;**9**:476; Witzigmann *et al*, 2006;**244**:230).

Methods All patients (n=256) with a final clinical diagnosis of BTC (229 cholangiocarcinoma, 27 gallbladder cancer) between January 2003 and September 2010 were included (135M, 121F; mean age 70 years, range 23–107 years). All cytology and tissue biopsy data, including number and technique, for each patient were recorded.

Results 59/256 patients (23%) were referred with a tissue diagnosis. Of the 197/256 patients (77%) without a prior tissue diagnosis, 196 had attempted tissue sampling (median 1 procedure, range 1–6) at our hospital. Out of a total of 341 tissue samples, 127 were taken for biliary cytology and 54 for other cytology (pleural and ascitic fluid n=38; endoscopic ultrasound-guided fine needle aspiration (FNA) n=15; bile n=1), of which 43/127 (34%) and 11/54 (20%), respectively, were positive for cancer. 124 percutaneous and 36 endobiliary biopsies were taken, of which 70% and 44% respectively, were positive. 45 (13%) samples were reported as suspicious for malignancy and a further 15 (4%) had suboptimal specimens

unsuitable for pathological diagnosis; all were classified negative for malignancy. Overall, 161/197 (82%) had a pathological confirmation of cancer at our hospital, giving a total positivity rate of 220/256 (86%). A clinical diagnosis of BTC, based on multidisciplinary review and evidence of disease progression, was made in the remaining 36 (14%) patients.

Conclusion A pathological diagnosis of BTC can be achieved in 86% of patients, exceeding previous best published data. The sensitivity of biliary cytology in routine clinical practice is low, but a pathological diagnosis can be obtained with a combination of other endoscopic and percutaneous approaches, allowing alternative diagnoses to be excluded and appropriate treatment given.

Competing interests None.