

Hepatobiliary malignancy surveillance strategies in primary sclerosing cholangitis associate with reduced mortality

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Background and Aims:

Patients with primary sclerosing cholangitis (PSC) are at increased risk for hepatobiliary malignancies, especially cholangiocarcinoma. Although many recommend surveillance for malignancy in PSC, different strategies are used by various centers and countries. We aimed to evaluate different surveillance strategies and their effectiveness in PSC with the hypothesis that surveillance imaging improves survival.

Method:

We queried centers about surveillance practices and retrospectively collected imaging surveillance data for hepatobiliary cancer in 2,975 patients with PSC from 28 centers within the International PSC Study Group (IPSCSG). Surveillance strategies were grouped in i) non-surveillance (no imaging in asymptomatic patients), ii) magnetic resonance imaging (MRI) and/or ultrasound (US) surveillance (regular imaging regardless of symptoms/labs) and iii) surveillance including endoscopic retrograde cholangiopancreatography (ERCP)-based (imaging and/or ERCP regardless of symptoms/labs). The primary endpoint was all-cause mortality. Cox-proportional hazard regression models were used to estimate hazard ratios (HRs).

Results:

65.6% (1953/2975) of patients were male, mean age (SD) at diagnosis of PSC was 35.6 (14.2) years, with concomitant IBD in 71.5% (2127/2973). Hepatobiliary malignancy was found in 175 (5.9 %) patients at 7.9 years of follow-up (Figure). Surveillance strategies differed significantly between centers. Of patients undergoing surveillance, 83% were subjected to MRI/MRCP, 49% to US and 28% to ERCP. Deaths were more frequent in the non-surveillance group 23.4% (82/350) than in the surveillance group 8.3% (218/2625). Mortality rate (95% CI) per 1000 person-years was 23.1 (18.1-28.1) in the non-surveillance group (n=350), 12.5 (10.6-14.5) in imaging surveillance with MRI and/or US (n=1897) and 8.4 (6.3-10.5) in surveillance that included ERCP (n=728). The risk of dying was reduced in patients undergoing any type of surveillance (HR 0.53; 95% CI: 0.41-0.68) and the reduced risk remained after adjusting for sex, age and start year of follow-up (HR 0.61; 95% CI: 0.47-0.80).

Conclusion:

A broad variety of surveillance strategies across centers are used. Regular surveillance for hepatobiliary malignancy in patients with PSC is associated with improved survival.

Figure:

