THE INCIDIENCE OF CHOLANGIOCARCINOMA AMONG PRIMARY SCLEROSING CHOLANGITIS PATIENTS IS LOWER THAN PREVIOUSLY REPORTED

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Background

- Primary sclerosing cholangitis (PSC) is a chronic inflammatory disease involving the bile ducts with an increased risk of cancer
- The relative risk (RR) of CCA in PSC has been reported as high as 1,560

Objectives

- To assess the utility of current screening practice in PSC patients for CCA
- To estimate the relative risk of CCA in PSC patients

Data & Methods

Source of the data: Electronic medical records of patients at Baylor St. Luke's Medical Center from 1998 to 2021

Participants: Screened 178 patients with diagnosis of PSC, 109 patient met inclusion criteria

Exclusion criteria:

- <1 year of follow up
- Established care with Baylor post transplant

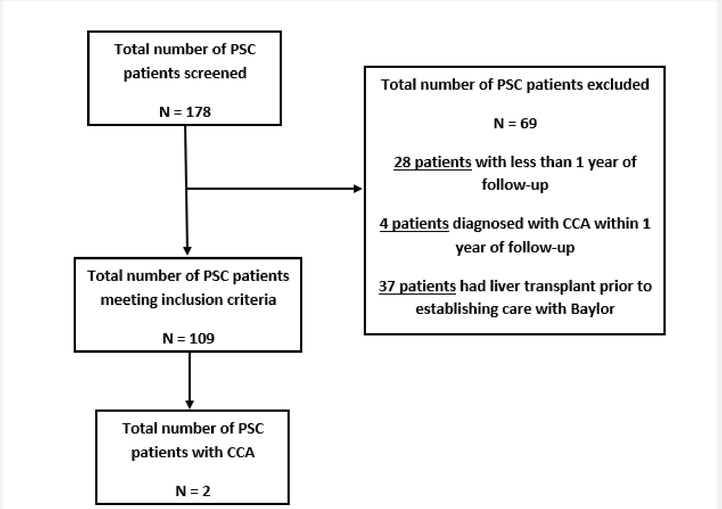
Variables:

- **Sociodemographic variables**
  - Age, gender, race
- **Date of PSC diagnosis**
- **Date of CCA diagnosis**
- **Duration of follow up**
- **Comorbid conditions**
  - Inflammatory bowel disease (IBD)
  - Diabetes mellitus (DM)
  - Cirrhosis
- **Social history**
  - Alcohol use
  - Tobacco use
- **Highest lifetime carbohydrate antigen (CA) 19-9 levels**
- **Date of death and cause of death**

Statistical analysis: A person-years analysis was conducted to compare the incidence rates of CCA in our sample to the general population. Cancer data on the general population from 1998 to 2018 was collected from the Surveillance, Epidemiology, and End Results (SEER) Program. Survival analysis with logrank test was used to assess for possible risk factors for the development of CCA.

Results

Figure 1: Flow diagram of patients included in the study



- **Final sample:** 109 patients
- 532 person-years of follow up: mean follow up 4.9 years
- Routing screening with MRCP at 6-12 month intervals
- 2 patients developed CCA after 1 year
  - **Annual incidence rate** : 0.38% (95% confidence interval [CI]= 0.04%-1.4%).
- **Annual incidence** in SEER registry: 1.6 per 100,000 person years
- **Relative risk** of CCA in PSC population: 234.9 (95% CI = 26.4-848.2)
- **CA 19-9 levels**
  - Without CCA: 24 U/mL (median)
  - With CCA (2 patients): 3,060 and 21,197 U/mL
- Both patients w/ CCA passed away within 1 year of cancer diagnosis

Table 2: Characteristics of PSC cohort with and without CCA

Variable		No CCA	CCA
	n	107	2
Age (median [IQR])		48.00 [33.00, 64.50]	55.00 [51.50, 58.50]
Age at PSC diagnosis (median [IQR])		37.00 [24.00, 54.50]	41.50 [34.75, 48.25]
Sex (%)	Male	64 (59.8)	1 (50.0)
	Female	43 (40.2)	1 (50.0)
Race (%)	White	72 (67.3)	1 (50.0)
	Black	25 (23.4)	1 (50.0)
	Other	10 (9.3)	0 (0.0)
IBD (%)	No	41 (38.3)	1 (50.0)
	Yes	65 (60.7)	1 (50.0)
	Unknown	1 (0.9)	0 (0.0)
Cirrhosis (%)	No	35 (33.3)	2 (100.0)
	Yes	70 (66.7)	0 (0.0)
Diabetes mellitus (%)	No	94 (87.9)	2 (100.0)
	Yes	13 (12.1)	0 (0.0)
Alcohol use (%)	Never	57 (53.3)	2 (100.0)
	Previous but quit	33 (30.8)	0 (0.0)
	Current user	17 (15.9)	0 (0.0)
Tobacco use (%)	Never	91 (85.0)	2 (100.0)
	Previous but quit	12 (11.2)	0 (0.0)
	Current user	4 (3.7)	0 (0.0)

Conclusions

- Risk of CCA among PSC patient is higher than general population, but lower than previously reported
- Routine surveillance failed to detect CCA
- CCA patients passed away within 1 year of cancer diagnosis
- Current surveillance practice with imaging and CA 19-9 levels may not help diagnose CCA or improve mortality