

Effect of Substance Abuse on Cholangiocarcinoma Outcomes and Screening in a Large Urban Safety-Net Hospital

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Introduction

- Patients with substance use disorders are at an increased risk of viral hepatitis, alcohol-related liver disease and, developing cholangiocarcinoma (CCA).
- Patients with substance abuse are often less compliant with healthcare screening strategies
- Aim is to evaluate the association between substance abuse disorder with CCA screening and outcomes.

Methods

- We performed a manual chart review of all patients diagnosed with CCA from 2010 to 2019 at a major safety-net hospital, in Cleveland, Ohio.
- Patients with CCA were divided into two cohorts based on the presence or absence of a history of substance abuse disorder.
- Statistical analyses were performed using SPSS version 26.0 (SPSS, Inc., Chicago, Illinois).
- Qualitative and quantitative differences between groups were analyzed by Chi-squared or Fisher's exact tests for categorical variables and t-test for continuous variables.

Results

Table 1: Baseline characteristics, screening adequacy, and disease outcome in patients with cholangiocarcinoma (CCA) and substance abuse disorder compared to those without.

	CCA Total (n=46)	Substance Abuse (n=11)	No substance abuse (n=35)	P-value
Age (mean +/- SD)	64.4 +/- 11.1	60.9 +/- 5.4	65.5 +/- 12.2	0.0278
Gender				
Male	22 (47.8%)	8 (72.7%)	14 (40.0%)	0.0485
Female	24 (52.2%)	3 (27.7%)	21 (60.0%)	
Race				
African Americans	14 (30.4%)	2 (18.2%)	12 (34.3%)	0.2064
White	25 (54.3%)	7 (63.6%)	18 (51.4%)	
Asian	1 (2.2%)	0 (0%)	1 (2.9%)	
Ethnicity				
Hispanic	5 (10.9%)	2 (18.2%)	3 (8.6%)	0.2626
Non-Hispanic	41 (89.1%)	9 (81.8%)	32 (91.4%)	
Insurance				
Medicaid	14 (30.4%)	4 (36.4%)	10 (28.6%)	0.8376
Medicare	15 (32.6%)	4 (36.4%)	11 (31.4%)	
Financial Assistance	1 (2.2%)	0 (0%)	1 (2.9%)	
Private	9 (19.6%)	1 (9.1%)	8 (22.9%)	
No insurance	7 (15.2%)	2 (18.2%)	5 (14.3%)	
Liver disease				
HCV	11 (23.9%)	6 (54.5%)	5 (14.3%)	0.3049
Alcohol	7 (15.2%)	5 (45.5%)	2 (5.7%)	
NASH	3 (6.5%)	0 (0%)	3 (8.6%)	
HCV treatment				
HCV treated	1 (9.1%)	1 (16.7%)	0 (0%)	0.5455
HCV not treated	10 (90.9%)	5 (83.3%)	5 (100%)	

Table 2: Screening adequacy and disease outcome in CCA patients with and without substance abuse.

	CCA Total (n=46)	Substance Abuse (n=11)	No substance abuse (n=35)	P-value
Screening (cross-sectional imaging or US) interval prior to CCA diagnosis				
< 6 months	31 (67.4%)	9 (81.8%)	22 (62.9%)	0.1587
>= 6 months	15 (32.6%)	2 (18.2%)	13 (37.1%)	
Seen by Gastroenterology				
Yes	19 (41.3%)	7 (63.6%)	12 (34.3%)	0.0663
No	27 (58.7%)	4 (36.4%)	23 (73.7%)	
Dead?				
Yes	27 (58.7%)	8 (72.7%)	19 (54.3%)	0.2492
No	10 (21.7%)	2 (18.2%)	7 (20.0%)	
Disease metastasis				
Yes	32 (69.6%)	7 (63.6%)	25 (71.4%)	0.2172
No	12 (26.1%)	4 (36.4%)	8 (22.9%)	
MELD at dx (mean,SD)	10.9, 9.1	11.8, 5.3	10.4, 10.5	0.8377
Treatment decision at tumor board				
Therapeutic ¹	14 (30.4%)	1 (9.1%)	13 (37.1%)	0.0976
Palliative ²	28 (82.3%)	8 (72.7%)	20 (57.1%)	

¹Therapeutic treatment options include resection, transplantation, ablation, or TACE.

²Palliative treatment options include chemotherapy and hospice.

Conclusion

- Patients with substance abuse were diagnosed with CCA at a significantly younger age.
- cirrhotic patients with substance abuse may benefit from earlier referral to specialist care with hopes of more adherence to screening exams.
- Our findings suggest there are worse outcomes in those with substance abuse, as they had higher deaths in follow up and higher likelihood of referral to palliative care upon diagnosis.
- Overall, this study emphasizes the need for more multidisciplinary linkage to care for this vulnerable patient population.