A Higher Prevalence of Colorectal Adenomatous Polyps in Patients with Liver Cirrhosis Compared with Non-cirrhotics

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Introduction & Objectives

- Colorectal cancer (CRC) is the third most common cancer in the United States and worldwide
- Precancerous lesions mostly arise as adenomatous colon polyps
- Recent studies suggested that nonalcoholic fatty liver diseases was associated with an increased risk for colorectal adenomas
- There is paucity of data in literature on the true prevalence of colorectal polyps in patients with liver cirrhosis
- Screening colonoscopy protocols for patients with liver cirrhosis are the same as for general population

Aim of the study

Our study aimed at determining the impact of liver cirrhosis on the risk of colorectal polyps and whether the risk is influenced by gender and grade of cirrhosis

Methods

Study Population

- Over 6 months at Baylor College of Medicine and under the screening guideline for colon cancer, total of 212 patients underwent colonoscopy for screening (N=199) or due to rectal bleeding (N=13), among all 193 patents (93.4%) had adequate colonoscopy preparation
- Pathological or radiological evidence of cirrhosis was determined for all patients
- Polyp assessment and types of polyps were determined in each patient during colonoscopy
- IRB was obtained from BCM to examine study objectives
- Clinical/epidemiological features of participants were documented at baseline and all data were retrieved from medical records

Statistical Methods

- STATA (V13) was sued for statistical analyses
- Descriptive statistics was performed
- The associations between cirrhosis and CRP were assessed by multivariate logistic regression analyses
- Odds ratio (OR) and 95% confidence interval (CI) was estimated after adjustment for confounding effects of epidemiological and clinical factors

Results

Table-1

Patients' characteristics/comorbidities in presence and absence of polyps

Variable	No Polyps N=97 (%)	Polyps N=115 (%)	P value
Age			.1
Mean (± SD)	58.3 (13.6)	60.4 (8.6)	
Sex			.3
Male	48 (49.5)	63 (54.8)	
Female	49 (50.5)	52 (45.2)	
Race			.7
White	78 (80.4)	87 (75.7)	
Non-white	19 (19.6)	28 (24.3)	
Smoking			.9
No	67 (69.1)	73 (63.5)	
Yes	30 (30.9)	42 (36.5)	
Alcohol use			.9
No	61 (62.9)	75 (65.2)	
Yes	36 (36.1)	40 (34.8)	
Diabetes			.02
No	74 (76.3)	72 (62.6)	
Yes	23 (23.7)	43 (37.4)	
Hypertension			.2
No	49 (50.5)	49 (42.6)	
Yes	48 (49.5)	66 (57.4)	
NASH			.02
No	91 (93.8)	97 (84.3)	
Yes	6 (6.2)	18 (15.7)	
Renal disease			.5
No	82 (84.5)	96 (83.5)	
Yes	15 (7.1)	19 (9)	
Hyperlipidemia			.3
No	71 (73.2)	89 (77.4)	
Yes	26 (26.8)	26 (22.6)	
HX cancer			.5
No	90 (92.8)	106 (92.2)	
Yes	7 (7.2)	9 (7.8)	
Ischemic HD			.2
No	89 (91.8)	101 (87.8)	
Yes	8 (8.2)	14 (12.2)	
HXColonSurgy			.06
No	43 (44.3)	38 (33)	
Yes	54 (55.7)	77 (67)	

Figure 1

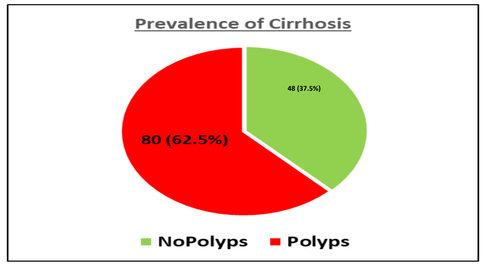

Figure 2

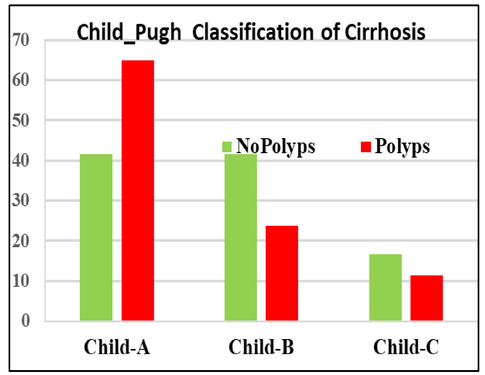

Figure 3

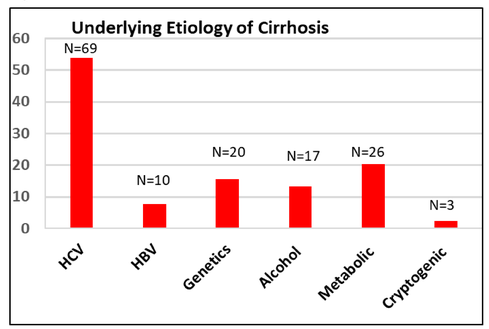

Figure 4

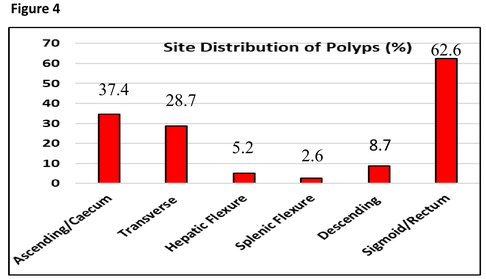

Table-2

Multi-variate logistic regression analysis for the association between cirrhosis and colonic polyps

Cirrhosis	AOR*	95% CI	P
All	2.6	1.4-4.7	**.003**
Women	3.3	1.3-8.1	**.003**
Men	1.7	.7-4.1	.2

*** AOR (Adjusted Odds Ratio): adjusted for age, sex, race, other confounding factors**

Results Summary

- Patients with cirrhosis had approximately 3 fold increased risk of CRP as compared to patients without cirrhosis
- Except for diabetes and NASH polyps and no polyps groups are comparable
- The significant association was observed in women
- The significant association was observed for adenomatous polyps
- The observed association was independent of Child-Pugh score of cirrhosis
- forceps and snare polypectomies were done in patients with and without cirrhosis with no significant difference in post-CS complications

Conclusion

- The current study demonstrated that cirrhosis is associated with risk of CRP and that sex may influence the association
- Further studies may be warranted to explore the underlying mechanism behind CRP development in patients with cirrhosis
- Colonoscopy in cirrhotic patients is safe and not associated with significant post-colonoscopy complications as compared to non-cirrhotics
- Further studies are needed to determine if we need to change onset age and screening guidelines in patients with liver cirrhosis

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Cirrhosis and complications
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