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Original Research

Assessment of cases of colonic diverticulosis

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ABSTRACT:
Background: Colonic diverticulosis refers to a small out pouching of the large intestinal wall. The present study was conducted to assess cases of colonic diverticulosis. **Materials & Methods**: 124 patients of Colonic diverticulosis of both genderswere included. Group I patients had colonic diverticulosis and group II were control without colonic diverticulosis. Standard colonoscopes were used for the examinations. If diverticula were observed within the colon of a patient, their location and number were recorded carefully. **Results**: Out of 124 patients, males were 50 and females were 74. The mean BMI in group I was 23.1kg/m2 and in group II was 24.8, Fiber, MDA score was 7.3 in group I and 7.0in group II, Fat, MDA score was 7.2 in group I and 6.4 in group II, hypertension was present in 54 in group I and 15 in group II, diabetes mellitus was present in 35 in group I and 17 in group II, smoking was present in 52 in group I and 30 in group II, alcohol drinker was 40 in group I and 12 in group II. Right side was involved in 64, left side in 38 and bilateral in 22. **Conclusion**: The prevalence of colonic diverticulosis was high, mostly seen on right side.
Key **words**: Colonic diverticulosis, colonoscopes, Herniation

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INTRODUCTION

Colonic diverticulosis refers to a small out pouching of the large intestinal wall. A diverticulum is a herniation through a weak site of the bowel wall that produces a small outpouching.[1] The majority of patients with diverticula are asymptomatic, but circa 20% evidence of clinical manifestations, most commonly diverticulitis or diverticular bleeding.[2]Diverticular disease of the colon is common in the Western world, with a prevalence of approximately 33% in patients over 60 years of age. Although autopsy series has reported incidence of diverticulosis in up to 50 % of population, about 10–25 % of these only become symptomatic. Of these, about 25–30 % of patients will go on to develop some complication like perforation, abscess, fistula formation or obstruction.[3]

The prevalence of diverticulosis is highly heterogeneous due to ethnic and geographic variability. A western lifestyle characterized by a low-fiber diet and a lack of physical activity probably contributes to a rise in the incidence for diverticulosis.[4] However, more recently, a large cross-sectional study failed to identify low-fiber diets or physical inactivity as risk factors for diverticulosis.Double contrast barium enema (DCBE) is regarded as the investigation of choice for demonstrating the presence and extent of colonic diverticulosis.[5] It is evident that the prevalence and pattern of colonic diverticulosis differ among ethnic groups and lifestyles; left-sided diverticulosis is most common in Western and developed countries, while right-sided diverticulosis is more prevalent in Asian and developing countries.[6,7] The present study was conducted to assess cases of colonic diverticulosis.

MATERIALS & METHODS

The present study comprised of 124 patients of Colonic diverticulosis of both genders. All were informed regarding the study and their written consent was obtained.

Data such as name, age, gender etc. was recorded. Group I patients had colonic diverticulosis and group II were control without colonic diverticulosis. All

endoscopic procedures were performed by expert gastroenterologist. The bowel was prepared using either polyethylene glycol or sodium phosphate solution. Conscious sedation was administered using intravenous midazolam and intramuscular pethidine. Standard colonoscopes were used for the examinations. If diverticula were observed within the colon of a patient, their location and number were recorded carefully. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 124		
Gender	**Male**	**Female**
Number	50	74

Table I shows that out of 124 patients, males were 50 and females were 74.

Table II Comparison of parameters

Parameters	**Variables**	**Group I (124)**	**Group II (124)**	**P value**
BMI, kg/m2		23.1	24.8	0.05
Fiber, MDA score		7.3	7.0	0.12
Fat, MDA score		7.2	6.4	0.04
Hypertension	Present	54	15	0.01
	absent	70	109	
Diabetes mellitus	Present	35	17	0.03
	absent	89	107	
Smoking	Present	52	30	0.05
	absent	72	94	
Alcohol	Drinker	40	12	0.02
	Non- drinker	84	112	

Table II, graph I shows that mean BMI in group I was 23.1 kg/m2 and in group II was 24.8, Fiber, MDA score was 7.3 in group I and 7.0in group II, Fat, MDA score was 7.2 in group I and 6.4 in group II, hypertension was present in 54 in group I and 15 in group II, diabetes mellitus was present in 35 in group I and 17 in group II, smoking was present in 52 in group I and 30 in group II, alcohol drinker was40 in group I and 12 in group II. The difference was significant (P< 0.05).

Graph I Comparison of parameters

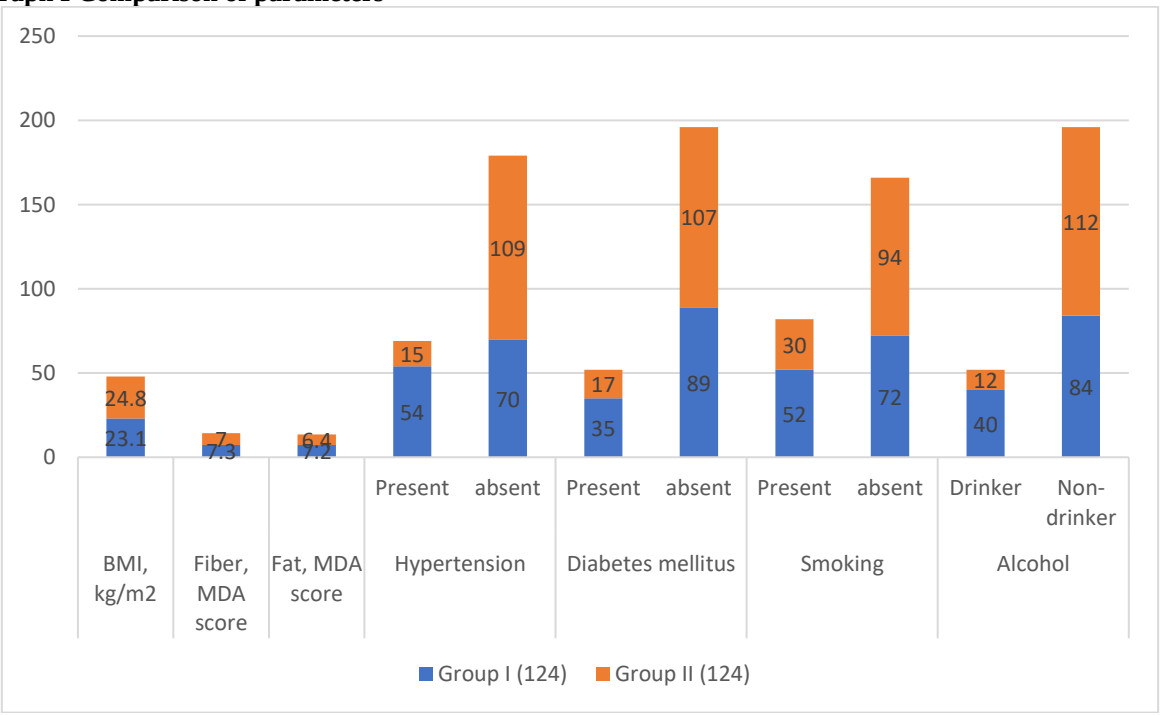
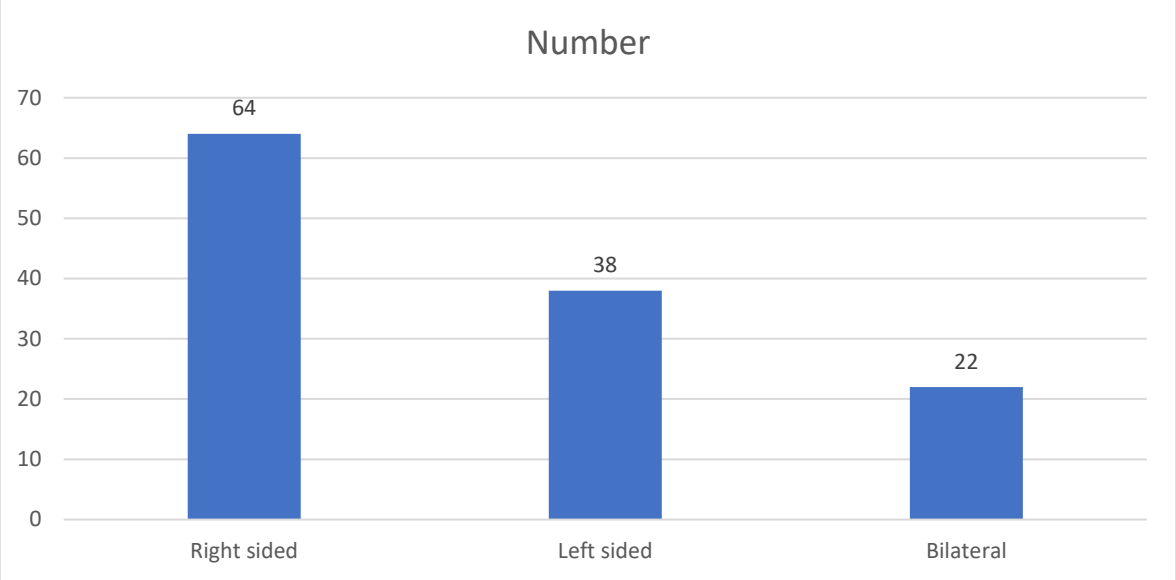


Table III Distribution of diverticula

Location	Number	P value
Right sided	64	0.01
Left sided	38	
Bilateral	22	

Table III, graph II shows that right side was involved in 64, left side in 38 and bilateral in 22. The difference was significant (P< 0.05).

Graph II Distribution of diverticula



DISCUSSION

Diverticulosis comprises various entities related to the presence of diverticula of the colon, referring to herniations through a weak site on the bowel wall, resulting in a bulging pouch.[7] Several factors may contribute to the pathogenesis of diverticulosis, including age, diet, intestinal motility, and genetic factors, as well as intestinal innervation.[8,9] Diverticulosis is generally regarded as being a western disease, giving rise to the distinction concerning its racial and geographic incidence. Until recently, the majority of detailed and large-scale studies were from North America and the developed countries of Europe. It is estimated that diverticulosis affects approximately 50% of the population aged 60 and over.[10,11] However, with the intensive penetration and incorporation of western lifestyle, as well as the remarkably increasing elderly population, there has been a dramatic increase of the incidence of diverticulosis among Asian countries. While still low in comparison to western countries, an increasing trend in prevalence was observed in Asia, including Japan, Singapore, Thailand, and Taiwan.[12,13] The present study was conducted to assess cases of colonic diverticulosis.

In present study, out of 124 patients, males were 50 and females were 74. Song et al[14]described prospective investigation, based on colonoscopic examination, of the prevalence, clinical characteristics, and factors associated with colonic diverticulosis on 848 patients who underwent colonoscopy. Clinical features such as the presence of diverticula and their location and number were assessed. Information on the subjects' symptoms, body mass index, diet, underlying disease, and alcohol and smoking habits was obtained through completion of a questionnaire. The overall prevalence of colonic diverticulosis was 12.1% (103 / 848). The right side of the colon was involved in 84.5% of patients (87/ 103); patients with right side diverticula were, on average, younger than those with left side diverticulosis (p = 0.014). Multiple diverticula were observed in 60.2% (62 / 103) of patients. Age greater than 60 years, a high-fat diet, and alcohol consumption were significantly associated with the presence of colonic diverticulosis (p < 0.05)

We found that mean BMI in group I was 23.1kg/m2 and in group II was 24.8, Fiber, MDA score was 7.3 in group I and 7.0in group II, Fat, MDA score was 7.2in group I and 6.4 in group II, hypertension was present in 54 in group I and 15 in group II, diabetes mellitus was present in 35 in group I and 17 in group II, smoking was present in 52 in group I and 30 in group II, alcohol drinker was 40 in group I and 12 in group II. We observed that right side was involved in 64, left side in 38 and bilateral in 22. Yang et al[15] in their study a total of 26 463 patients performed. The distributions of diverticulosis were recorded, which were classified as right-sided, left-sided, and bilateral type. The trends in diverticulosis were analyzed in terms of aging and yearly increase. Additionally, associations of the occurrence of diverticulosis with

age and sex were determined using a logistic regression model. They identified 1045 patients with colonic diverticulosis, with an overall prevalence of 3.8% (1045/27 558). A preponderance of right-sided diverticulosis was demonstrated, accounting for 72.9% (693/951) of included subjects. The proportion of colonic diverticulosis increased significantly (P

CONCLUSION

Authors found that the prevalence of colonic diverticulosis was high, mostly seen on right side.

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