



ROLE OF FECAL OCCULT BLOOD TESTING IN ASYMPTOMATIC SENIOR CITIZENS

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ABSTRACT **AIM :** Fecal occult blood testing (FOBT) in asymptomatic elderly individuals for colorectal cancer screening.

MATERIALS AND METHODS: Place of study: Department of digestive Health and Diseases, Government Peripheral Hospital, Anna Nagar, Chennai. Prospective study patients attending DDHD OPD, Annanagar. Period of Study: March 2012-Jan 2013. Elderly asymptomatic individuals. Inclusion criteria: Age: >60 years to 86yrs. Exclusion Criteria: Family history of colorectal cancer, Chronic constipation, Bleeding per rectum. Fecal Samples taken after written consent. Patients with positive FOBT are subjected to colonoscopy. Biopsy if lesion present and correlated.

RESULT: Total number of patients enrolled in the study was 325, both male and female in the age group of >60yrs upto 86 yrs. In the above said population FOBT positivity rate was 38 (11.6%) in Non hydrated slide. Ulcer : 6, Diverticulum: 9, Foreign body: 1, Worm infestation: 5, Polyp: 11, cancer: 4.

CONCLUSIONS: Screening in asymptomatic elderly people with FOBT has resulted in detection of unsuspected malignancy, in early stage and reduced malignancy related morbidity and mortality. FOBT can be still recommended for colorectal cancer screening in a population based study.

KEYWORDS : FOBT, senior citizens, colon cancer

INTRODUCTION:

Colorectal cancer ranks third in male and the second in female worldwide. Colorectal cancer varies 10 times in both sexes worldwide.¹ Incidence are high in south Asian, South African countries. In Asia, colorectal cancer incidence varies widely low when compared with developed countries². According to Indian cancer registry age adjusted incidence in India are very minimal when compared with the world registry. Lifetime risk of dying from CRC is 2.5%. If diagnosed early 90% survival, localized cancer up to 40%. Sudden change in diet and physical activity causes rapid increase in colorectal cancer in economically transforming countries. Trend of colorectal cancer in India is rising, this trend is also seen in migrating population and also due to change in diet, life style and physical activity. Incidence in India 4.3 (male), 3.4 (female) per lack, this is a population based study. Fecal occult blood, flexible sigmoidoscopy and colonoscopy are used as screening procedure in high incidence areas to reduce mortality³. **AIM :** Fecal occult blood testing (FOBT) in asymptomatic elderly individuals for colorectal cancer screening.

MATERIALS AND METHODS:

Place of study: Department of digestive Health and Diseases, Government Peripheral Hospital, Anna Nagar, Chennai. Prospective. Period of Study: March 2012-Jan 2013. Ethical committee Approval obtained. Informed consent was obtained. Inclusion criteria: Elderly asymptomatic individuals Age >60 years and upto 86. Exclusion Criteria: Family history of colorectal cancer, Chronic constipation, Bleeding per rectum. Patients with positive FOBT are subjected to colonoscopy. Biopsy if lesion present and correlated. **RESULT:** Total number of patients enrolled in the study was 325, both male and female in the age group of more than 60-86 yrs. In the above said population FOBT positivity rate was 38 (11.6%) in Non hydrated slide. **SEX**

DISTRIBUTION: More of male patients participated in our study. Attitude towards the by both male and female were studied. Both the sexes had better knowledge about bowel cancer but small group did not show any interest.

AGE	No	%
>60-65	92	28.3
66-70	96	29.5
71-75	68	20.9
76-80	44	13.5
81-86	25	7.6

TABLE: 1. Study group

SEX	NO	%
Male	211	65.8
Female	111	34.1

BMI	NO	%	Colon Finding	NO	%
18-25	18	47.3	Ulcer	6	15.7
25-29.9	12	31.5	Diverticulum	9	23.6
>30	8	21	Foreign Body	1	2.6
			Worm infestation	5	13
			FOBT pos but normal colon	2	5.2
			Polyp	11	28.9
			Cancer	4	10.5

Elderly age group were included in the study, in that most common age group was 66-70 yrs. Out of 325 patients only 38 patients had foht positive (11.6%), males showed 60.5% and female 39.4% positive rate. FOBT positivity depends on the diet restriction, drugs, site of the lesion, and amount of bleeding from the lesion. At least 2 ml of blood is needed to produce the result. Long term storage is not needed, at least two consecutive stool samples for three days are useful. Strict vegetarians taking only fruits and vegetables were only less. Mostly chicken were common in non vegetarian diet. Most people were in the habit of smoking of more than 20-25 yrs of beedi. Anaemia was noticed in 18 patients mostly in male that to in patients with pathology all patients with polyp and cancers lesion had anaemia. This right side lesion present with occult blood loss. **COLONOSCOPIC FINDING:** Ulcer was present in 6 persons, male 5 and female 1. Tiny ulcer, erythematous <1-2mm, which very superficial, biopsy showed non specific colitis. Common in recto sigmoid region followed by rectal area, more ulcers seen in recto sigmoid region. Out of 38 patients 9 had diverticulum. males were more common. small diverticulum in the sigmoid, transverse colon, and caecum. No evidence of colonoscopic bleeding were seen. Male persons with diverticulum was 7. Female with diverticulum was 2. One female patient had proliferative growth in caecum with multiple diverticulum in the ascending colon and caecum. One out of 38 only one (2.6%) had foreign body that to a big stapler pin swallowed 5 days ago. Five persons (13%) had worm infestation, in that four were male and one female. All belong to low socioeconomic group alcoholic with poor oral hygiene. Total 11 patients had polyp, 8 male, 3 female patients. Caecal polyp : 3 Ascending polyp : 2. Sigmoid polyp : 1 Multiple polyps : 6. Less than

5mm in size, biopsy taken which shows non specific changes. Hyperplastic polyp were 3 ..Adenomatous polyps were 3 , tubular adenoma 01, and villous adenoma 02.Malignancies(adenocarcinoma) were found in four patients, three were male and one was female.

DISCUSSION:Study population including both sexes of age group 60-85 yrs.Total numbers were 325 patients, in which 38 patients showed FOBT positivity (11.6%) in non hydrated slides.In our study we screened for low risk patients in elderly group.AGE

DISTRIBUTION: In our study we have included elderly age group, in that most common age group affected was 65-75 yrs.As per Indian study states that commonest age group affected was 60 yrs.According to world cancer registry the age group affected was 60- 85 yrs4.Considering the above studies from various regions, elderly ages were more commonly affected, which was consistent with our study. Our population common age group was 66-70 yrs. SEX

DISTRIBUTION: Our population consisted of 211 male and 111 female.Male patient had polyps and 3 male patients had cancerous lesion. Mostly they were diminutive polyps, hyperplastic and adenomatous polyp. Three patients had adenomatous polyp. Various studies from India and other countries have stated that male to female were 2.3:15.The results our study says that male to female was 2:1which is very much correlating with other studies. FOBT Positive rate:Our study had 38 (11.6%) positive for FOBT.Studies from various parts of the world have shown that positive rate for FOBT 2.6% to 5%. In hydrated slides up to 8% Rehydration can increase positivity and sensitivity but specificity will reduce FOBT positive patients when screened show 5- 10% incidence of cancer, 20-30% incidence of adenoma.One year positive predictive value of fobt is 8%, 2-10% at 2 yrs, 11% by 4 yrs.When compared with other studies our population had more fobt positive rate in non hydrated slides with proper diet advice, collection and technique.Male population with fobt positive is 23 (60.5)Female population 15(39.4)In our study non hydrated slide had 11.6% positive rate.DIET:Strict vegetarian diet seen in 13 patients and non vegetarian diet in 25 patients.Several epidemiological studies, case control studies stated that high intake of fiber, more of fruits and vegetables will reduce the incidence of colon cancer6..According to our study more than 80% were taking non vegetarian.Population based studies revealed that meat eating had significant incidence of colon cancer7.In our study we had both veg and non veg eating people, commonly non veg eating person. Many people in our study had combined intake of chicken, mutton, and fish.. SMOKING,

PHYSICAL ACTIVITY, AND BMI:..Smoking is risk factor in the causation of cancer colon. In this study all were chronic smokers that are more than 10-20 yrs taking both cigerrate and beedi.Study states that chronic smoking has increased incidence of adenoma and carcinoma by causing damage to DNA, stimulating liver enzymes,. Reduced physical activity and rectal prostaglandin are well correlated in colon cancer in aetiology. Daily activity of at least half to one hour is essential. Adenoma is associated with increased waist hip ratio.. In our study 21% were obese. One patient who had proliferative growth was in the obese category. Overweight was 31.5% in this study and one patient who also had growth. Population based study in Indian cities states that overeating, reduced physical activity, increased BMI will all lead to increased incidence of cancer colon. Obesity is associated with micronutrients deficiency such as calcium, Folate, and selenium8. Colonoscopy findings:..Incidence of polyp in our study was 28.9%. no malignancy found in histopathological examination.American study revealed that post-mortem finding of polyp were 50%.Colonoscopy finding were only 40%9.We had four malignancies in our study, all were adenocarcinoma, and all were in stage A. All patients underwent surgery and every other patient is at our follow up.Comparing with all other various studies, the results of our study is compatible with the age group of study population 60-86 yrs.Male gender were more commonly involved,Sex incidence was 2: 1 it is also comparable with other studies.FOBT positive results were increased; this was achieved with adequate preparation of the patient and technique. We were able to diagnose early colon cancer in four patients, and also reduce cancer morbidity and mortality.

CONCLUSIONS: Screening in asymptomatic elderly people with FOBT has resulted in detection of unsuspected malignancy, in early stage..Reduced malignancy related morbidity and mortality. Proof of the value of screening is available from our analysis.Our findings together with evidence from other trails suggest that consideration

should be given FOBT screening to reduce CRC mortality in the general population. FOBT can be still recommended for colorectal cancer screening in a population based study.

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