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Comparative Study Between Flexible Sigmoidoscopy And Colonoscopy in Hemorrhoid Patients

Venkatesh gadekarla[(a)],Shivananda prabhu[(b)], Poorna Chandra thejeswi.D.S[(c)]
A: Junior Resident,Department Of General Surgery, Kastruba Medical College, Mangalore, India
B: Professor , Department Of General Surgery, Kastruba Medical College, Mangalore, India
C:Asociate Professor , Department Of General Surgery, Kastruba Medical College, Mangalore, India

Abstract:
Objectives: *To compare flexible sigmoidoscopy and colonoscopy in hemorrhoid patients to rule out colorectal pathology*
Methods: *Comparative study, Purposive sampling technique based on inclusion and exclusion criteria with a sample size of 40 under flexible sigmoidoscopy group and 30 under colonoscopy group, study carried in hospitals under KMC, Mangalore*
Paients and out come assessment: *All the patients who come with complaitnts of haemorrhoids of age more than 25 years are advised for flexible sigmoidoscopy. Colonoscopy is done in patients who have findings with flexible sigmoidoscopy or the patients who come with haemorrhoids and other bowel related symptoms.*
Results: *There are 17 people of 40 in flexible sigmoidoscopy group who have finding compared to 3 people who have findings found on colonsoscopy . with a z value at 1.96 and p=0.75 between 2 groups which is not significant.But only 4 patients had findings in both colonoscopy and flexible sigmoidoscopy.*
Conclusion: *All patients with haemorrhoids who are having symptoms of more than 3 months should be offered flexible sigmoidoscopy. The patients who are having hemorrrhoids of any duration with age greater than 60 should be offered flexible sigmoidoscopy. The patients in whom flexible sigmoidoscopy shows positive findings,should also be evaluated with colonoscopy. The patients who are having haemorrhoids of any duration with complaints of weight loss , generalised weakness , and with ultrasound findings showing a relation of colon pathology- these patient should be evaluted directly with colonoscopy.*
Still this study requires more time and more sample size to prove the significance of the Study and many more studies in future for further emphasis.

I. Introduction

Haemorrhoids are symptomatic anal cushions also known as piles.Primary hemorrhoids are present in majority of the individuals.[(1)] They are classically seen in three,seven and eleven clock position, when patient is in position of lithotomy.[(2)]
Hemorrhoids are two types .They are,
1) Internal
2) External.

Internal haemorrhoids are the one which are inside anus and lined by anal mucosa.In many patients, one can identify haemorrhoids in 3 places.They are 1 on the left and 2 on the right.several variations are present. There are more than 3 bundles in some patient. [(3)]

External haemorrhoids are the one which are present in the "inferior aspect of anal canal". They are lined by anodermis and skin.The External haemorrhoids may be seen in more than one quadrant.May be present circumferential.[(4)]

The common clinical picture of haemorrhoids is painless rectal bleeding.This is increased with bowel movement.It is described by the patients as blood drips on the toilet comod. Haemorrhoids are definitely diagnosed depending up on correct history of patient and thorough clinical assesment. So per rectal examination as well as proctoscopy has to be done.

II. Colonoscopy And Flexible Sigmoidoscopy

Colonoscopy

Its an endoscopic tool which is used for the visualization and for biopsy of the large intestine.
Its important applications are in the investigation of colorectal cancers pathologies.[(5)] Colonoscopy is currently the gold standard and it is being used to diagnose colorectal cancer since the late nineteen sixties.Both

colonoscopy and sigmoidoscopy have advantages and disadvantages, but experts agree that doing either of these tests is preferred to no testing at all.

The most common therapeutic procedure performed at colonoscopy usually is colonic polyps resection.The specimen that is taken can be sent for histo pathological examination to look for neoplastic change and to plan correct treatment procedure.Small sized polyp up to 5 mm can be taken using cheese-wiring.[6]

Flexible-sigmoidscopy

It is an good screeing procedure to look early changes in the distal colon.Flexible -sigmoidoscope is 60cm long which provides good visuals.Patient has minimal discomfort.Sigmoidoscope is done in many to see for premalignancy and neoplastic changes.

Complaints like diarhea, pain in the rectum can be further managed by sigmoidoscopy.However further examination by barium enema or colonoscopy may be required in symptomatic patients.

Since internal haemorrhoids are very common in general population,it is likely that a case of carcinoma colon especially that of left colon will coexist with haemorrhoids.Hence in a selected subset of patients of haemorrhoids it may be advisable to rule out a neoplasm in the proximal bowel by endoscopy.

This study is an attempt to detect if flexible sigmoidoscopy alone is an adequate evaluation or a full colonoscopy would be required, is another point of interest.

III. Materials And Methods

Study design: comparative study
Sample size: $n = Z^2P(1-P)/E^2$
with 95% confidence level and 90% power sample size came out to be 72,with p=0.75,
E=allowable error of 10%
Study period: October 2014 – September 2016
Sampling methods: purposive sampling technique based on inclusion and exclusion criteria.
Statistical analysis: fishers exact test, chi square test, mannwhitney test
Study centre: Kasturba Medical College Hospital Attavar, Mangalore
Government Wenlock Hospital, Mangalore
Kasturba medical college hospital, Ambedkar circle, Mangalore

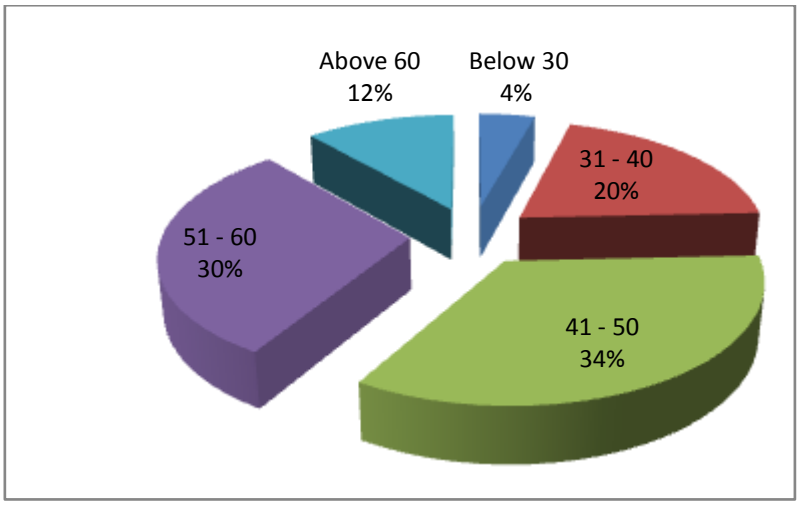
Inclusion criteria:
1.All patients with hemorrhoids
2.All patients who have already been treated for hemorrhoids and comes with recurrent symptoms
3.All patients having pain while passing stools
4.Patients who are having blood in stools
5.Patients more than 25 years
6.All patients with hemorrhoids and having pain abdomen

Exclusion Criteria:
1.Patients less than 25 years of age.
2.Patients already diagnosed with colorectal pathology
3.Patients who already undergone surgery for colorectal pathology

Application methodology
All the patients who come with complaitnts of haemorrhoids of age more than 25 years are advised for flexible sigmoidoscopy. Colonoscopy is done in patients who have findings with flexible sigmoidoscopy or the patients who come with haemorrhoids and other bowel related symptoms.

IV. Results

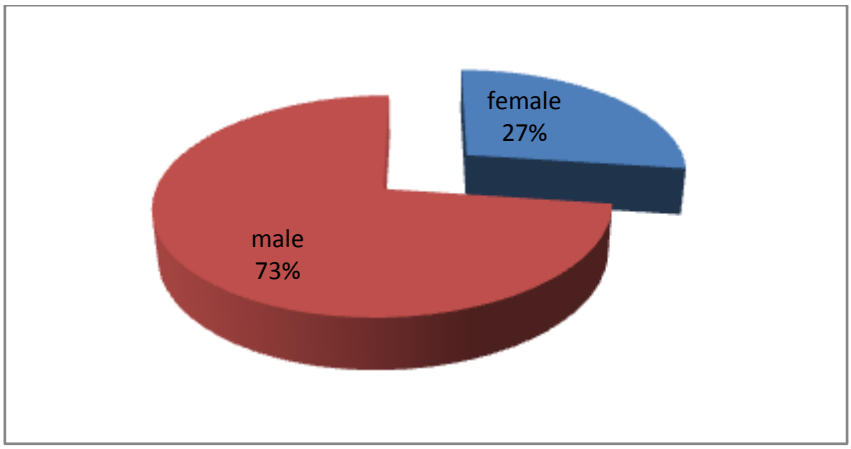
Distribution Chart On Age

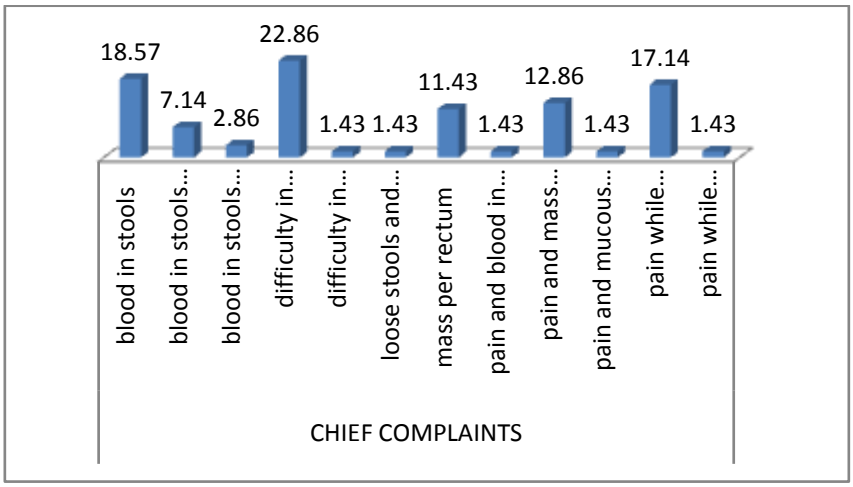


	N	Minimum	Maximum	Mean	Std. Deviation
AGE	70	25	73	48.04	10.747

Chart On Sex Distribution

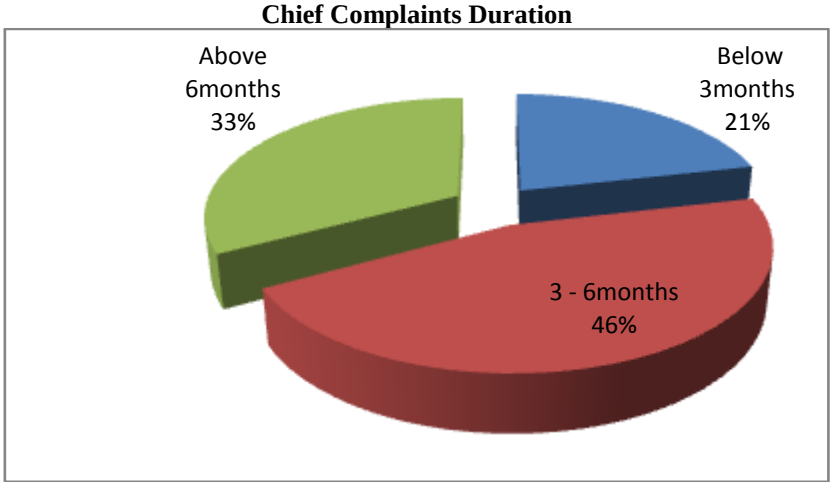
Frequency	Percent	
female	19	27.1
male	51	72.9
Total	70	100.0



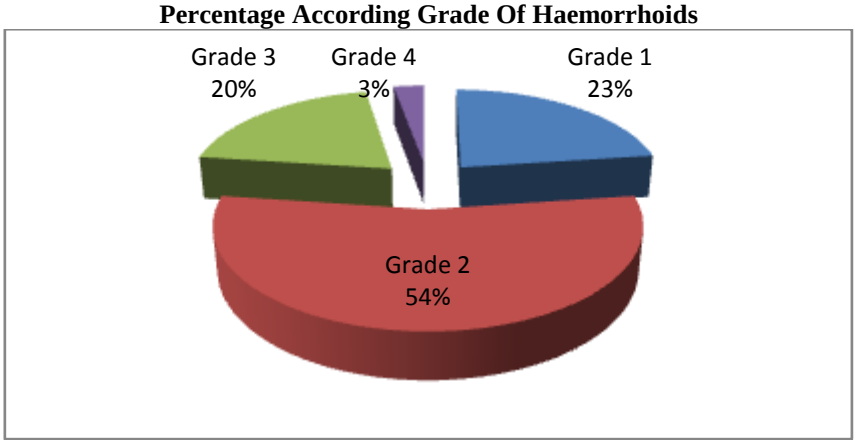


Percentages According To Chief Complaints

Chief Complaints Duration



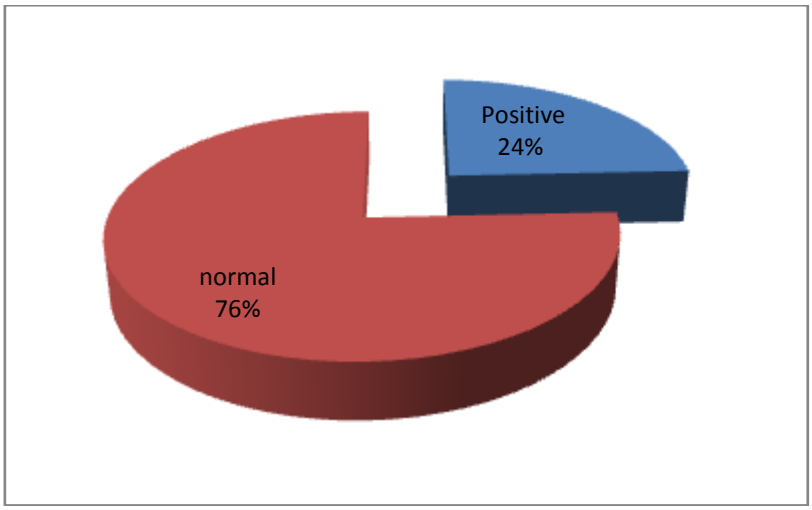
Percentage According Grade Of Haemorrhoids



Patients With Sigmoidoscopy Positive Findings

		Frequency	Percent
	ca rectum	1	5.9
	colitis	1	5.9
	diverticulosis	1	5.9
	growth at proximal rectum	1	5.9
	multiple polyps at sigmoid and rectum	1	5.9
	multiple sigmoid diverticulosis	2	11.8
	poly growth at rectum	1	5.9
	polyp at distal sigmoid	1	5.9
	stercoral ulcer	4	23.5
	superficial ulceration in rectum	1	5.9
	superficial ulceration in sigmoid	1	5.9
	ulceroproliferative at rectosigmoid	2	11.8
	Total	17	100.0

Percentage Showing Sigmoidoscopy Positivity



Patients With Coloscopy Positive Findings

Frequency	Percent
circumferential ulcer –tb	1	14.3
Colitis	1	14.3
mid transverse colon ulceroproliferavtive growth	1	14.3
multiple nodules seen in transverse colon	1	14.3
multiple polyps transverse colon	1	14.3
severe colitis	1	14.3
ulcerative growth in transverse flexure	1	14.3
Total	7	100.0

Chart Showing Frequency Positivity Of Colonoscopy

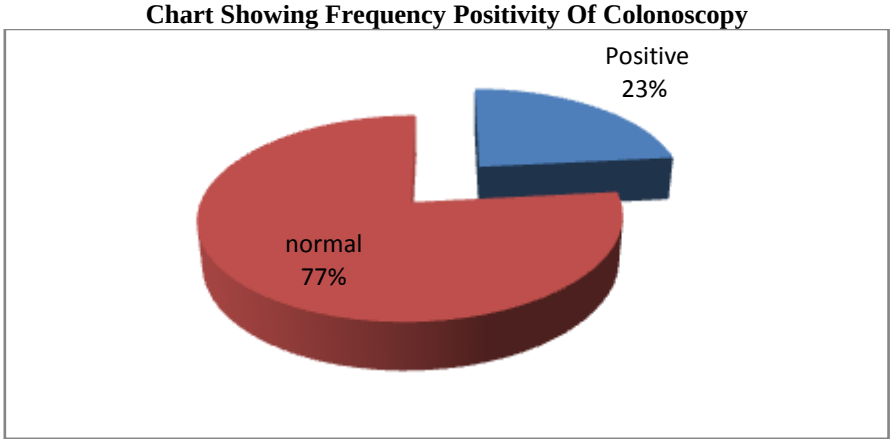


Chart Comparing Flexible Sigmoidoscopy To Colonoscopy

		COLONOSCOPY		
		Positive	normal	Total
SIGMOIDOSCOPY	Positive	3	14	17
		17.6%	82.4%	100.0%
		42.9%	60.9%	56.7%
	normal	4	9	13
		30.8%	69.2%	100.0%
		57.1%	39.1%	43.3%
Total		7	23	30
		23.3%	76.7%	100.0%
		100.0%	100.0%	100.0%

This explain 82.4 % of colonoscopy are normal with sigmoidoscopy.where as 17.6% has both findings in sigmoidoscopy as well as colonoscopy.

	Estimate	Lower	Upper
Sensitivity	42.86	6.20	79.52
Specificity	39.13	19.18	59.08
PPV	17.65	-0.47	35.77
NPV	69.23	44.14	94.32
Overall accuracy**	40.00	22.47	57.53
	Value	p=	
Kappa	0.120	0.400	NS

Chart Comparing Coloscopy Findings And Sigmoidoscopy Findings

COLONOSCOPY	SIGMOIDOSCOPY	Frequency
circumferential ulcer -tb	normal	1
colitis	colitis	1
mid transverse colon ulceroproliferavtive growth	normal	1
multiple nodules seen in transverse colon	normal	1
multiple polyps transverse colon	multiple polyps at sigmoid and rectum	1
normal	normal	9
	ca rectum	1
	growth at proximal rectum	1
	multiple sigmoid diverticulosis	1
	poly growth at rectum	1
	polyp at distal sigmoid	1
	sigmoid diverticulosis	1
	stercoral ulcer	4
	superficial ulceration in rectum	1
	superficial ulceration in sigmoid	1
	ulceroproliferative at rectosigmoid	2
	Total	23
severe colitis	diverticulosis	1
ulcerative growth in transvesre flexure	normal	1

Colonoscopy Positive Patients Based On Age

		COLONOSCOPY		
		Positive	normal	Total
AGE	Below 30	1	0	1
		100.0%	.0%	100.0%
		14.3%	.0%	3.3%
	31 - 40	1	2	3
		33.3%	66.7%	100.0%
		14.3%	8.7%	10.0%
	41 - 50	3	6	9
		33.3%	66.7%	100.0%
		42.9%	26.1%	30.0%
	51 - 60	2	8	10
		20.0%	80.0%	100.0%
		28.6%	34.8%	33.3%
	Above 60	0	7	7
		.0%	100.0%	100.0%
		.0%	30.4%	23.3%
Total		7	23	30
		23.3%	76.7%	100.0%
		100.0%	100.0%	100.0%

Fishers exact test p=.180, NS

Colonoscopy Positivity According To Sex

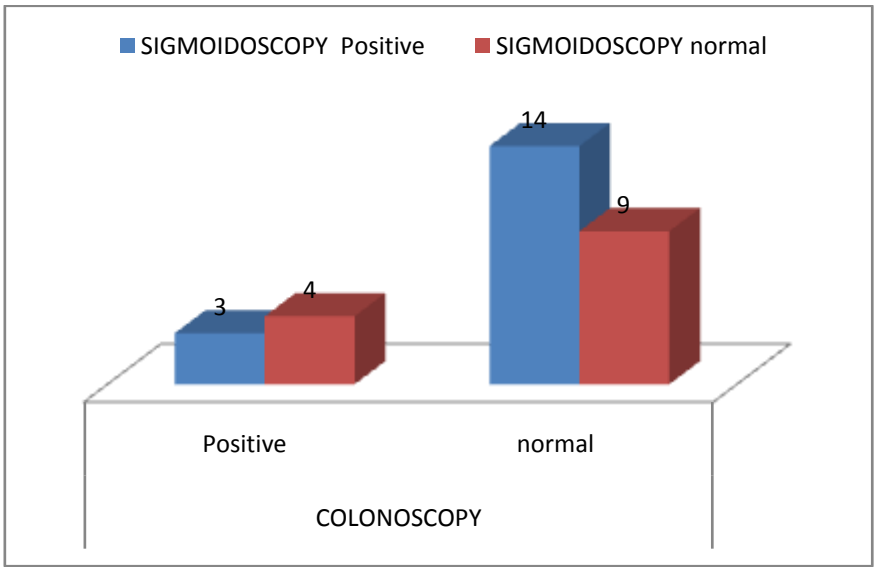
		COLONOSCOPY		
		Positive	normal	Total
SEX	female	1	5	6
		16.7%	83.3%	100.0%
		14.3%	21.7%	20.0%
	male	6	18	24
		25.0%	75.0%	100.0%
		85.7%	78.3%	80.0%
Total		7	23	30
		23.3%	76.7%	100.0%
		100.0%	100.0%	100.0%

X2=.186p=.666, NS

Complaints According To Duration

		COLONOSCOPY		
		Positive	normal	Total
DURATION	Below 3months	2	3	5
		40.0%	60.0%	100.0%
		28.6%	13.0%	16.7%
	3 - 6months	4	5	9
		44.4%	55.6%	100.0%
		57.1%	21.7%	30.0%
	Above 6months	1	15	16
		6.3%	93.8%	100.0%
		14.3%	65.2%	53.3%
Total		7	23	30
		23.3%	76.7%	100.0%
		100.0%	100.0%	100.0%

Fishers exact test p=.051, NS



V. Conclusion

All patients with haemorrhoids who are having symptoms of more than 3 months should be offered flexible sigmoidoscopy. The patients who are having hemorrrhoids of any duration with age greater than 60 should be offered flexible sigmoidoscopy. The patients in whom flexible sigmoidoscopy shows positive findings,should also be evaluated with colonoscopy.

The patients who are having haemorrhoids of any duration with complaints of weight loss , generalised weakness , and with ultrasound findings showing a relation of colon pathology- these patient should be evaluted directly with colonoscopy.

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