



## MR Fistulogram – A Descriptive Analysis in a South Indian Town Population with A Surprising Result

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### Abstract

**Aims and Objectives:** *The aim of our study is to evaluate and classify the various types of peri anal fistula.*

**Materials and Methods:** *A Prospective study of 61 patients with suspected fistula in ano, primary or recurrent, referred from the surgery outpatient department was done in the Rajah Muthiah Medical College, Annamalai University, Chidambaram between October 2014 to September 2016 and the results were analyzed.*

**Results:** *1) The mean age of the study patients is  $39.74 \pm 11.92$  years. 2) Grade IV fistula is common (26.2%) followed by Grade III (21.3%) and Grade II (21.3%) fistulas.*

**Conclusion:** *Peri anal fistula is more commonly seen in men of age group 31 to 40 years with mean age of  $39.74 \pm 11.92$ . Surprisingly, the most common type of Perianal fistula in our study population was G IV fistula (26.2%) followed by Grade III (21.3%) and Grade II (21.3%) fistulas. The late presentation with G IV fistula in our study population highlights the social taboos precluding the individuals from seeking timely medical assistance and thereby signifies creating due medical awareness.*

**Keywords:** *MR Fistulogram, Classification and types of Peri anal fistula, social taboos in south Indian town population.*

**AIMS AND OBJECTIVES**

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**MATERIALS AND METHODS**

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**RESULTS**

**Table – 1: Age Distributions**

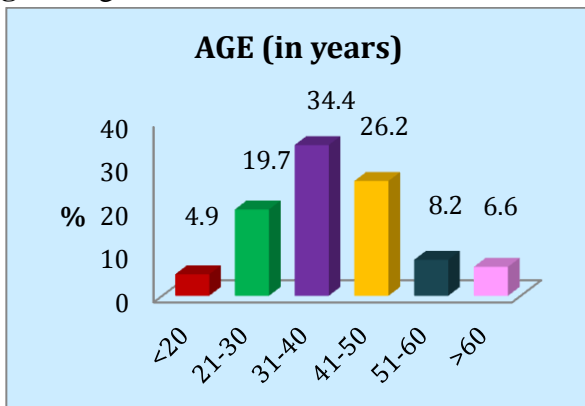
Age (in years)	Number	Percentage
≤ 20	3	4.9
21-30	12	19.7
31-40	21	34.4
41-50	16	26.2
51-60	5	8.2
> 60	4	6.6
Total	61	100

**Table – 1.1.: Age-Descriptive Statistics**

	Mean	S.D.
Age (in years)	39.74	11.92

In Table – 1, age distribution of the patients is presented. The common age distribution is 31-40 years where 34.4% are observed and 41 to 50 years where 26.2% are observed. The mean age of the patients is  $39.74 \pm 11.92$  years.

**Fig. 1 - Age Distributions**

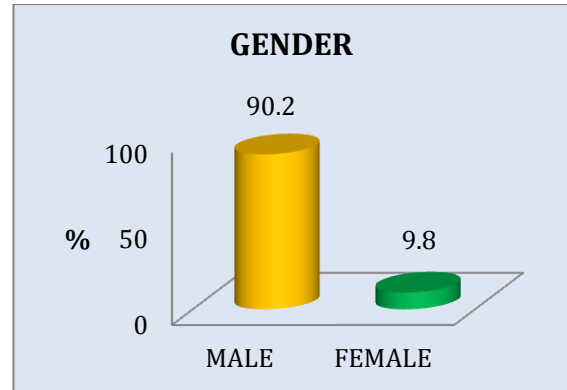


**Table – 2: Gender Distribution**

Gender	Number	Percentage
Male	55	90.2
Female	6	9.8
Total	61	100

Gender distribution of the study patients is presented in Table – 2. The most of the patients are male (90.2%).

**Fig. 2 - Gender Distribution**

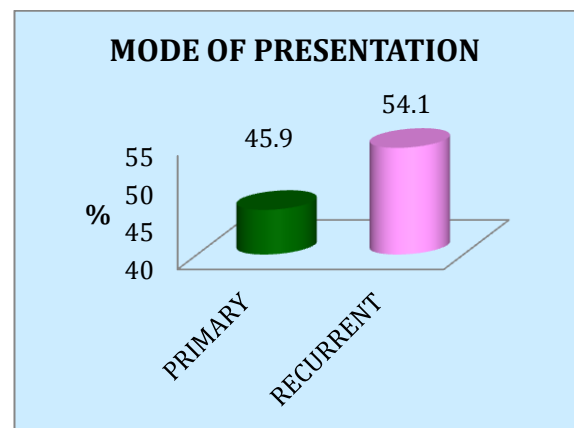


**Table – 3: Mode of Presentation**

Mode on Presentation	Number	Percentage
Primary	28	45.9
Recurrent	33	54.1
Total	61	100

The mode of presentation is primary for 45.9% whereas it is recurrent for 54.1%.

**Fig. 3 - Mode of Presentation**



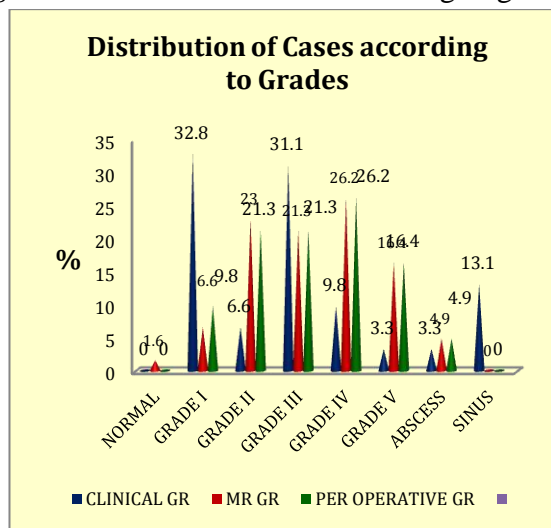
**Table – 5:** Distribution of cases according to grades

	Clinical Grading		MR Grading		Per Operative Grading	
	N	%	N	%	N	%
Normal	-	-	1	1.6	-	-
Grade I	20	32.8	4	6.6	6	9.8
Grade II	4	6.6	14	23.0	13	21.3
Grade III	19	31.1	13	21.3	13	21.3
Grade IV	6	9.8	16	26.2	16	26.2
Grade V	2	3.3	10	16.4	10	16.4
Abscess	2	3.3	3	4.9	3	4.9
Sinus	8	13.1	-	-	-	-
Total	61	100	61	100	61	100

The distribution of cases according to grades is presented in Table – 7. The distribution with specific to clinical grading, MR grading and per-operative grading is presented. As per-op grading is superior to other grades, it is taken into account for interpretations. About 26.2% are in grade IV

classifications and which is the common grading of fistula. Each of 21.3% has grade II and grade III classifications. About 16.4% have grade V classifications.

**Fig. 5:** Distribution of cases according to grades



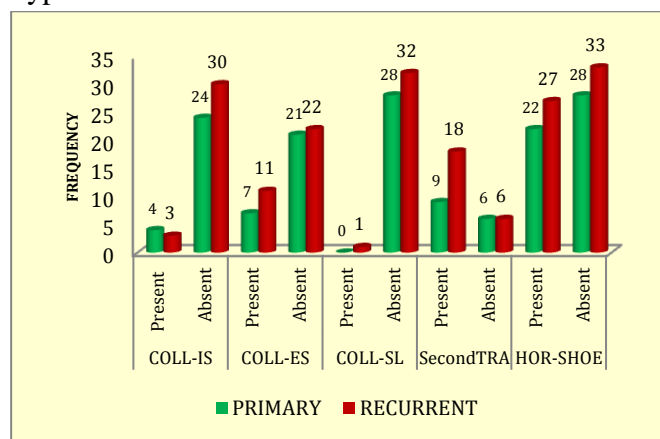
**Table – 6:** Association of Mode of Presentation with Type of Fistula

Mode of Presentation	Coll-is		Coll-Es		Coll-SL		Second Tra		Hor-Shoe		Total
	Present	Absent	Present	Absent	Present	Absent	Present	Absent	Present	Absent	
Primary	4	24	7	21	0	28	9	19	6	22	28
Recurrence	3	30	11	22	1	32	15	18	6	27	33
Total	7	54	18	43	1	33	24	37	12	49	61

	Value	'P' Value	Value	'P' Value	Value	'P' Value	Value	'P' Value	Value	'P' Value
Chi-Square Test	0.402	0.526	0.506	0.475	0.863	0.353	1.125	0.289	0.101	0.751

The association of mode of presentation with type of fistula is presented in Table – 10. The chi-square test of association is insignificant (P > 0.05) for all the types of fistula with mode of presentation. Hence there is no statistical association is observed between mode of presentation and fistula types.

**Fig. 6 -** Association of Mode of Presentation with Type of Fistula



## DISCUSSION

Perianal fistulization is an uncommon but important condition of the gastrointestinal tract that causes substantial morbidity. Perianal fistulas occur in approximately 10 of 100,000 persons, with a twofold to fourfold male predominance. Although anal fistulas were known to Hippocrates and have been described throughout the centuries, they began to receive special attention in the 19th century. In 1835, Frederick Salmon founded the Benevolent Dispensary for the Relief of the Poor Afflicted with Fistula, Piles, and Other Diseases of the Rectum and Lower Intestines—the now world famous St Mark's Hospital—in London. Much of our understanding of perianal fistulas comes from the work of surgeons at St Mark's Hospital: Salmon, who operated on Charles Dickens; Goodsall, who described the course of fistulous tracks from the skin to the anus<sup>(1)</sup>; and Parks, whose classification of fistulas in relation to anal anatomy is widely used in surgical practice<sup>(2)</sup>.

### Observations in our study

The mean age of the study patients is  $39.74 \pm 11.92$  years. About 54.1% of patients have recurrent mode of presentation. Recurrent cases have associated with more risk factors than primary cases and which is statistically significant. Secondary tract findings is the more common type of fistula (24%) followed by Extrasphincteric collections (18%). There is no statistically significant association is observed for mode of presentation with type of fistula.

Surprisingly, Grade IV fistula is common (26.2%) followed by Grade III (21.3%) and Grade II (21.3%) fistulas. Our study population comes from a south Indian town region where it is a social stigma to seek medical advice for diseases pertaining to perianal region. People here hesitate and hence present to hospitals at a very late stage when there is no other choice. We have come to understand the significance to create awareness

among such population and motivate them to seek medical advice at an earlier stage.

## CONCLUSION

Perianal fistula is more commonly seen in men of age group 31 to 40 years with mean age of  $39.74 \pm 11.92$ . Surprisingly, the most common type in our study population was Grade IV fistula (26.2%) followed by Grade III (21.3%) and Grade II (21.3%) fistulas. The late presentation with Grade IV fistula in our study population highlights the social taboos precluding the individuals from seeking timely medical assistance and thereby signifies creating due medical awareness.

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