



## Role of MRI Defecography in Evaluation of Pelvic Floor Dysfunction- A Review Study in Tertiary Care Centre

Dr Sayali Umale<sup>1</sup>, Dr. Saurabh Joshi<sup>2</sup>, Dr. P.S.Mishrikotkar<sup>3</sup>,  
Dr.D.B.Dahiphale<sup>4</sup>, Dr. Shivaji Pole<sup>5</sup>, Dr. Abhijeet Nagapurkar<sup>6</sup>

<sup>1</sup>Junior Resident-3, Department of Radiology, MGM Medical college Aurangabad.

<sup>2</sup>Assistant Professor, Dept. of Radiology MGM Medical college and hospital, Aurangabad.

<sup>3</sup>Professor, Dept. of Radiology MGM Medical college and hospital, Aurangabad.

<sup>4</sup>HOD and Professor, Dept. of Radiology MGM Medical college and hospital, Aurangabad.

<sup>5</sup>Professor, Dept. of Radiology MGM Medical college and hospital, Aurangabad.)

<sup>6</sup>Associate Professor, Dept. of Radiology MGM Medical college and hospital, Aurangabad

### 1. INTRODUCTION

- Functional disorders of pelvic floor like pelvic organ prolapse and defecatory dysfunction result in variety of symptoms and significantly affect quality of life.
- Dynamic imaging has a central role in diagnosis of pelvic floor dysfunction and is crucial in choosing a conservative vs surgical treatment.
- MR imaging has an increasing role because of its multiplanar imaging capabilities, intrinsic soft tissue contrast and absence of ionizing radiation.

### Aims and Objectives

- To assess the diagnostic accuracy of MR defecography in pelvic floor dysfunction for proper treatment planning- surgical v/s conservative.

### Materials

- We studied 24 cases who were referred to our Radiology department for MR defecography over a period of 6 months from May 2023 to October 2023.

### Inclusion Criteria

- Patients above 18 year of age.
- Patients presenting with complaints such as incontinence, constipation and prolapse.

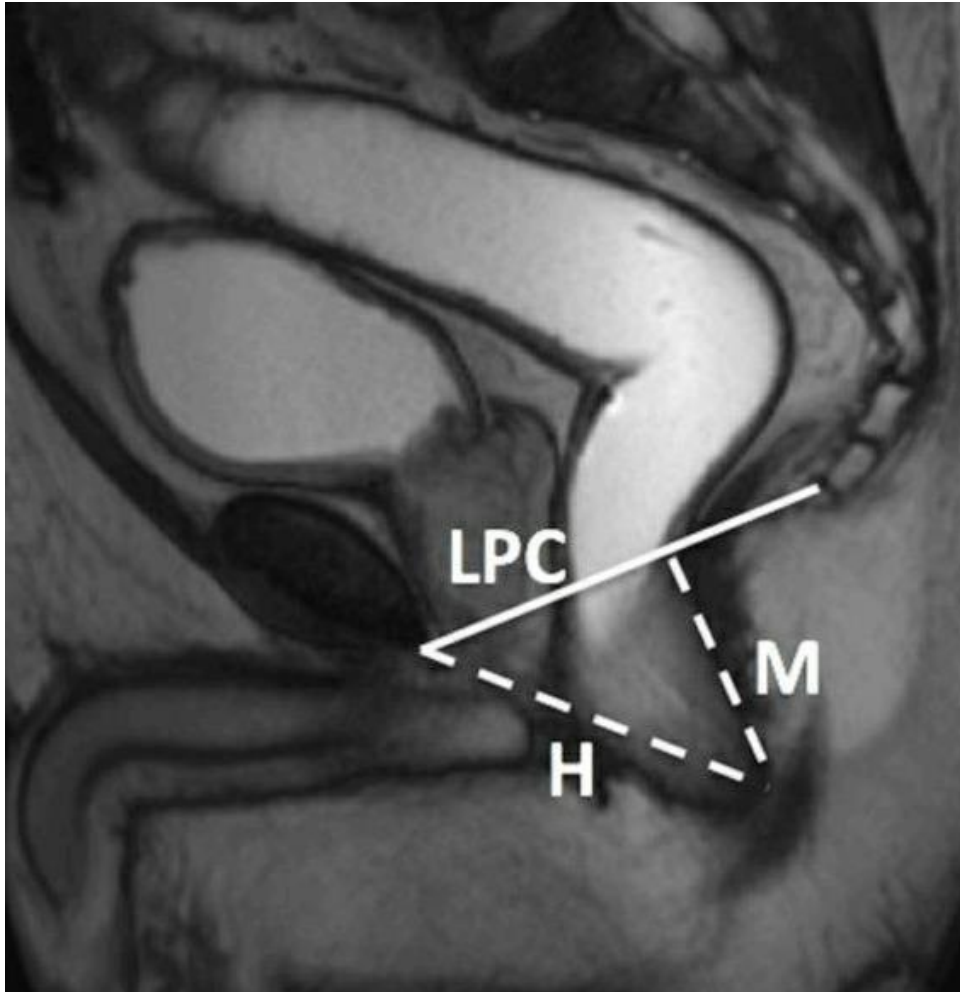
### Exclusion Criteria

- Patients with MR incompatible devices.
- Patients with claustrophobia.

### 2. METHODOLOGY

- MR defecography was performed on 1.5T MRI system having closed configuration using standardized protocol.
- Written and informed consent was taken.
- 200-250 cc of Ultrasound jelly was instilled in patients rectum with rectal tube in left lateral decubitus position. Then patient was made to lie down in supine position.

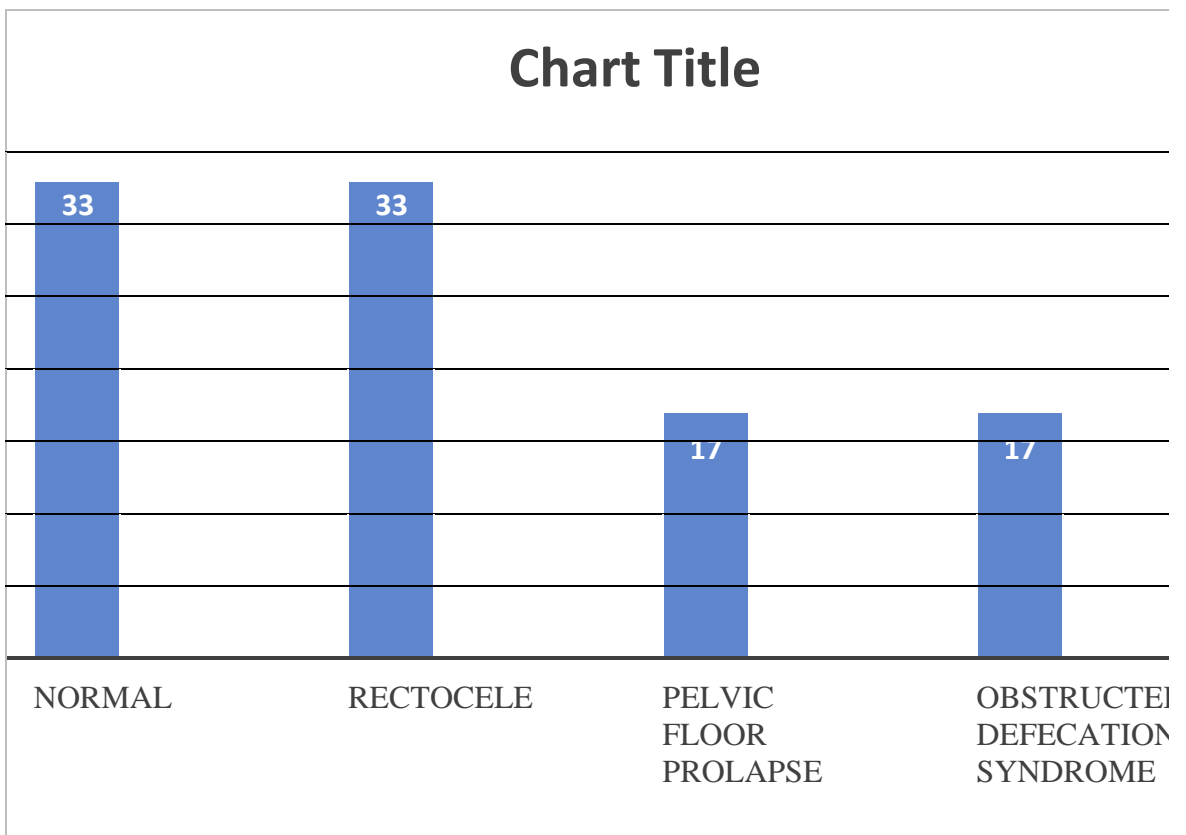
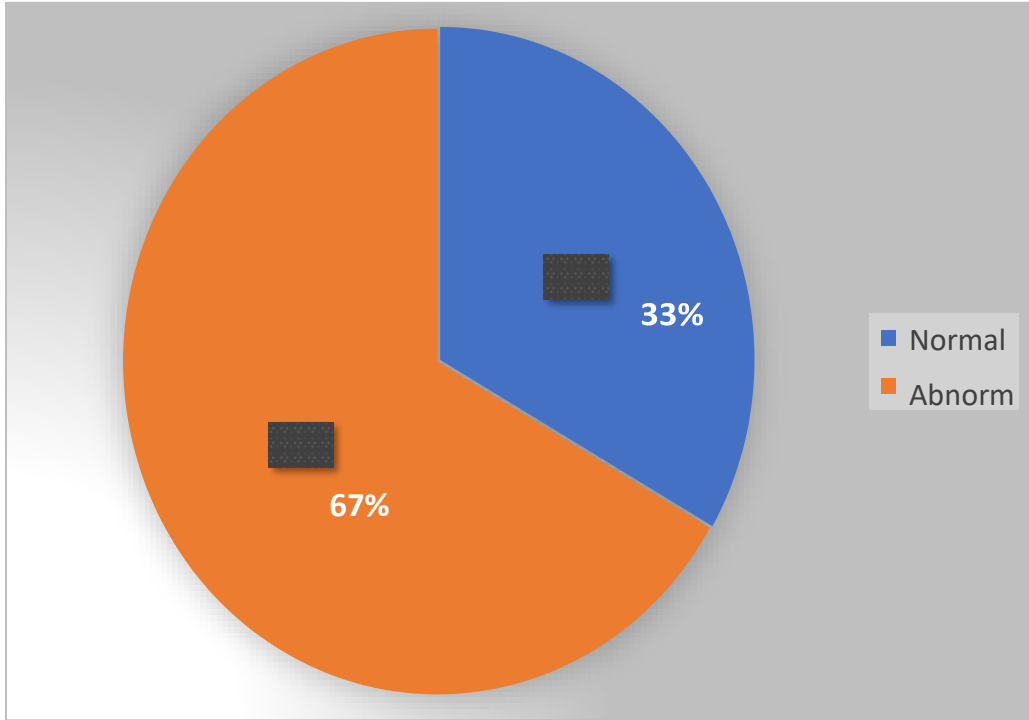
- Imaging was performed using pelvic phase array coil. Initially static imaging was performed using high resolution T2W TSE sequences in axial and coronal plane. Then dynamic imaging was performed using T2W multiphasic FIESTA sequences through mid sagittal plane in anal canal.
- The patient is first asked to squeeze anal sphincter ,then apply short straining effort. Finally the patient is asked to pass the ultrasound jelly( defecate)



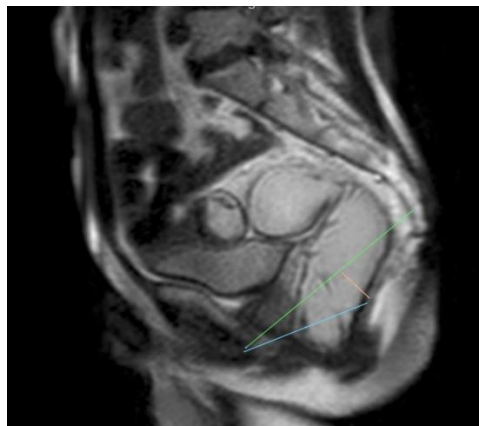
	Boundaries	Practical usefulness
Pubo-coccygeal line (PCL)	From the lower border of the symphysis pubis to the last coccygeal junction.	Represents the level or height of the pelvic floor.
H-Line	From the lower border of the symphysis pubis to the posterior border of the ano-rectal junction.	Represents the anteroposterior diameter of the levator hiatus.
M-Line	Perpendicular to the PCL to the most posterior point of H-Line.	Represents the downward vertical of the levator hiatus. It defines how much is the descent of the structure under study.

Grade	Hiatal enlargement(H line)	Pelvic floor descent(M line)
Normal	<6 cm	<2 cm
Mild	6-8 cm	2-4 cm
Moderate	8-10 cm	4-6 cm
Severe	>10 cm	>6 cm

### 3. RESULTS



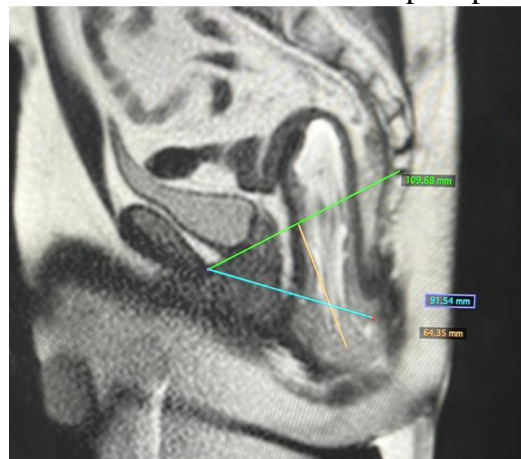
Obstructed defecationsyndrome



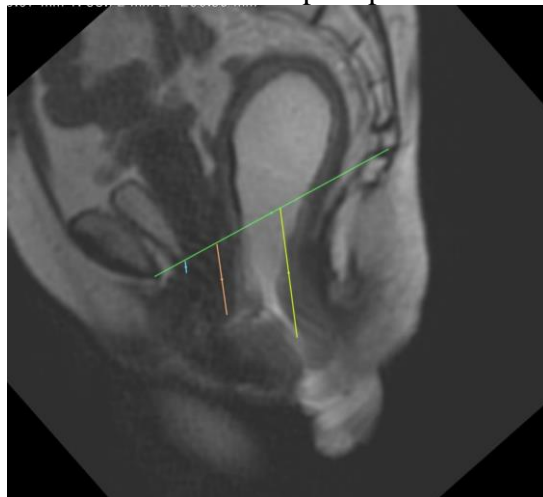
Anterior rectocele



Anterior rectocele with rectal prolapse



Pelvic floor prolapse



#### 4. DISCUSSION

- M/c finding in my study was rectocele, which is consistent with previous studies.
- All the patients in this study were appropriately triaged based on findings on MRD as candidates for conservative management (n= 16) , as candidates for surgical management (n=0) and candidates who did not require any treatment (n=8).
- Hence it is prudent to say that findings from our study correlate with previous literature that it helps in successful triage of patients for conservative and surgical management.

## 5. CONCLUSION

- MR defecography is essential in work up of patients complaining of pelvic floor dysfunction. Dynamic MR imaging is an excellent modality for assessing functional pelvic floor disorders. Findings on reporting are valuable for selecting candidates for surgical treatment and identifying those for conservative treatment.

## 6. REFERENCES

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