

Prevalence of Rectal Examinations Prior to Magnetic Resonance Defecography Studies

M Dickinson¹, C Schrum², E Shah³, M Speicher⁴, K Strohbahn²



¹Geisel School of Medicine, Hanover, NH, ²Department of Obstetrics and Gynecology, Geisel School of Medicine at Dartmouth, Lebanon, NH, ³Section of Gastroenterology and Hepatology, Dartmouth-Hitchcock Medical Center, Lebanon, NH, ⁴Department of Medical Education and Research, American Association of Colleges of Osteopathic Medicine.



Introduction

Constipation, anal incontinence and pelvic organ prolapse are common disorders under the larger umbrella of pelvic floor dysfunction (PFD), affecting upwards of 50% of women [1], [2]. Magnetic resonance defecography (MRD) is among the adjunct tests recommended in the algorithms for evaluation of patients with PFD, but should be preceded by a physical exam including digital rectal exam (DRE) [3], [4].



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Figure 1. MRD of normal female pelvic anatomy. Sagittal midline T2-TSE image demonstrating the perineal body (*) and the levator plate (white arrow). B, bladder; U, uterus; V, vagina; R, rectum [5].

Objective

To assess the frequency of DRE in female patients prior to MRD.

Methods

We conducted a retrospective cohort review of MRD performed on female patients at a single rural tertiary care center from 2016 through 2020. Cohorts were determined by the referring provider's subspecialty. Retrospective chart review was performed to determine if DRE was included as part of the clinical evaluation of each patient's PFD presentation. Patient age and referring provider subspecialty were also documented, and Chi-square analysis was done comparing presence or absence of DRE prior to MRD.

Results

Baseline characteristics by referring provider specialty were summarized using descriptive statistics (Table 1). A total of 304 female patients underwent MRD during the study period: 209 (68.8%) were referred by gastroenterology providers and 95 (31.2%) from other specialties.

	Colorectal Surgery	Family Medicine	Gastroenterology	General Surgery	Internal Medicine	Geriatric Medicine	Uro-gynecology	Total
Age (SD)	58.2 (17.1)	65.0 (n/a)	55.5 (15.5)	61.0 (8.5)	52.0 (13.7)	65.5 (6.4)	60.9 (11.5)	56.6 (15.4)
Uterus Present on MRD (%)								
Not Present	13 (25.5)		65 (31.1)		1 (20)		18 (52.9)	97 (31.9)
Present	28 (54.9)	1 (100)	110 (52.6)	2 (100)	4 (80)	1 (50)	6 (17.6)	152 (50)
No Mention	10 (19.6)		34 (16.3)			1 (50)	10 (29.4)	55 (18.1)
Provider Credentials (%)								
APP	2 (3.9)		87 (41.6)	1 (50)			1 (2.9)	91 (29.9)
MD/DO	49 (96.01)	1 (100)	122 (58.4)	1 (50)	5 (100)	2 (100)	33 (97.1)	213 (70.1)

Table 1. Baseline Characteristics by Referring Specialty Cohort.

Physician gastroenterologists perform a rectal examination significantly less often than physicians of other specialties; 32.8% and 84.4% respectively (Figure 2; Pearson $\chi^2=29.314$; $n=155$; $p<0.001$).

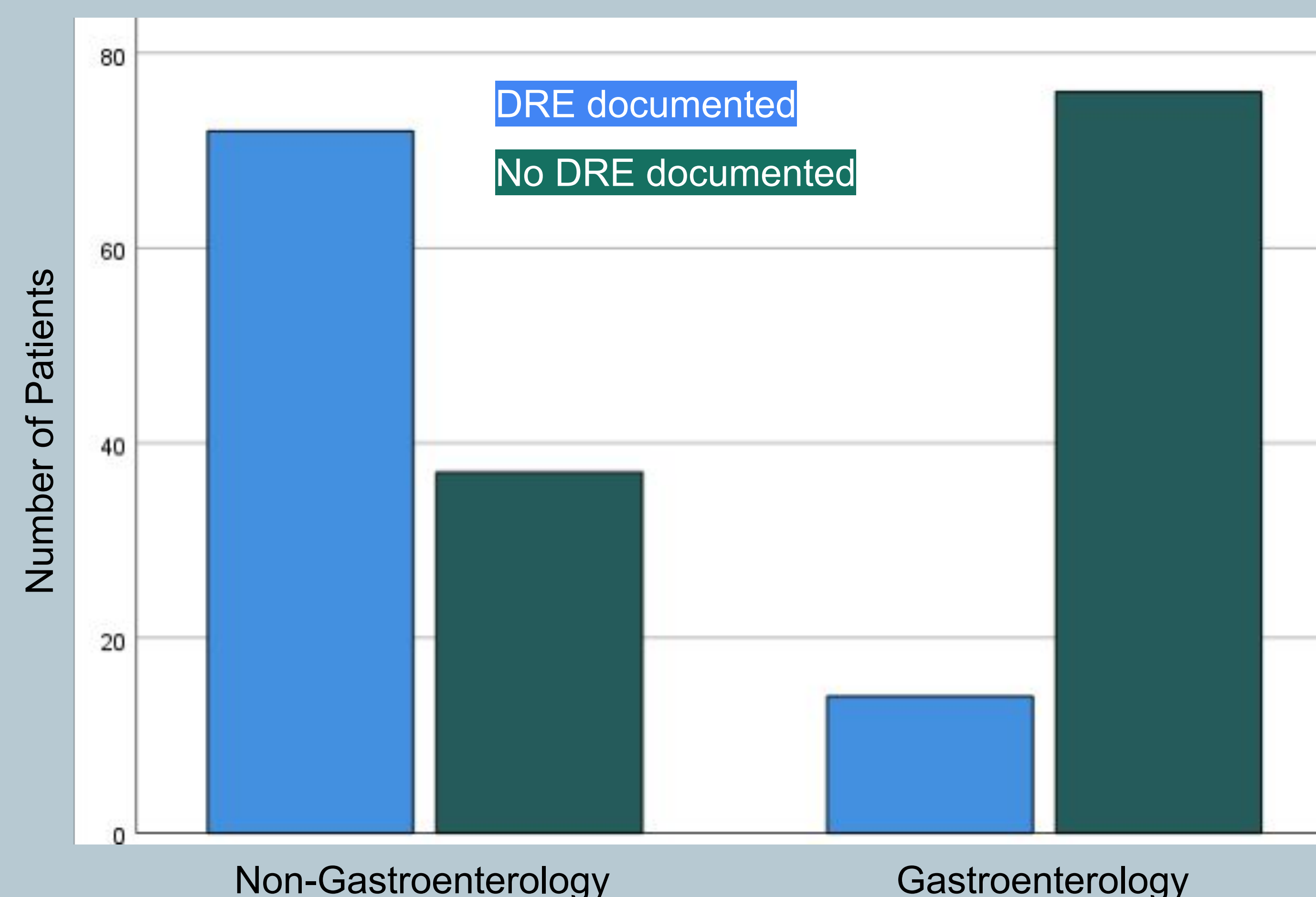


Figure 2. Documentation of DRE prior to MRD by physician specialty.

Conclusions

DRE by an experienced practitioner has high sensitivity and specificity for detection of dyssynergia in the evaluation of constipation [6] and decreased anal sphincter tone for fecal incontinence [7]. We expected to find that DRE was performed universally before performing ancillary tests, however, this was not the case. Moreover, performance of a DRE was less common within gastroenterology than with other referring providers. Our findings highlight the need for better understanding and practitioner utilization of DRE and ancillary testing in the algorithms for evaluation of PFD.

Future Directions

We will continue studying the current trends in indications for MRD, referral patterns, and MRD's role in clinical decision-making. We hope to use this information to assist practitioners in providing appropriate and efficacious care for patients with pelvic floor and defecatory dysfunction. Thanks to grant funding by the Fellows' Pelvic Research Network, we are planning a multicenter review to advance understanding of clinical utility for MRD.



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