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REVIEW ARTICLE

Digital Rectal Exam in the Acute Hospital Setting: Bridging Patient Experience and the Physician Perspective

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Abstract

The digital rectal examination is one of the key physical examination tools used in the assessment of gastrointestinal bleed, different rectal diseases and prostate disease. It is an invasive diagnostic test that has a significant level of patient anxiety and discomfort involved. Despite its many diagnostic utilities this exam has been vastly underutilised due to many limiting factors including lack of physician confidence with this bedside physical maneuver. This review includes patient's point of view and providers perspective on digital rectal examination in the inpatient hospital setting. Some of the contributors to negative patient experience include opposite gender of the physician performing the procedure, lack of procedural awareness and expectations and repeat examinations due to improper electronic health care record charting. A better understanding of the limitations and constraints involved from both the patient and physician perspective can help improve patient experience and overall clinical outcomes.

Keywords: Digital rectal examination, Patient centered, Patient experience, Physician awareness

1. Introduction

Patient-physician interactions in modern medicine have evolved from paternalism-driven ways of the past to one that encourages shared-decision making and encourages patients to play a more active role in their own care. This paradigm shift defines 'patient-centered care' and has led to more positive outcomes and perceptions of quality and satisfaction from patients.[1]

In some aspects of medicine, the power imbalance between patient and provider has much room for improvement, especially in acute clinical situations where the lack of a pre-existing patient-physician relationship limits shared decision-making. Patients with acute conditions requiring hospital admission often need urgent and invasive diagnostic tests with fewer opportunities to advocate for themselves due to the time-sensitive nature of their conditions. One such invasive maneuver that is often required and performed is the digital rectal examination (DRE). The DRE has been shown to be associated with significant levels of anxiety, embarrassment, and pain.[2–5] Previous studies have shown that patients' overall levels of anxiety, embarrassment, and willingness to proceed with DREs is impacted by the provider's gender and how well the patient feels the exam was explained prior to proceeding.[5,6] Efforts to improve the patient experience and reduce embarrassment and discomfort should be pursued

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through changes to current practice. The emphasis on bedside physical exam maneuvers in graduate medical education has waned in recent years, leading to both reductions in the diagnostic yield of certain maneuvers as well as the ability of physicians to reassuringly explain the indication of the exam.[4] In the inpatient setting, inconsistencies in documentation in the electronic health record (EHR) can contribute to patients undergoing invasive exam maneuvers without clear indications.[7]

While there are many articles in the literature regarding the utilization of the DRE, most of them are related to the outpatient ambulatory setting. This review focuses on factors that affect the patient perspective of the DRE, indications for the exam as well as potential methods for improving the patient experience, with a focus on the inpatient setting.

1.1. Indications

The indications for performing a DRE are vast and the exam can be diagnostically valuable in many conditions. Patients that present with gastrointestinal and urogenital complaints will benefit from a DRE as it can not only diagnose but also guide next steps in the patient's care.[8–10] A list of indications to perform a DRE are listed in Table 1.

Gastrointestinal bleeds are a particularly common cause of inpatient hospital admissions where a DRE is indicated. DREs can reveal hematochezia or melena, which is an important part of the diagnostic pathway and can help localize the cause of the bleeding to either the upper or lower part of the GI tract. In addition, the DRE can help risk-stratify a non-urgent versus acute to determine hospital admission with urgent intervention with endoscopy.[11] Previous studies have shown that when performed, the DRE leads to reduced hospital admissions, endoscopic procedures, and medical therapy.[8] The presence of a completed rectal exam assists in guiding medical management and decreases the number of unnecessary endoscopies. This demonstrates that the DRE can be a quick, diagnostic bedside maneuver, and is a useful adjunct in stewardship of hospital resources.

2. Demographics and predictors

Discrepancies between the number of rectal exams performed among individuals of different demographic groups have been noted in the literature. Patients who are older than age 50, on anticoagulant medications, or are Hispanic have been noted as having DREs completed on them more often, while patients who present to the hospital with altered mentation, or during nighttime hours tend to undergo fewer DREs.[8]

Patients older than age 50 were thought to be less likely to refuse a DRE when compared with their younger counterparts. One potential explanation may be that younger patients experience more embarrassment and anxiety regarding the invasive exam. Patients on an anticoagulant medication typically underwent DREs more often, likely due to their higher perceived risk and presentation with gastrointestinal bleeding. For Hispanic patients, one study found that a larger portion of patients that underwent DREs were Hispanic however another study showed no difference in exam rates between ethnic groups.[8,12] There's a lack of studies and therefore a big research gap highlighting the disparity in exam rates between different age groups, gender, socioeconomic paradigms, and most importantly cultural and ethnic groups.

Patients with altered mentation are unable to consent or decline any exam maneuvers and this may have led to provider reluctance to perform an invasive exam maneuver on a patient that is unable to speak for themselves.

In some cases, the difference in examination rate could be addressed such as increasing staffing during nighttime hours to allow for more thorough examination and an increased emphasis on bedside patient education regarding the benefits of certain exam maneuvers to reduce feelings of anxiety or embarrassment. However, to discuss disparities or

Table 1. Indications for digital rectal exam.

Clinical Symptoms Justifying Digital Rectal Exam	
Symptom	*Differential Diagnosis*
Rectal bleeding (Melena/Hematochezia)	Hemorrhoids, Anal fissures, Inflammatory bowel disease, Rectal neoplasia
Rectal/Anal Swelling or lump	Hemorrhoids, Rectal prolapse, Rectal cancer
Iron deficiency anemia	Bleeding, Neoplasia
Bladder/Bowel incontinence	Neurological disease (spinal cord injury)
Change in bowel habits (constipation/incontinence)	Rectal cancer, Constipation, Inflammatory bowel disease
Nocturia/Urinary dribbling (in males)	Prostate disease (benign or malignant)

discrepancies related to race, a more robust and specifically tailored study would be required.

2.1. Patient perspective

As patients are the recipients of medical care, the acknowledgement of the patient experience is an important step to make positive changes to clinical practice. Multiple studies have attempted to examine and assess the subjective experiences of patients undergoing DREs, the factors that improve their experience, and differences in comfort with invasive exam maneuvers with certain patient populations.

Patients across the demographic spectrum regardless of age or gender have reported some level of pain, anxiety, or embarrassment related to the DRE. Studies have shown that up to 75% of female patients experience uneasiness or anxiety prior to the exam and as many as 62% of male patients find it to be a traumatic exam maneuver. Younger patients also tended to report more anxiety.[5] Reasons cited for this discomfort were the sensitive and intimate nature of the exam and a sense of embarrassment. In some cases, the discomfort associated with the exam led patients to decline undergoing the exam altogether.[13]

One important factor that was found to mitigate discomfort associated with the DRE was education regarding the logistics of the exam and its indications. Patients that were given a verbal explanation as well as shown models and simulations of the DRE beforehand reported less anxiety and discomfort.[3] Another factor that can help decrease anxiety could be the option of being able to end the exam at any point. As part of consent for the exam, patients should be clearly informed about their ability to have the examiner stop at any point if they experience discomfort or embarrassment.[14]

Physician demeanour and ability to ease the patient can play a huge role in making the exam more acceptable as reported by a personal experience of a patient.[15] Another factor that potentially affects the patient experience is the gender of the provider. Previous studies show that a significant percentage of patients tend to prefer providers performing a DRE to be of the same gender with one study showing that females preferred a female provider 65% of the time while males preferred male providers 38.5% of the time.[10]

In a study about patients' reaction to DRE for prostate exam 54% of the patients imagined that the exam would be painful or embarrassing however 49.1% of these people changed their impression after the exam reiterating the importance of making the patient and the environment more comfortable for the patient before starting the exam.[16]

2.2. Physician perspective

The emphasis on teaching bedside physical exam maneuvers in graduate medical education has waned in recent years for a variety of reasons. Technological advancements have led to a rapid growth in the list of diagnostic tools and modalities that are more sensitive than the physical exam. Another barrier includes lack of time in the academic training environment as trainees often have multiple responsibilities and spend progressively less time at the bedside.[17] One survey found that resident physicians cited the lack of time and direct feedback at the bedside as the most significant barriers to adequate physical exam training.[4]

Although learning at the bedside has shown to be the most effective modality, opportunities to practice invasive exam maneuvers such as the DRE are not as readily available. Practicing the DRE on a standardized patient (SP) has been found to be a more effective method of educating trainees on the indications and proper execution of the exam than other less realistic methods such as the use of a simulation body.[18]

Less efficacious training likely results in physicians with less confidence in their physical exam skills. These physicians are also less proficient in understanding the indications of exam maneuvers leading to underdiagnosis of significant diseases such as rectal abscesses or gastrointestinal bleeding. Physicians are also less adept at explaining the indications for a DRE and the interpretation of their findings to patients at the bedside. This gap in training can be detrimental to both the patient experience and in clinical outcomes.[8] In some instances, patients have pursued litigation against hospital providers due to a DRE being performed.[19] This may represent a case of poor bedside communication regarding the benefits of a DRE leading to significant patient discomfort and anxiety. On the flip side, several reports of malpractice litigations can be found for missing a DRE when indicated leading to delayed or missed diagnosis.[20]

A survey of physicians and medical students found that the most common reasons for not performing a DRE were concerns for patient privacy and the perceived invasiveness of the exam. Furthermore, 56% of respondents endorsed some degree of discomfort with performing the exam. Physicians with more years of experience and subspecialists such as gastroenterologists tended to perform more rectal exams.[21] An additional concern

is that physicians that see a previous documented DRE in the health record may be reluctant to repeat an exam despite a change in the patient's clinical status occurring in the interim.

Chaperone utilization during rectal exams was also highly variable amongst medical trainees. A survey of internal medicine residents found that trainees do not feel that a chaperone is required 71% of the time when performing a DRE despite most respondents acknowledging that chaperones were important for patient comfort and dignity. The most frequently cited reasons for forgoing chaperone use were lack of staffing and time constraints.[22]

As the physical exam is being phased out in graduate medical education in favor of other objective modalities, medical school graduates are less comfortable with both executing physical exams and interpreting their findings. This is especially true with the DRE, where inadequate training can lead to worsened clinical outcomes due to patients declining the exam or the exam not being performed due to lack of provider confidence.

2.3. Role of health system

Given that the DRE is such an invasive exam maneuver that places stress and anxiety on the patient, efforts should be made to minimize the number of DREs that patients are subjected to while also maximizing the diagnostic yield of each exam. Standardized documentation of exams in the EHR is one way to achieve this goal. Previous studies have shown that the DRE is significantly under-documented in the EHR.[7,8] To prevent redundant uncomfortable exams, adequate documentation of a completed DRE is essential for the awareness of subsequently involved providers and consultants.

A standard documentation form or template that informs other providers of a completed DRE with the findings that could be filled out and recorded in the EHR could be one possible solution. An ideal template should include the provider and team performing the exam, pertinent findings of the exam and the clinical status of the patient. The patient's clinical status at the time of exam could be useful for clinical context in the case of a clinical change warranting a repeat exam. Also, the addition of a warning in EHR if the exam was performed in the past can prevent redundant examinations on the same patient by different providers. Table 2 provides a more thorough list of information that should be recorded each time a DRE is performed on a patient in the inpatient setting.

Although the implementation of a standardized template would be useful, there are some barriers to its implementation such as provider compliance given that the EHR is already convoluted and a major contributor to physician burnout.[23] However, other solutions to this issue have also been proposed. Software programs utilizing natural language processing enable the EHR to recognize and record the language that physicians document in order to track certain quality metrics that are inputted by physicians as free text and recorded automatically. This offers a possible solution to reduce documentation burden on providers.[24]

Table 2. Important data to include in Digital Rectal Exam documentation template.

Provider name:	Patient clinical information:
Providers team:	Vital signs:
Time & Date:	Labs:

Digital rectal exam findings:

- Observation: Inspect perianal area including perineum during straining to assess for prolapse, pelvic descent and puborectalis lift. Assess anal wink.
- Palpation: Assess resting anal tone, palpate for Levator ani tenderness, prostate for size and rectal wall for rectocele.

3. Conclusions

Rectal exams are an important diagnostic tool that can be performed at bedside to provide valuable information regarding disorders of the gastrointestinal and urogenital tracts. Negative patient experiences with rectal exams are related to some factors that are inevitable in the acute inpatient setting; however, many factors can be improved upon such as focusing on bedside patient education prior to the exam, increasing emphasis on the physical exam in graduate medical education and improvement to documentation in the health record. Standardizing the exam via a template in the EHR would be one method of improving the patient experience.

Overall, the DRE is an inadequately utilized diagnostic tool that, with some modifications, could improve the subjective patient experience and clinical outcomes. It is the provider's responsibility to bridge the inherent physician-patient power gradient by creating an equitable clinical environment in which patients feel empowered and informed about their care. Additional studies would be useful in further characterizing the patients' subjective experiences with the DRE during inpatient admissions as well as the role of under-documentation in repeat rectal exams. Also, more work should be done to determine the impact of DRE on outcomes of patients with GI bleed in inpatient setting. It is currently unclear whether patients of a certain race undergo DREs more often as the data in current studies is equivocal. Therefore, more

focused studies on this topic must be conducted to determine if a correlation exists.

Statements and declarations

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