Excessive Preoperative Evaluation
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Story from the Front Lines

A man in his 70s with history of hypertension and chronic kidney disease (CKD) developed a painful umbilical hernia and presented for surgical evaluation at an outside hospital. Preoperative evaluation by the surgeon revealed elevated creatinine and minimal microscopic hematuria with 6-9 RBCs/HPF but no casts. The patient did not have any urinary complaints and denied gross hematuria. His complete blood count was normal. The surgeon decided to postpone the surgery pending further work-up.

Patient was then referred to our hospital where he waited for a few months prior to meeting a primary care provider, who subsequently referred him to Urology and Renal services. One more month went by before the patient finally saw two specialists. During the same time frame, patient did notice any new urinary symptoms, with repeat creatinine remained stable and urinary analysis with the same level of RBCs. However, the pain of his abdominal hernia became worse with insufficient control from ibuprofen and acetaminophen so was started on low dose oxycodone. Additional work-up from renal clinic did not reveal any alternative etiology for his CKD which was presumed secondary to hypertension. From the Urologist's side, there was concern regarding the possibility of bladder cancer due to smoking, and decision was made to proceed to cystoscopy. A few more months passed by and the patient eventually completed cystoscopy, which showed no evidence of malignancy but revealed a benign finding of bladder diverticulum. The urologist concluded that the diverticulum required no additional work-up.

Finally, after approximately 6 months, the patient had his hernia repaired uneventfully. At follow-up visit in the renal clinic approximately one year after the hernia repair surgery, patient reported feeling well with no new urinary symptoms. His renal function remained stable and microscopic hematuria persisted.

Teachable Moment

The overuse of medical services is a known driving cause of rising healthcare cost and patient harm[1]. The Choosing Wise campaign, an initiative by the ABIM foundation, has led a national movement to educate patients and healthcare providers on avoidance of unnecessary medical procedures to drive down costs and ensure patient safety[2,3]. In the preoperative realm, excessive evaluations may subject patients to additional harm and lead to delay of the surgical procedures which they may urgently need. In a national survey regarding preoperative evaluation, the rate of total overuse was as high as 58%, with the desire from physicians to reassure patients or themselves being the most important driving force[4].

In the clinical vignette above, the patient was seeking care among three different facilities. Inability to obtain prior medical records across sites of care caused uncertainty from the physicians' perspective, especially when they encountered an abnormal lab value. Logically, postponing surgery and pursuing additional work-up for clarification seem to be a "safer" option for both the patient and physician. However, due to the extraordinary complexity of today's healthcare system with multiple payers and medical liability, such "safer" alternatives may not be completed in a timely manner, which may cause extended delay of the primary medical issue (repair of abdominal hernia) for the patient, leading to avoidable suffering and potential risk of opioid medication.

Possible solutions to overuse of preoperative evaluations would include: first, efficient sharing of medical records among providers to facilitate effective medical decision making; second, pragmatic studies could be performed to evaluate the surgical outcome with minor abnormal preoperative lab

value; third, effective triage of patient scheduling could be done to prioritize patients with an upcoming surgical need. Additionally, dissemination of evidence revealing that preoperative laboratory or imaging studies for low risk procedures in otherwise asymptomatic patients is rarely beneficial[5]. Finally, continuous advocacy efforts would also be needed to promote awareness of potential harm from excessive preoperative testing among patients, family members, and physicians.

References:

1. Emanuel EJ, Fuchs VR. The perfect storm of overutilization. JAMA 2008;299:2789-91.
2. Cassel CK, Guest JA. Choosing wisely: helping physicians and patients make smart decisions about their care. JAMA 2012;307:1801-2.
3. Volpp KG, Loewenstein G, Asch DA. Choosing wisely: low-value services, utilization, and patient cost sharing. JAMA 2012;308:1635-6.
4. Kachalia A, Berg A, Fagerlin A, et al. Overuse of testing in preoperative evaluation and syncope: a survey of hospitalists. Ann Intern Med 2015;162:100-8.

5. **SmetanaGWMacphersonDS**The case against routine preoperative laboratory testing**,** Med Clin North Am, 2003, vol. 87 (pg. 7-40).