The Case of a 71-Year-Old Man with Back Pain

Bouncebacks *appears semi-monthly in JUCM. Case presentations on each patient, along with case-by-case risk management commentary by Gregory L. Henry, past president of The American College of Emergency Physicians, and discussions by other nationally recognized experts are detailed in the book* **Bouncebacks! Emergency Department Cases: ED Returns** *(2006, Anadem Publishing, www.anadem.com; also available at amazon.com and www.acep.org).*

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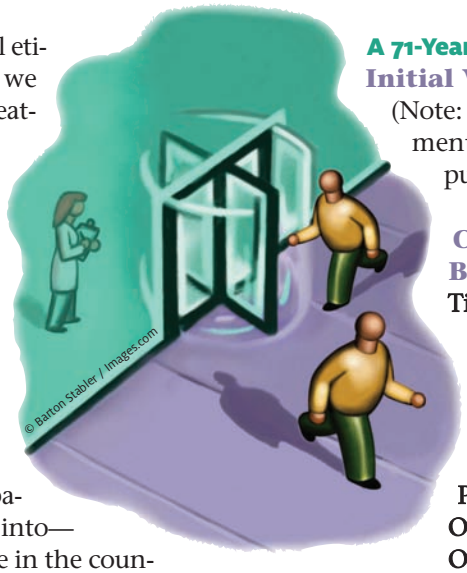
Though it is easy to predict the usual etiology of common complaints, we need to be able to exclude life-threatening causes of symptoms.

In law, we are innocent until proven guilty. In medicine, we are required to prove certain diseases are *not* occurring; we are, in a sense, guilty until proven innocent: A 50-year-old man with chest pain and diaphoresis has an MI until proven otherwise. A 22-year-old woman with lower abdominal pain has an ectopic pregnancy until proven otherwise.



Our case this month involves a patient with back pain. He could walk into—and out of—any urgent care practice in the country *unless* the provider has an index of suspicion for potential life-threatening causes of his symptoms.

An easy way to put this principle into practice is to complete the history and physical, then to revisit the symptoms with a "back door" approach by specifically evaluating for the life-threatening causes of the symptoms.

For example, if a patient has a headache, subarachnoid hemorrhage and meningitis need to be considered. After the provider has obtained information on the character of the pain, onset, duration, and exacerbating factors, specific questions can be asked to exclude these important diagnoses.

A 71-Year-Old Man with Back Pain

Initial Visit

(Note: The following is the actual documentation of the providers, including punctuation and spelling errors.)

CHIEF COMPLAINT (at 20:36):
Back pain

Time	20:48	00:11
Temp (F)	97.1	
Pulse	72	71
Resp	20	16
Syst	140	113
Diast	80	67
POS	L	S
O2 sat		98
O2%		RA
Pain scale	6	2

HISTORY OF PRESENT ILLNESS (at 21:09):
71yo WM with h/o HTN reports was watching the game and it had just started overtime when felt a spasm and pain in left lower back. Denies any twisting/turning/lifting/trauma to the back. Reports lay down on the hard floor to help the pain, took 2 advil from his wife and placed a cool cloth on the back. Still with spasm and unable to get up off the floor, so called 911 for assistance to ED. Denies any known recent back injury. No prior illness. No cough/rhinorrhea/chest pain/ear ache/sore throat/dysuria/

hematuria/urinary incontinence/numbness or tingling down extremities/bowel or bladder dysfunction/weakness in legs. Denies chest pain/abd. p., fever

PAST MEDICAL HISTORY/TRIAGE:

Triage nurse: Pain started spontaneously while at home watching TV. Pain is a stabbing, pressure in the left lower back that does not radiate. Denies trauma. Denies pain, or burning with urination.

Medication, common allergies: Morphine (nausea)
Current meds: Prinivil
PMH: Hypertension, kidney stones
PSH: Lobectomy for TB in the 1960's

EXAM (at 21:10)

General: Alert and oriented X3, well-appearing WM in no acute distress; lying flat on his back on the bed; unable to sit upright, but can roll over on his side

Head: Normocephalic; atraumatic.

Resp: Normal chest excursion with respiration; breath sounds clear and equal bilaterally; no wheezes, rhonchi, or rales

Card: Regular rhythm, without murmurs, rub or gallop

Abd: Non-distended; Patient has some tenderness to palpation in left upper quadrant without guarding or rebound

Back: No c/t/l midline tenderness; +tenderness to palpation over left paraspinous area in lumbar region

Ext: 5/5 strength DF/PF at ankles/IS/HS/quads; nl sensation to light touch; patellar DTR's 2+ and symmetric bilaterally; neg SLR bilaterally; 2+ DP pulses bilaterally

Skin: Normal for age and race; warm and dry; no apparent lesions

ORDERS:

At 21:00: Demerol 50 mg IVP, Phenergan 12.5 mg IVP, .9NS – 1L bolus

At 23:39: Vicodin 2 PO, Vicodin 2 PO to go

RESULTS (Reviewed at 21:58):

Test	Value	Units	Ref. Range
WBC	15.3	K/uL	4.6-10.2
HGB	13.2	G/DL	13.5-17.5
PLT	175	K/uL	142-424
NA	135	MMOL/L	135-144
K	5.1	MMOL/L	3.5-5.1
CL	102	MMOL/L	98-107
CO2	26	MMOL/L	22-29
BUN	22	MG/DL	7-18
CREAT	1.3	MG/DL	0.6-1.3

LFT's amylase/lipase: WNL
Urine dip stick: Protein; Results: Trace

PROGRESS NOTES (at 23:39):

Abdominal exam benign with palpation although reports that abdomen sore with palpation of lower left side and upper left side. Still with some muscle spasm in the lower back, but able to walk and desires to go home. Counseled patient to return immediately for worsening abdominal pain, fevers, etc.

DIAGNOSIS:

Spasm - muscle, back

DISPOSITION:

The patient was discharged to Home ambulatory. Follow-up with primary care physician in 2 days. Prescriptions: Vicodin 5mg Twenty (20). Take 1-2 by mouth every 4-6 hours as needed. Released from the ED at 00:19.

Discussion of Documentation and Risk Management Issues at Initial Visit

Error 1

Error: Abdominal pain was mentioned in the progress note but not discussed in the history of present illness.

Discussion: Concomitant abdominal *and* back pain in a 71-year-old significantly changes the differential diagnosis. There are many entities which cause both abdominal and back pain, including pancreatitis, peptic ulcer disease, aortic aneurysm, ureterolithiasis, pyelonephritis, mass, and diverticulitis.

The HOPI states patient denies abdominal pain. Just as discrepancies in the physician and nurses notes are difficult to defend, the physicians note needs to be consistent.

Teaching point: Subsequent findings often require the provider to revisit the history to further quantify these symptoms.

Error 2

Error: The patient required a significant amount of pain medication, possibly indicating a more serious underlying etiology of his symptoms.

Discussion: He initially received IV narcotics, then additional PO narcotics were ordered at the same time as documentation of a progress note saying he had improved. These incongruous events make the progress note hard to believe. If he was feeling so much better, then why did he require Vicodin on top of Demerol?

Teaching point: Repeated doses of narcotic meds in a 71-year-old man without a history of back pain is a red flag for more serious illness.

Error 3

Error: Over-reliance on normal urine.

Discussion: The urine does not show blood in 20% to 25% of patients with ureterolithiasis/kidney stones. The urine may show blood with a ruptured aortic aneurysm. With such concerning symptoms, it is important that a normal urine result not lead the doctor astray.

Teaching point: A test with low specificity and sensitivity is only marginally helpful.

Error 4

Error: Diagnosis is not consistent with symptoms.

Discussion: Why would a 71-year-old man without history of back pain suddenly have a spasm so severe that it causes him to call the paramedics? Our patient had no mechanism for his pain; it started as he was sitting watching TV and was so severe it brought him to the floor. After he had received two doses of narcotic pain medications, he stood up, said he felt better, and wanted to go home.

A physician needs to consider serious disease even if the patient attempts to talk him out of this possibility.

Teaching point: The onus is on the physician to exclude life-threatening etiologies of symptoms.

Bounceback Visit—ED Return Two Days Later

Shortly after 8 p.m. two nights later, the patient has sudden onset of abdominal pain radiating to the back. He calls his primary care physician, who does not return the call in 15 minutes. The patient's wife again calls 911.

When paramedics have the patient stand up to transfer to cart, he has a syncopal episode.

21:09 Presents per squad. Chief complaint of abdominal pain. Pulse 122, blood pressure 96/49, O2 sat 100%

21:13 *Physician documentation*: Severe abdominal and back pain. Has associated shortness of breath. No chest pain, blood in urine or stool.

Physical exam: The abdomen does have voluntary guarding and is moderately distended. He does have a pulsatile mass palpated in the left side of the abdomen. Femoral pulses both present but slightly decreased. Palpebral conjunctiva pale. Skin is moist. His mental status was alert and oriented, although he did keep closing his eyes during the history

21:16 Empiric diagnosis of ruptured aortic aneurysm. Vascular surgeon is paged and immediately calls back. Agrees to come in immediately for emergency surgery

21:27 Systolic BP decreases to 80. Hb returns at 6.5, indicating severe anemia. Pt. taken to surgery where ruptured aortic aneurysm is found. Surgery includes aorto-bi-iliac bypass with reimplantation of inferior mesenteric artery.

Pt. makes good recovery and leaves the hospital in good condition.

Unless a specific life-threatening entity is considered in the differential diagnosis, it will not be found.

Discussion of Ruptured Aortic Aneurysm and Risk-Management Principles

This patient presented initially, as do many patients, with ruptured abdominal aortic aneurysm (AAA); he had atypical symptoms which were mistakenly attributed to another disease entity.

The triad of ruptured aortic aneurysm is hypotension, back pain, and pulsatile abdominal mass, but less than half of patients present with all three symptoms. Almost a quarter of patients with AAA are initially misdiagnosed with renal colic.

The incidence of AAA is 1% in men over the age of 65 and is the cause of death in 15,000 patients per year. Most asymptomatic aneurysms are found incidentally on a CT or ultrasound of the abdomen.

Frequent presenting symptoms in patients with AAA are syncope, abdominal pain, hypotension, or back pain. Sudden death may also occur. Risk factors include hypertension, tobacco use, and age. If diagnosis is delayed until rupture, mortality skyrockets to 75%.

Physical examination can be misleading. Peripheral pulses may be normal, even in cases of rupture. Cullen (periumbilical ecchymosis) and Grey Turner's signs (flank ecchymosis) indicating retroperitoneal hematoma occur only rarely. Pulsatile abdominal mass in unreliable.

The diagnosis in an unstable, hypotensive patient is clinical, as occurred when our patient returned. He was taken to the operating room based on symptoms and physical exam findings. If he had been taken to the CT scanner while so unstable, he likely would have "crashed" there and the outcome may have been different.

Labs with acute rupture will be normal, as was the case at the initial visit; the patient did not have anemia until he returned. CT is almost 100% accurate, but the risk in the acute-care setting is that an unstable patient will need to be transferred. US is good at determining if there is an aneurysm, but CT is better at determining rupture. A bedside ultrasound, if available, can be performed rapidly and is almost 100% sensitive. There is no role for plain x-ray in diagnosis of AAA; if suspected, US or CT should be emergently performed.

In 1994, Michael Kefer published a study in the *Annals of Emergency Medicine* entitled Death After Discharge from the ED. The endpoint was death within seven days of ED visit. The researchers found nine patients who had been discharged and subsequently died from a medical error; interestingly, three of the nine died from ruptured AAA.

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Risk Management Principles

The main lesson to learn from this case is, when faced with an unusual presentation in a patient with risk factors for a potential life-threatening illness, the life-threatening causes need to be excluded.

Our patient had no mechanism for a back strain/spasm and had an unusual presentation; he was sitting in a chair watching TV when his pain started. He did have some pain with palpation of the back, but the physical exam was not definitive evidence that a more serious etiology was occurring. Abdominal pain was mentioned, but not adequately pursued. In addition, he had two significant risk factors for AAA: age and hypertension. It is rare for a 71-year-old to present to the ED with the first episode of back pain in his life. ■

Suggested Readings

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