



Remember The Man You Sent Home Last Night...



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Harold's Case

Harold, the 69-year-old father of a local politician, presented to the ED the previous evening with left flank pain, very similar to the attack of "kidney stones" that he had suffered several years ago. His urine dip showed +++ hematuria and examination of his somewhat obese abdomen was normal. His pain settled with NSAIDs and narcotic analgesics and he was discharged with a diagnosis of renal colic.

The next day, a colleague stops you in the corridor with the dreaded words, "Remember the patient..." He tells you that the patient came in a short time ago with no vital signs, presumably from a ruptured abdominal aortic aneurysm (AAA).

Questions & Answers

1. *How could this happen to me (and him)?*

Take a few deep breaths, stay calm—it's going to be OK. Although about one in four cases of ruptured abdominal aortic aneurysms (AAAs) are initially misdiagnosed as renal colic,¹ the explanation is much broader than this statistic. The clinical environment of emergency medicine is well supplied with conditions that can present with symptoms far more like those of different, benign disorders than their own "classical" presentations (Table 1).

Humans are vulnerable to poor decision-making: half of marriages fail, many people trust their horoscopes as predictions of the future, believe in UFOs, spend money in gambling institutions that are designed to take it from them far more often than reward them and believe in extra-sensory perception. There are many other examples of irrational judgement and decision-making. Psychologists have actually described us as having "deep defects in the design of our cognitive machinery!"² In other ways, however, we have evolved to be quite efficient in decision-making, by developing almost reflex reactions to recognized situations. These biases, or cognitive dispositions to respond (CDR),³ are largely unconscious and can be useful in situations where we have to make multiple decisions and only the majority of these need to be correct. In medicine, however, where we expect ourselves to make more accurate and more consequential decisions, they can cause us (and our patients) problems. The case above illustrates the effect of several of these CDR on clinical decision-making (Table 2).

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Table 1

Examples of dangerous conditions that may masquerade as benign illness

Mimic/apparent diagnosis	Critically dangerous condition
GERD/chest wall pain	Acute coronary syndrome (MI, UA) Aortic dissection Myocarditis
Renal colic	AAA Ischemic gut
Anxiety	Supraventricular tachycardia ASA toxicity Methanol/ethylene glycol toxicity Pulmonary embolism Pheochromocytoma Acute coronary syndrome
Constipation	Bowel obstruction Ischemic gut AAA
Upper respiratory infection	Pneumonia Pulmonary embolism Congestive heart failure
Cellulitis	Deep vein thrombosis Necrotizing fasciitis Ischemic limb

GERD: Gastroesophageal reflux disease
UA: Unstable angina

2. *What do I do now?*

If necessary, take a few minutes alone to regain composure. Contacts you should make as soon as possible include the head of your department or medical staff and the Canadian Medical Protective Association (CMPA). Go to a quiet place and record everything about the case, including who you were working with, the stage of your shift, the situation in the department and anything else that might have affected your thought processes. Include how you were feeling at the time, how long you had been working and how rested you were before the shift. This process is referred to as a cognitive autopsy.⁴ Discuss the case and your feelings with a trusted colleague and/or spouse. Avoid discussing the case with other people where possible—the rumour mill is rarely helpful in these cases.

Feelings of guilt, self doubt and despair are common. Try to recognize that these are normal reactions in such situations and may interfere with your being able to acknowledge that you are not a bad doctor and that making mistakes is part of life.

Although, traditionally we were advised not to speak to the family (or patient if they are alive after a diagnostic error), this approach is falling out of favour. After discussing the idea with your legal advisor and clinical chief, you may wish to contact the family to express your condolences and regret that this has happened, especially if the family is known to you. This need not be an expression of guilt, but an honest acknowledgement of your sympathy and regret that this happened. Rather than discussing the details of the case, you could say that the issue will be investigated thoroughly. If you are uncomfortable doing this, your chief of staff may want to call or visit. Remember, too, that an apology to the patient, family or

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Table 2


Some CDR that may have been in play in the present case

CDR explanation	Avoidance strategy
<p>Triage cueing</p> <p>When the patient tells the triage nurse that the pain was similar to his previous “kidney stone,” he sets her up for assuming the diagnosis is ureteral colic. Her intuitive belief may result in triage to an inappropriate area of the ED (geography is destiny).</p>	<p>Triage cueing</p> <p>Be wary of the cueing that can go on at triage. Triage nurses only have very short windows in which to assess patients and can easily convey their first impressions (and/or the patient’s own impressions) to other staff in the ED, especially by writing inappropriately on the chart.</p>
<p>Anchoring</p> <p>The presentation of flank/back pain, nausea and vomiting and hematuria establishes a “context” in which the “intuitive” diagnosis gets anchored.</p>	<p>Anchoring</p> <p>Anchoring is ok providing you are willing to adjust the diagnosis later, if needed. Mistrust and step back from first impressions. When the first diagnosis comes to mind, again ask, “What else might this be?”</p>
<p>Confirmation bias</p> <p>The finding of hematuria confirms our initial impression (although ureteric irritation from an AAA can cause hematuria).</p>	<p>Confirmation bias</p> <p>Disconfirming evidence is usually more powerful than confirming evidence. Look for definitive ways to disconfirm what you believe the diagnosis to be. Alternatively, adopt rule out worst case scenario (ROWS) and (in this case) do an abdominal U/S.</p>
<p>Diagnostic momentum</p> <p>His improvement on standard “renal colic” treatment reassures us that this is what he has. The diagnosis gathers momentum without gathering real evidence.</p>	<p>Diagnostic momentum</p> <p>Remember that response to treatment is a poor diagnostic tool. Be aware that our first impressions have momentum and need to be challenged before they become our final diagnosis.</p>

CDR: Cognitive dispositions to respond
U/S: Ultrasound

friends does not carry with it any admission of guilt in at least four provinces in Canada (British Columbia, Manitoba, Saskatchewan and Nova Scotia) and cannot be used against you later.

3. *If it is human to make mistakes, am I powerless to avoid this scenario?*

Like traffic rules and good driving habits make the roads safer, there are rules and habits that can decrease our chances of making diagnostic errors. We live in a world of partial denial, facing dangers every day. If we were to dwell on each of these, we would never drive our vehicles or go out of our houses. Part of our denial is exonerated by the fact that we are able to be careful and try to know and understand the dangers of life, avoiding them where possible. Emergency medicine has many dangers similar to the one illustrated above, that can be managed through awareness of CDR and the situations where they lurk. Study the list on Table 2, or read further on the subject.³ Use metacognition (thinking about how you think) when making diagnoses, asking yourself if any of these biases might have influenced your thinking or not and if so, whether or not you might have prevailed with another diagnosis, despite their influence. 

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