The Joint Commission

Case Example #4 — Part 1

Found too late: Missed diagnosis leads to delay in treatment

UPDATED:
See added safety strategies on page 2

CASE EXAMPLE

A healthy and active 32-year-old male who had a history of hemophilia and chromophobe renal cell carcinoma with nephrectomy two years prior, presented to an urgent care clinic with complaints of fatigue, nausea, diarrhea, and acute and chronic abdominal and back pain. He had intermittent generalized abdominal and lower back pain for two months prior, which had increased in severity. He also was self-administering a prescribed clotting product (FVIII) to manage low hemoglobin for a spontaneous bleed of unknown origin but was presumed to be related to a rotator cuff tear from sports. Having just returned from traveling abroad, the patient was evaluated for suspicion of "traveler's diarrhea" and treated accordingly.

With the winter season, the clinic was extremely busy with an increased volume of patients, creating a sense of urgency to maintain flow.

One month later, symptoms persisted and were increasing in severity. The patient presented once again to the urgent care center with nausea, acute abdominal and back pain, indigestion, fatigue, and weight loss. He was seen by a different provider who diagnosed influenza virus — not uncommon for the time of year — and the weight loss was explained as associated with work-related stress with counsel to rest over the holidays.

Several of the previous patients the provider had seen presented with similar, flu-like symptoms, increasing a bias toward that diagnosis.

Given the urgency and pace of the clinic, the patient's past medical history was not well explored.

With symptoms increasing — including new pressure developing on the patient's diaphragm — and growing frustration, the patient saw his primary care provider the following week. A follow-up visit was established with an order for a barium swallow test to evaluate (through X-ray) the upper GI tract for suspicion of a hiatal hernia.

Though the outpatient primary care provider was associated with the larger organization where urology consults and surgery occurred, medical records were not well integrated, making access cumbersome and time-consuming to review.

The patient traveled home to spend the holidays with his family. To them, he looked pale, thin, fatigued and unwell. Dubious of a hernia, they felt something was not adding up, and the patient and his family were eager for further testing to be done after his return home, having discussed the possibility of cancer recurrence.

The barium swallow study was performed and determined to be negative.

More than a month passed with the patient experiencing increasing acute abdominal pain, loss of appetite, fatigue, anemia, and vomiting such that the patient reported to his primary care physician that he was vomiting daily at work and had increased inability to eat or drink with comfort. Several more encounters evaluating the patient's GI tract and gallbladder occurred during this time and were inconclusive as to cause.

The patient's medical history was not explored or discussed with the patient. Instead, the focus was on GI-related issues, which the patient assumed to be reasonable, expecting the provider to have access to and awareness of his past medical history.

One evening, the patient was driven to the emergency department. He was weak, lightheaded, vomiting, anemic and dehydrated. He was admitted, and imaging studies of the abdomen and pelvis were taken. Results showed significant ascites and tumor masses in the abdominal cavity, and tumor nodules throughout the peritoneum.

The patient was diagnosed with peritoneal cancer deriving from the primary renal cell carcinoma. Unable to eat with comfort, he was placed on total parenteral nutrition (TPN). He expired seven months after the correct diagnosis.

Despite several encounters with medical providers, including his primary care physician, the work-up focused on benign sources of abdominal discomfort without review of his medical history.

It was later discovered that a lesion had been identified in a routine follow-up CT of the patient's abdomen and pelvis that was performed one month before the onset of symptoms. While the abnormal radiology finding was included in the medical record, follow-up communication with the urologist did not occur and the abnormal finding was lost for follow up. The source for the drop in hemoglobin and red blood cells was identified as being due to tumor bleed and not a rotator cuff injury. Spontaneous bleeding was a known symptom with his initial chromophobe renal cell carcinoma diagnosis two years prior, but was never explored.

There was one radiologist on shift with a larger than normal work volume. The workflow for communicating abnormal findings with the provider relied on memory, and there were no electronic system flags to indicate results received.

Note: This case example is an actual event that occurred to a family member of a Joint Commission employee. The employee and her family have given permission to The Joint Commission to share their loved one's story in hopes that others will avoid similar missed diagnosis and delays in treatment.

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Case Example #4 — Part 2

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SAFETY STRATEGIES

A healthy and active 32-year-old male who had a history of hemophilia and chromophobe renal cell carcinoma with nephrectomy two years prior, presented to an urgent care clinic with complaints of fatigue, nausea, diarrhea, and acute and chronic abdominal and back pain. He had intermittent generalized abdominal and lower back pain for two months prior, which had increased in severity. He also was self-administering a prescribed clotting product (FVIII) to manage low hemoglobin for a spontaneous bleed of unknown origin but was presumed to be related to a rotator cuff tear from sports. Having just returned from traveling abroad, the patient was evaluated for suspicion of "traveler's diarrhea" and treated accordingly.

One month later, symptoms persisted and were increasing in severity. The patient presented once again to the urgent care center with nausea, acute abdominal and back pain, indigestion, fatigue, and weight loss. He was seen by a different provider who diagnosed influenza virus — not uncommon for the time of year — and the weight loss was explained as associated with work-related stress with counsel to rest over the holidays.

With symptoms increasing — including new pressure developing on the patient's diaphragm — and growing frustration, the patient saw his primary care provider the following week. A follow-up visit was established with an order for a barium swallow test to evaluate (through X-ray) the upper GI tract for suspicion of a hiatal hernia.

The patient traveled home to spend the holidays with his family. To them, he looked pale, thin, fatigued and unwell. Dubious of a hernia, they felt something was not adding up, and the patient and his family were eager for further testing to be done after his return home, having discussed the possibility of cancer recurrence.

The barium swallow study was performed and determined to be negative.

More than a month passed with the patient experiencing increasing acute abdominal pain, loss of appetite, fatigue, anemia, and vomiting such that the patient reported to his primary care physician that he was vomiting daily at work and had increased inability to eat or drink with comfort. Several more encounters evaluating the patient's GI tract and gallbladder occurred during this time and were inconclusive as to cause.

One evening, the patient was driven to the emergency department. He was weak, lightheaded, vomiting, anemic and dehydrated. He was admitted, and imaging studies of the abdomen and pelvis were taken.

Results showed significant ascites and tumor masses in the abdominal cavity, and tumor nodules throughout the peritoneum.

The patient was diagnosed with peritoneal cancer deriving from the primary renal cell carcinoma. Unable to eat with comfort, he was placed on total parenteral nutrition (TPN). He expired seven months after the correct diagnosis.

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Organization leaders implemented daily safety huddles to proactively anticipate patient volume, flow and resource constraints in order to better promote conditions and allocate time for effective communication and decision-making.[1,2]

Recognizing the risk of cognitive biases in the diagnostic process, the organization convened a team to evaluate the systems conditions that influence decision-making. The team eliminated wasteful work that was burdensome and distracting, increased the efficiency and accuracy of information retrieval, and provided real-time decision support.

Leadership also endeavored to promote a nonpunitive culture for reporting diagnostic error to enable learning and improvement. Reflective case reviews were incorporated among physicians to raise awareness as to how biases can influence diagnostic errors.[2,3]

Using the National Coordinator for Health Information Technology's SAFER Guides, the organization initiated a self-evaluation of its EHR to evaluate timely access to information, reliability of communicating and reporting test results and "closing the loop" — the communication loop — with the patient.[4,5]

The organization implemented targeted systems, processes and physician training to empower and engage patients (and families) in their care and elicit feedback.[6]

Multidisciplinary teams evaluated ambulatory care workflows and optimized information technology (IT) solutions to automate processes to ensure that tests were received, acted upon in a timely manner, and effectively communicated to a provider responsible for follow-up care. Back-up procedures were established to flag unacknowledged test results and initiate follow-up actions after a specified timeframe.[7]

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RESOURCES

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5. Partnership for Health IT Patient Safety workgroup. Health IT safe practices for closing the loop: Mitigating delayed, missed, and incorrect diagnoses related to diagnostic testing and medication changes using health IT. 2018, ECRI Institute.

6. Health Research & Educational Trust. September 2018. Improving diagnosis in medicine change package. Chicago, IL: Health Research & Educational Trust. September 2018. Accessed at http://www.hret-hiin.org/

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