ST. VINCENT CHARITY MEDICAL CENTER

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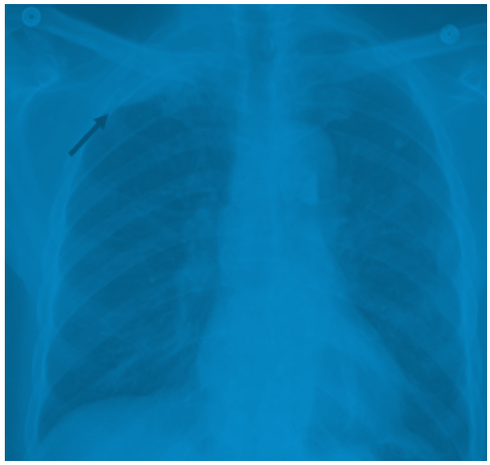

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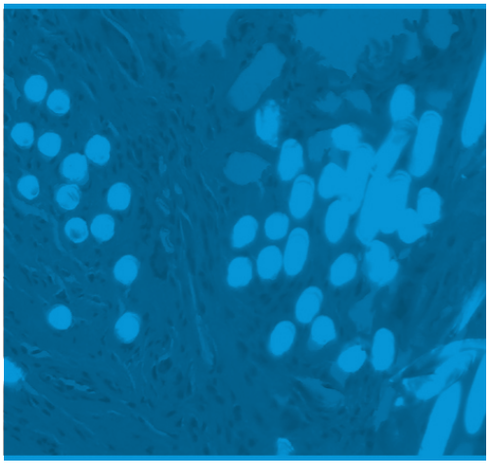

ST. VINCENT CHARITY MEDICAL CENTER JOURNAL
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ST. VINCENT CHARITY
MEDICAL CENTER

The St. Vincent Charity Medical Center family is committed to the healing mission of Jesus. We serve with: a deep respect for the dignity and value of all persons; our practice of quality care; our dedication to the poor; and, our commitment to education. St. Vincent Charity Medical Center, with the commitment of its Caregivers and physicians, will be a leading model for healthcare delivery in Northeast Ohio based on its faith-based mission, dedication to education, commitment to the communities it serves, excellence in the patient experience it provides, focus on surgical services, and partnerships with physicians and other constituencies.

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A MESSAGE FROM THE EDITOR

The heated debate on Obamacare—whether or not it is good thing—motivated me to learn more about our health care, where we stand compared to other countries and if we need to change our system. In reality you don't want to fix something which is not broken.

A simple online search revealed many interesting data that I am going to share with you. You can decide whether or not you are a supporter of healthcare reform. Let me start with a few simple quality markers comparing United States with the Organization for Economic Cooperation and Development (OECD), an international economic group comprised of 34 member nations:

1. An American lives to 78.7 years of age on average, an OECD member to 79.8 years
2. The U.S. had 2.4 practicing physicians per 1,000 people—well below the OECD average of 3.1
3. The number of hospital beds in the U.S. was 2.6 per 1,000 population in 2009, lower than the OECD average of 3.4 beds
4. Life expectancy at birth increased by almost nine years between 1960 and 2010, but that's less than the increase of more than 15 years in Japan and more than 11 years on average in OECD countries

How much are we spending?

The U.S. spent $8,233 on health per person in 2010. Norway, the Netherlands and Switzerland are the next highest spenders, but in the same year, they all spent at least $3,000 less per person. The average spending on health care among the other 33 developed OECD countries was $3,268 per person. We devoted 17.6 percent of GDP in 2010 to healthcare. The Netherlands is second, at 12 percent of GDP, and the average among OECD countries was almost half that of the U.S., at 9.5 percent of GDP.

Do we do anything better than them?

If insured, waiting times for U.S. patients are among the lowest in OECD countries. Relatively fewer patients (just 20 percent) wait more than four weeks for a specialist appointment or more than four months for elective surgery (7 percent). OECD Health Data shows that the five-year survival rate for breast and colorectal cancers are higher in the U.S. than in other OECD countries. We have much shorter average length of stay in a hospital (4.9 days versus 7.1 days) and less consultation per capita, 3.9 versus 6.4.

These are only a few examples of what we are doing right or wrong. So, what do you think now? Let me know by sending an email to researchjournal@stvincentcharity.com.

Keyvan Ravakhah, MD, MBA, FACP
Editor in Chief

We want to hear from you. Send your feedback to researchjournal@stvincentcharity.com

Vampirism: Myth or Disease

By **Preethi GK Venkatesh, MD; Amanda Lathia, MD; and Keyvan Ravakhah, MD**

LEARNING OBJECTIVES

1. To identify malingering/factitious disorder early in the course and avoid extensive use of medical resources.
2. To recognize the importance of obtaining clear psycho-social history on admission.

BACKGROUND

Factitious disorder and malingering are conditions in which patients recurrently seek medical care for self-inflicted or feigned illness. Bleeding is an uncommon presentation.

OBJECTIVE

To report a case of factitious disorder and malingering presenting as hematemesis and resulting in extensive use of medical resources over a 27-day hospital stay in order to arrive at a diagnosis.

CASE REPORT

A 25-year-old Caucasian woman with a history of heroin abuse was transferred to a tertiary academic hospital with hematemesis and abdominal pain. Two months prior to her transfer, she had a cesarean delivery complicated by wound infection, sepsis, transaminitis, and traumatic pneumothorax. Upon transfer, she reported multiple episodes of hematemesis, witnessed only by her mother on one occasion. She denied chest pain, melena, or hematochezia.

On physical examination, she appeared well-nourished in no acute distress. Her vital signs were stable without orthostasis. Her abdomen was soft and nondistended but diffusely tender to light palpation. She had a peripherally inserted central line (PICC) due to difficult intravenous access. She reported multiple episodes of hematemesis while hospitalized, though all were unwitnessed. However, her clothing was blood tinged and there was blood in the toilet. Her hemoglobin dropped below 7.0, and normalized after several units of blood products but kept fluctuating throughout the hospital course until the diagnosis was made (Figure 1).

She underwent extensive evaluation during the hospital stay, including 4 esophagogastroduodenoscopies (3 under general anesthesia), capsule endoscopy, tagged red blood cell scan, and 2 laryngoscopies. Two upper endoscopies showed blood in the oropharynx (Figure 2) and duodenum (Figure 3), but no active bleeding. No bleeding was seen in other endoscopy evaluations. Capsule endoscopy showed red liquid in her stomach.

In the light of high suspicion for malingering, a sitter was ordered on day 21. The sitter witnessed the patient manipulating the PICC, and a room search revealed a bloody IV catheter in her bedside drawer. Concern was raised that she was intentionally bleeding herself, possibly drinking her blood, and inducing emesis, although she denied these hypotheses. The PICC line was removed, and her hematemesis resolved.

Psychiatry and social work discovered that the patient's 2-month-old son had tested positive on birth for heroin, and the patient's ex-husband was fighting to gain custody of their two sons from the patient's mother. The patient's motivation to be hospitalized was because of the fact that she believed that her mother would continue to have temporary custody as long as she | continued on p.8

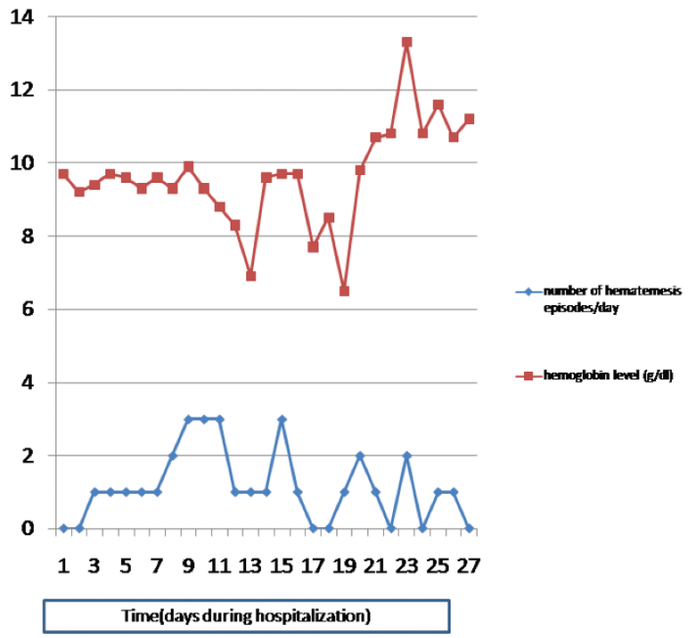

Figure 1: Trends in hemoglobin and hematemesis episodes.

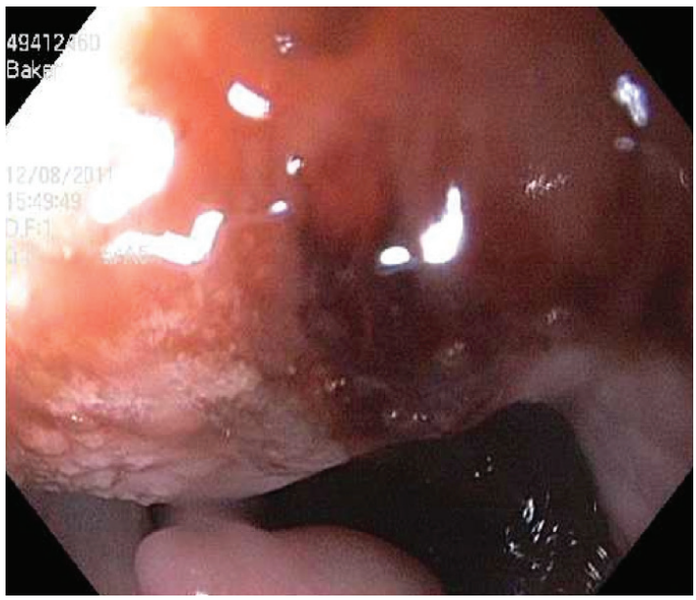

Figure 2: Blood in the oropharynx

Hyponatremia Associated with Unilateral Hand Weakness and Numbness

By **Buthayna Dinary, MD; Khaldoon Shaheen MD; Fazel Dinary, MD; Srinivas Merugu, MD, FACP, MMM; and Keyvan Ravakhah, MD, MBA, FACP**

LEARNING OBJECTIVES

1. To describe a rare case of NSCLC presented as Pancoast tumor complicated by brachial plexopathy and associated with SIADH as a paraneoplastic phenomena.
2. To emphasize that early recognition and appropriately applied management may significantly improve symptoms and prevent complications of hyponatremia which may enhance quality of life in patients with paraneoplastic SIADH.

INTRODUCTION

Syndrome of inappropriate secretion of antidiuretic hormone (SIADH) is a well-recognized paraneoplastic phenomenon and it is typical of small cell lung cancer (SCLC). It is rarely if ever found in non-small cell lung cancer (NSCLC). We herein describe a rare case of NSCLC presented with brachial plexopathy manifestations associated with SIADH. It also emphasizes that early recognition and appropriately applied management may significantly improve symptoms and prevent complications of hyponatremia, which may enhance quality of life in patients with paraneoplastic SIADH.

CASE PRESENTATION

A 62-year-old previously healthy man, worked as a mechanist, presented with three months history of worsening right hand weakness and numbness with difficulty operating machinery at work. He reported having pain in his right axilla and scapula for one year which felt like ice pick with numbness. These symptoms progressively extended along the posterior aspect of his arm and forearm and involved the right hand with flexion deformity of the right hand and fingers. He had no neck pain, headaches or dizziness. He had no trauma to the neck or head. He reported anorexia, fatigability, unintentional weight loss of about 20 lbs over 3 months and mild chronic | continued on p.8

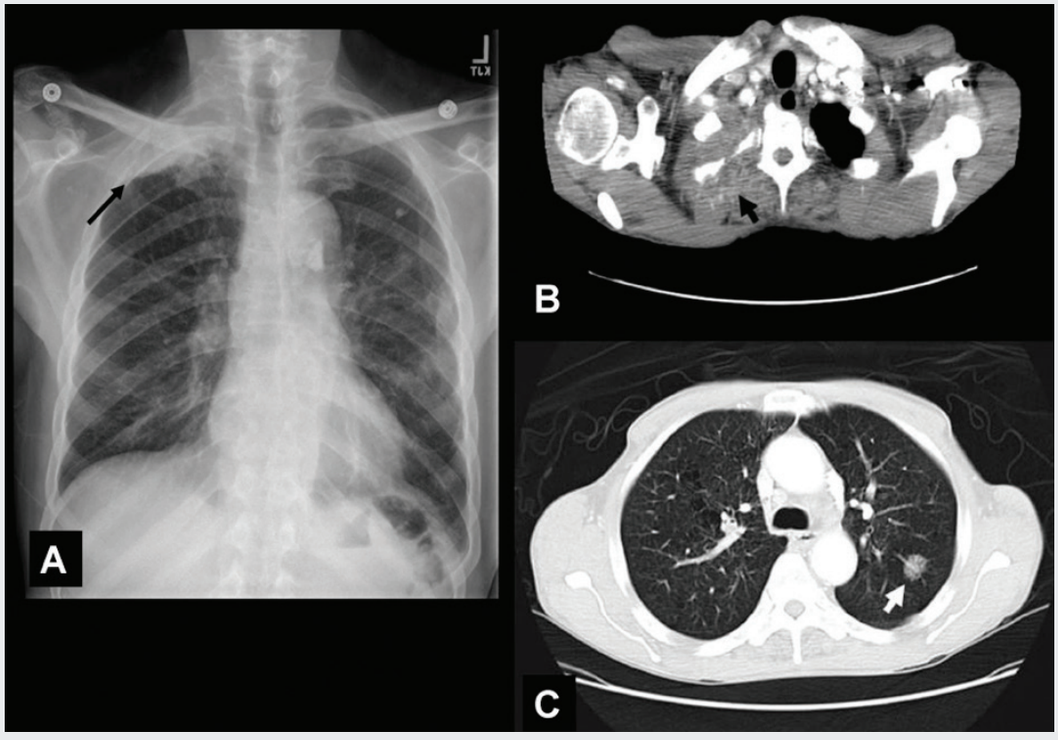

Figure 1 (left): (A) CXR showed right apical pleural based density suggestive of a soft tissue mass lesion. (B) CT scan chest, inhomogeneous mass (6.0×5.4 cm in dimension) in the right apex (black arrow). It appears to invade the local chest wall and posterior aspect of the right second rib and suspicious for primary neoplasm (Pancoast tumor). (C) CT scan chest shows a separate left lung metastatic nodule (white arrow).

Acute Urinary Retention Due to Benign Ovarian Cyst

By **Praveena Iruku, MD; Ahmed Elsherbiny, MD; and Katarzyna Hause-Wardega, MD**

LEARNING OBJECTIVES

1. To consider the possibility of malignancy in postmenopausal women with ovarian cysts, especially those presenting with acute onset of urinary retention.
2. To utilize the Risk of Malignancy Index (RMI) as an important tool in the risk-stratification of patients with gynecological malignancy.

INTRODUCTION

Acute urinary retention is defined as inability to pass urine in spite of urge to urinate. It is associated with lower abdominal pain and distension. It is most common in older men. Benign prostatic hyperplasia is the cause in more than 50% of patients. Other common causes include constipation, urethral strictures, post-operative and neural problems. It is uncommon in women although women frequently encounter bladder dysfunction. Fibroids in premenopausal women and malignancy of pelvis, urethra and vagina are other causes in these patients.

CASE PRESENTATION

History: This is a 76-year-old Caucasian woman with past medical history of hypertension, hypothyroidism and osteoarthritis who came in with complaint of acute urinary retention. According to the patient she had not been able to pass urine for the past 22 hours and acute onset of abdominal pain for the past day. She denied presence of urinary symptoms in the past. She complained of abdominal pain mostly in the suprapubic and right lower quadrant, 10/10 in intensity, constant pressure-like sensation, no radiation, associated with nausea. She could not identify any aggravating factors. The suprapubic pain was partly alleviated after the Foley catheter was placed, but the right lower quadrant pain did not change. She said that for the past two days she had diarrhea, which was described as frequent small amounts of stool, soft in consistency without any blood or mucus.

She had a history of vaginal prolapse for which she underwent surgery many years ago. She had no recent surgeries and no back problems. She went into menopause about 20 years ago. She denied any abdominal bloating, early satiety or weight loss. Her family history was negative for breast cancer or ovarian cancer. She did not take any opioids, anticholinergics, or over-the-counter antihistamines. Her home medications included acetaminophen, meloxicam, levothyroxine and hydrochlorothiazide. She was a homemaker.

Physical Examination: Vital signs were as followed: T 36.4, RR 24, HR 105, BP 160/84. On examination she had severe tenderness in the right lower quadrant with voluntary guarding. She also had some mild suprapubic discomfort. There was no rigidity, rebound tenderness, organomegaly or flank tenderness. There were no masses palpable on the abdominal exam. Rectal exam was normal. Pelvic exam was positive for a complex mobile mass palpated in the vaginal cuff. It was also compressing her rectum. Cervix was normal. Neurological examination was unremarkable.

Laboratory examination was significant for WBC count of 15,600 and hemoglobin of 13.5. Comprehensive metabolic panel was normal. Urinalysis was positive for RBC count of 11-15 without any evidence of infection. A CT of the abdomen with oral contrast revealed a large 13.8 cm cystic mass with a completely compressed bladder representing an ovarian mass. | continued on p.10

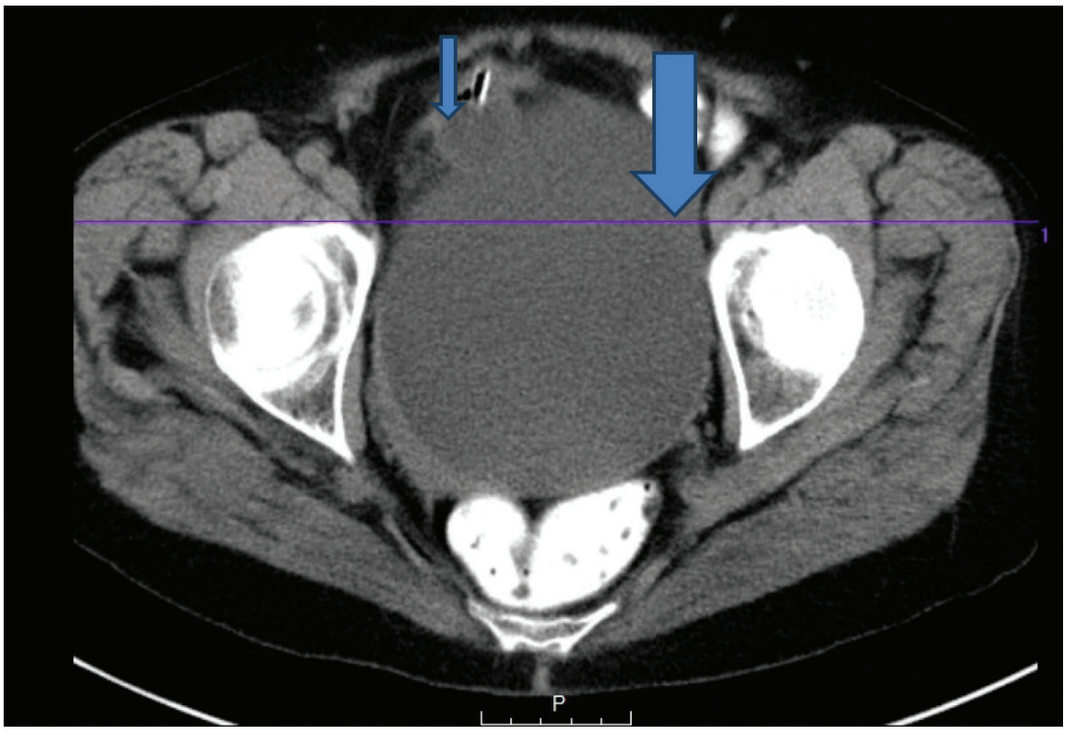

Figure 1: A large ovarian cystic mass compressing on the bladder which is seen with the Foley in it.

IgG4 Cholangitis— A Mimicker of Cholangiocarcinoma

By **Preethi GK Venkatesh, MD; Madhusudhan R Sanaka, MD ; and Keyvan Ravakhah, MD**

LEARNING OBJECTIVES

1. To differentiate various types of Cholangitis
2. To identify the underlying causative pathologies for adults with biliary strictures

INTRODUCTION

IgG4-associated cholangitis (IAC) is associated with autoimmune pancreatitis (AIP) [1]. We present a case of an elderly man with a biliary stricture suggestive of cholangiocarcinoma (CCA) on imaging. Further evaluation revealed IAC masquerading as CCA.

CASE PRESENTATION

An 80-year-old Caucasian man with a past medical history of distal pancreatectomy for a pancreatic mass 10 years ago presented with anorexia, nausea, abdominal pain and low-grade fever. He also reported that his urine was yellowish-orange. He was moderately tender to palpation over the epigastrium and had elevated bilirubin (8.9 mg/dl) and alkaline phosphatase (645 IU/L) levels.

Abdominal ultrasound demonstrated dilation of the common bile duct to 10 mm. However, no filling defect was seen and patient had already undergone cholecystectomy. Computerized tomography of abdomen demonstrated 1-2 cm segment of wall thickening and stricture of the extrahepatic bile duct near the cystic duct insertion with intrahepatic biliary duct dilation suggestive of possible CCA. (Figures 1 and 2) His CA 19-9 was also elevated at 322 U/ml (Normal < 33 U/ml). Endoscopic retrograde cholangiopancreatography performed subsequently revealed a 1.5 cm mid common bile duct stricture with mild proximal dilation.

Brushings were obtained from the stricture which revealed inflammatory cells with no malignancy. IgG4 levels were sent because of a previous history of a distal pancreatic mass. IgG4 levels were elevated at 284 mg/dl (11-112 mg/dl). The histology specimens were obtained from his previous surgery and re-review showed evidence of IgG4-associated sclerosing pancreatitis with markedly increased numbers of IgG4 positive cells.

The patient was treated with prednisone 40 mg daily; liver enzymes and bilirubin levels normalized and clinical symptoms subsided. After several weeks prednisone was tapered and the patient was maintained at 10 mg daily. Magnetic resonance cholangiopancreatography was done at three months which showed normal bile duct with complete resolution of stricture and repeat IgG4 levels were normal.

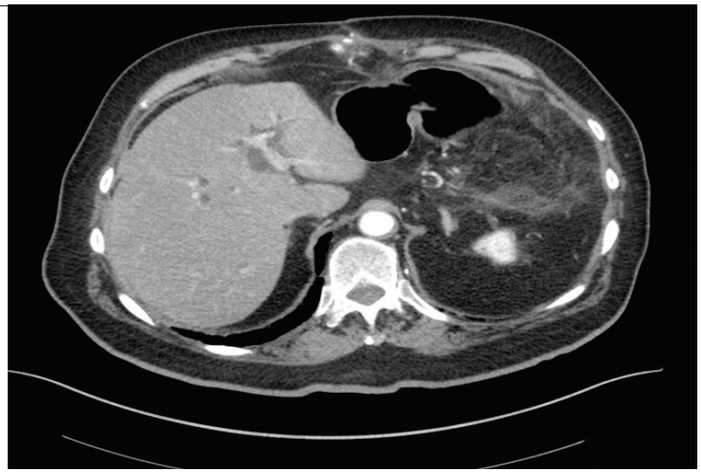

Figure 1: Wall thickening in the extrahepatic bile duct

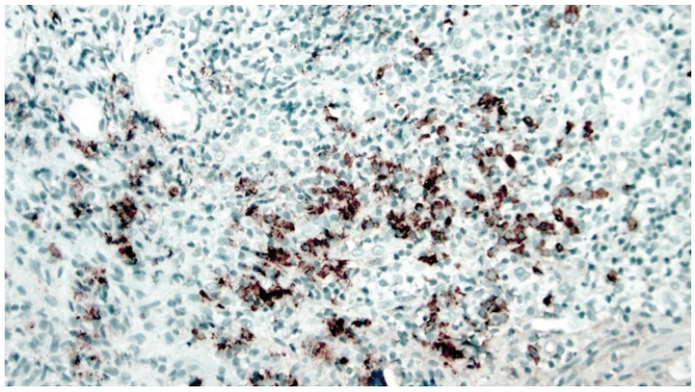

Figure 2: IgG4 positive plasma cells (immunoperoxidase stain, 200X)

DISCUSSION

IAC represents the biliary manifestation of IgG4-associated systemic disease and has a striking male preponderance and typically presents in the sixth and seventh decades of life with obstructive jaundice, weight loss, and mild abdominal discomfort similar to what was encountered in our patient[1]. The differential diagnosis, depending on the location and characteristics of the biliary stricture, include primary sclerosing cholangitis (PSC), CCA, and pancreatic cancer[2]. Presence of elevated serum IgG4 is 74% sensitive to diagnose IAC. The presence of unexplained pancreatic disease in patients with biliary strictures should raise the suspicion for IAC as in our patient. Our patient in fact also had elevated CA 19-9 which can be seen in IAC thus masquerading as CCA[3]. This case has highlighted that IAC needs to be entertained in the differential diagnosis of patients with indeterminate biliary stricture [1]. A combination of serology with other clinical criteria can help in diagnosis.

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Suture Granuloma Formation Following Flexor Hallucis Longus Tendon Transfer

By **Wissam Khoury, DPM, FACFAS; John Gerhard, DPM; and Mark Razzante, DPM**

LEARNING OBJECTIVES

1. To recognize the uncommon complication of FiberWire, which is associated with formation of symptomatic suture granulomas on the weight-bearing surface of the foot.
2. To learn therapeutic alternatives for Flexor Hallucis Longus Tendon Transfer

ABSTRACT

A suture granuloma was resected after the transfer of the Flexor Hallucis Longus tendon during an Achilles tendon repair/ revision with use of the FiberLoop system (Arthrex, Naples, FL). The FiberLoop system includes FiberWire suture, which has proven to be safe and reliable in foot and ankle reconstruction. However, because of its silicone coating, one should ensure that it is not subjected to undue pressure and friction. Although a rare complication, these conditions can lead to silicone fragmentation and the formation of foreign body granulomas. It is the authors' contention that the transosseous tunnel technique for the transfer of the Flexor Hallucis Longus (FHL) tendon utilizing the FiberLoop system should be avoided or altered to reduce this possibility.

INTRODUCTION

FiberWire is a braided blend of polyester and polyethylene strands coated with silicone. The silicone is designed to improve handling, reduce the abrasive quality of the suture and to decrease the surface area exposed to the body to lessen the potential for reaction. [1]

In several animal-based studies, FiberWire was found to produce a less intense or comparable inflammatory response as compared to other nonabsorbable sutures commonly used in orthopedic surgery.[1, 2] Yet, there are case reports detailing the formation of symptomatic suture granulomas in humans. Wilmott, et al. reported two cases of granuloma formation following ankle syndesmosis repair with the TightRope system, which also utilizes FiberWire suture.[3] In a recent case series, FiberWire was found to induce suture granulomas in transtibial and transfemoral amputations in which it was used to suture the myodesis. The authors postulate that the operative sites were prone to inflammation due to the nature of the injuries and that this combined with the presence of friction contributed to the formation of the granulomas.[4] In both reports, histological slides show refractile particles of silicone within the giant cells of the mass.[3,4]

At the surgical site, polymorphonuclear leukocytes release cytokines which recruit monocytes/ macrophages. Macrophages engulf foreign body particles through phagocytosis. Th-2 lymphocytes release interleukins, specifically IL-4 and IL-13, which induce the fusion of macrophages resulting in the creation of foreign body giant cells. These promote angiogenesis and the migration and proliferation of fibroblasts which produce the capsule surrounding the granulation tissue.[5]

CASE PRESENTATION

A 60-year-old female presented to our institution with a complaint of chronic right heel pain of four years duration. The patient relates a traumatic rupture of her Achilles tendon, which was surgically repaired. The patient underwent a subsequent hardware removal. Due to persistent pain, the patient began a varied course of conservative treatments which failed to relieve her symptoms. She was referred for surgical intervention.

Physical exam revealed an antalgic gait, decreased plantaflexory strength as compared to the contralateral limb, as well as a thickened Achilles tendon. Pain upon palpation was noted at the insertion of the Achilles tendon. Radiographs revealed a retrocalcaneal exostosis and enthesophytes at the insertion as well as calcifications within the body of the tendon (Figure 1).

Our surgical plan was to debulk the Achilles tendon, perform a tenosynovectomy, to resect the calcaneal exostosis and to transfer the Flexor Hallucis Longus tendon to augment the Achilles tendon.

A 7 cm linear incision was created medial to the Achilles tendon, the paratenon was incised, and the Achilles tendon was incised longitudinally. Both medial and lateral flaps were then reflected from the calcaneus. The Achilles tendon was noted to be hypertrophic and approximately 1 cm of thickness was debrided from both portions. Multiple spurs as well as remnants of Ethibond (Ethicon, Somerville, NJ) suture from the previous procedure were noted at the insertion, these were excised. Next, the retrocalcaneal exostosis was resected and

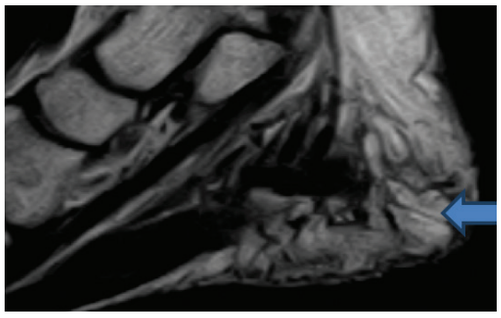

Figure 1: T1 weighted image shows a discrete mass with a slightly increased signal intensity as compared to the surrounding adipose tissue

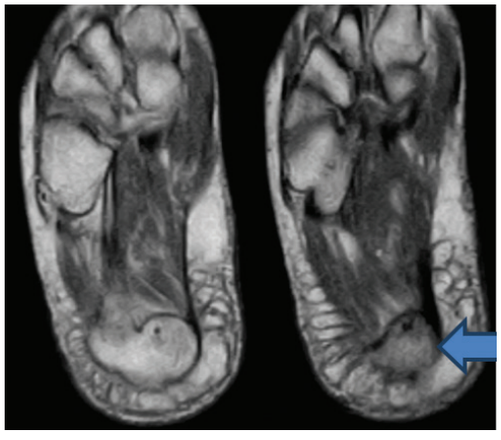

Figure 2: T1 Axial images reveal a conical shaped mass with a hypointense core

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Vampirism: Myth or Disease

(cont. from p.3)

This case illustrates the importance of obtaining a clear psycho-social history on admission and keeping close observation of a patient when there are suspicions for feigning of illness.

was hospitalized. Factitious disorder and malingering were diagnosed. She was discharged to the care of her mother on day 27.

DISCUSSION

Factitious disorder is defined as the "intentional production or feigning of physical or psychological signs or symptoms" in order to assume the sick role in the absence of secondary gain[1]. Malingering requires the presence of secondary gain[2]. Accurate epidemiologic data for factitious disorder and malingering are difficult to find, owing presumably to underreporting of both illnesses. By some reports, 1-5% of all problems encountered in adult primary care practice are malingering or factitious[3]. The conditions often coexist with somatoform disorders, substance abuse or psychosis.

This case illustrates the importance of obtaining a clear psychosocial history on admission and keeping close observation of a patient when there are suspicions for feigning of illness.

Unfortunately, this patient underwent extensive medical evaluation resulting in tremendous medical expenditure as well as risk to the patient. Physicians should maintain a high index of suspicion for factitious disorder and malingering when illness cannot otherwise be explained. Early psychosocial assessment and use of sitters or 24-hour video may help avoid excessive use of medical resources and limit risk to the patients.

References:
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Figure 3 Blood in the duodenum

Hyponatremia Associated with Unilateral Hand Weakness and Numbness

(cont. from p.4)

cough with no history of fever, night sweats, hemoptysis or dyspnea.

He was a 40 pack-year smoker and denied alcohol use. On examination, he was conscious and alert with no apparent respiratory distress. He had normal vital signs with no orthostatic changes and a BMI of 17. His grip strength in right hand was 4/5 with atrophy of the interossei muscles and flexion deformity was noticed at the distal interphalengeal joints (DIP). Sensation to pinprick was reduced along the right C7, C8 and T1 dermatomes. Otherwise the reminder of physical examination was unremarkable.

Laboratory investigation showed WBC of 13,100cells/mm3 with monocyte of 20%. The biochemical profile showed serum sodium of 121mmol/L (reference range 136-145mmol/L), urine osmolality of 451 mOsmol/kg (reference range 270-300mOsmol/kg), and urine osmolality of 451 mOmol/kg and urinary sodium concentration of 69mmol/L. Potassium, urea, creatinine, corrected calcium and liver function test were all within normal. The chest x-ray showed right apical pleural-based density suggestive of a soft tissue mass lesion (Figure 1). CT scan chest was performed and showed large right apical mass suspicious for primary neoplasm (Pancoast tumor) with apparent chest wall invasion, mediastinal and right hilar adenopathy, and a separate left lung metastatic nodule (Figure 2).

MRI of the chest revealed large right apical superior sulcus pulmonary mass, most likely to be primary bronchogenic carcinoma with extensive local spread. The local spread of the disease was most prominent posteriorly involving and surrounding the proximal first and second ribs, spinous transverse processes, adjacent soft tissues and involving the right brachial plexus nerve roots exiting the upper thoracic spine (Figure 3). CT guided core biopsy of the right apex mass was performed and histopathology showed a poorly differentiated non-small cell lung carcinoma (NSCLC), adenocarcinoma was favored (Figure 4).

Immunohistochemical staining showed cytokeratin 7 was positive, other staining such as the cytokeratin 20, TTF-1 and p63 markers were negative. Brain and abdomen computed tomography screening and bone scanning showed no distant metastases and tumor/node/metastasis staging (T3N2M1a) was stage IV. The biochemical profile was consistent with SIADH, a paraneoplastic syndrome secondary to NSCLC.

His hospital stay was uneventful and his initial treatment consisted of pain control and fluid restriction. His sodium level improved to 129mmol/L.When discharged home, he started chemo-radiotherapy adjuvant treatment. Initially, he received two courses of MIC chemotherapy (mitomycin, ifos-famide and cisplatin) three times weekly. After six weeks, his sodium level was 131 mmol/L. He reported partial improvement in his right hand weakness and was less fatigued. Along with his clinical improvement, his serum osmolality was 281 mOsmol/kg.

He refused to receive any further courses of chemotherapy and no follow up radio-imaging was pursued. He was referred to hospice care. A few months later he was found to have progressive disease and his plasma sodium was 119 mmol/l. His condition became worse and he eventually died shortly afterwards.

DISCUSSION

Syndrome of inappropriate secretion of antidiuretic hormone (SIADH) is a condition of hyponatremia and renal salt loss attributed to overexpansion of body fluids

resulting from sustained release of antidiuretic hormones which stimulates renal resorption of water. It is characterized by hyponatremia, high urine osmolality, low serum osmolality, normal acid-base and potassium balance[1]. SIADH may be caused by various conditions, such as disorders involving the central nervous system, a variety of malignant tumors, major abdominal or thoracic surgeries, symptomatic HIV infection, and intrathoratic disorders such as infections, positive pressure ventilation and conditions with decrease in left atrial pressure [2].

Also, a large number of pharmaceutical agents have been shown to produce SIADH, including chlorpropamide, carbamazepine, oxcarbazepine, SSRIs and a number of cytotoxic drugs such as vincristine, vinblastine, cisplatin, cyclophosphamide, and melphalan[1].

SIADH is a well-recognized paraneoplastic phenomenon and was first described in relation to malignancies in 1968[3]. About 75% of tumor-associated SIADH is caused by small cell lung cancer (SCLC). Less common causes of ectopic ADH secretion include head and neck cancers, hematologic malignancies, intrathoracic non-pulmonary cancers, skin tumors, gastrointestinal cancers, gynecological cancers, breast cancers, prostatic cancers, and sarcomas[4]. Non-small cell lung cancer (NSCLC) is shown to be responsible for an exceedingly small proportion of paraneoplastic SIADH[5]. One larger series of patients with lung cancer have revealed that SIADH occurs in 0.7% of patients with NSCLC (three cases out of 427 patients) compared to SIADH incidence of 15% of SCLC cases (214 cases out of 1473 patients)[4].

In the absence of renal insufficiency, congestive cardiac failure, liver insufficiency, volume depletion, diuretic use, hypoadrenalism and hypothyroidism, the findings of serum hyponatraemia and hypoosmolality associated with an inappropriate high urinary osmolality indicates the SIADH was present in our patient due to the NSCLC.

Quite often lung cancers in individual patients contain multiple subtypes. Although SIADH seen in our patient is typical of SCLC and is rarely if ever found in NSCLC, there is sufficient evidence that the tumor was of the NSCLC type. The histological morphology, positivity pattern for cytokeratin 7, as well as negativity for the cytokeratin 20, TTF-1 and p63 markers were consistent with a poorly differentiated non-small cell lung carcinoma (NSCLC), adenocarcinoma was favored. In none of these samples in our case was a small-cell lung cancer component found.

The optimal therapy for SIADH is to treat the underlying malignant disease which may improve this paraneoplastic condition. There was resolution of SIADH after the surgical resection of the primary lung cancer and after palliative chemotherapy in other case reports [5,6], this could suggest that chemotherapy may be a useful option in improving this condition in unresectable tumor [6]. If this is not applicable or if the disease has become refractory, other treatment methods are available such as water restriction, demeclocycline therapy, or, in severe cases, infusion of hypertonic saline together with furosemide during careful monitoring. There was no mention for tolvaptan/conivaptan.

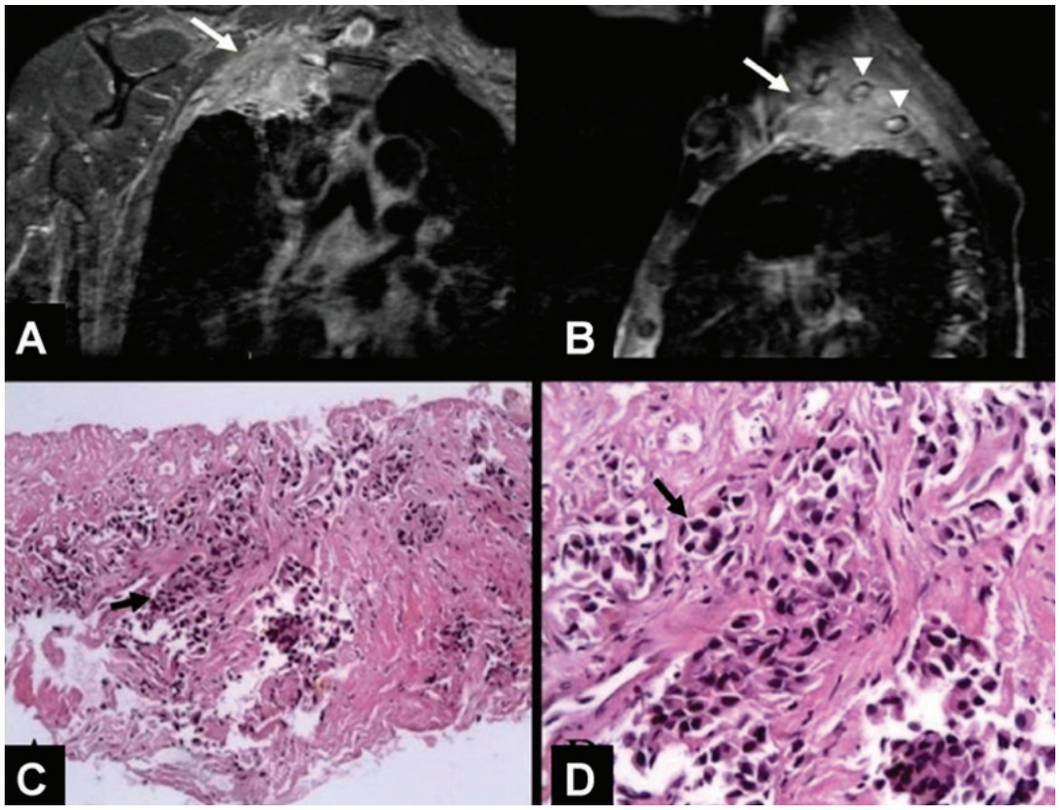

Figure 2 (above): (A&B) MRI of the chest revealed large right apical superior sulcus pulmonary mass due to bronchogenic carcinoma with invading adjacent soft tissues and involving the right brachial plexus nerve roots (arrows), and is most prominent posteriorly involving and surrounding the proximal first and second ribs, spinous transverse processes (arrow heads). (C&D) Histopathology characteristic of non-small cell lung carcinoma (NSCLC). Infiltrating nests of cohesive cells containing enlarged hyperchromatic nuclei, moderately abundant eosinophilic cytoplasm in collagenous stroma (arrows). A: staining with hematoxylin-eosin ×200. B: staining with hematoxylin

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Acute Urinary Retention Due to Benign Ovarian Cyst

(cont. from p.5)

A follow-up transvaginal U/S was done which showed a caudally displaced bladder by a cystic mass measuring about 9.1 x 5.7 x 10.0 cm abutting the vaginal cuff and showing a marginal solid component of 4.9 x 1.8 x 2.2 cm. The patient was seen by a gynecologist who recommended oncology involvement given her age, complexity of the cyst and the possibility of ovarian malignancy. Her CA 125 was normal at 8.7 U/ml. The need for exploratory laparotomy was discussed with the patient and the family. A mini-laparotomy and bilateral salpingoophorectomy was recommended since she already underwent hysterectomy for vaginal prolapse. Pathology revealed a benign simple ovarian cyst. There was no evidence of any malignant cells. Cyst fluid was mostly blood. Her CEA level was 10.0 ng/ml.

DISCUSSION

Ovarian cysts are fairly common in postmenopausal women although less common than in premenopausal. Abnormal ovarian morphology was noticed in 21.2 % of patients in an ovarian cancer screening trial [1]. Most of the ovarian cysts are asymptomatic and are incidentally found on ultrasonography. Ovarian cysts can cause clinical symptoms by different mechanisms like rupture of contents, torsion of ovaries or mechanical pressure on surrounding structures[2]. Sudden onset of the pain may indicate torsion, hemorrhage into the cyst or rupture of the cyst, whereas slow onset of the pain may suggest mass effect. Unilocular ovarian cysts less than10 cm in diameter in asymptomatic postmenopausal women or women older than 50 years of age are associated with minimal risk for ovarian cancer[3]. In contrast, complex ovarian cysts with wall abnormalities or solid areas are associated with a significant risk for malignancy[4]. Tumor markers like CA 125 should be used in the assessment of the risk of malignancy in postmenopausal females. Serum CA 125 has a sensitivity of about 80 % and when a cutoff of 30 u/ml is used, it has a sensitivity of 81 % and specificity of 75 %.

Risk of malignancy index (RMI) is one of the tools that can be used to select women who might benefit from surgery.

Treatment has a broad range from observation to surgical excision. Risk of malignancy index (RMI) is one of the tools that can be used to select women who might benefit from surgery. It is calculated using the following equation: RMI = U x M x CA125. U is the ultrasound score, M is 3 for all post-menopausal women and CA 125 is the serum CA 125 measurement in u/ml. Ultrasound scans are scored one point for each of the following characteristics: multilocular cyst; evidence of solid areas; evidence of metastases; presence of ascites; and bilateral lesions. Patients are classified as low, moderate and high risk if the score is 25, 25-250, more than 250 respectively. Using a cutoff point of 250, a sensitivity of 70% and specificity of 90% can be achieved. Cytology is not useful in distinguishing benign from malignant tumors. In addition there is a risk of cyst rupture during aspiration. Moderate to high risk patients may require laparotomy with oophorectomy or bilateral salpingoophorectomy[5]. Our patient was moderate risk and she was referred to a gynecologic oncologist for an opinion. She was suggested total abdominal hysterectomy and bilateral salpingo-oophorectomy, which she underwent uneventfully. Pathology revealed a benign cyst of the ovary.

CONCLUSION

Our case highlights a rare case of a complex ovarian cyst in a postmenopausal woman presenting as acute urinary retention. Such presentation has been described only in a few cases[6,7], mostly in premenopausal women. Excluding ovarian malignancy is essential given the vague nature of the symptoms; however, the most common ovarian cysts encountered in postmenopausal women continue to be benign.

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Suture Granuloma

(cont. from p.7)

hypertrophic tissue was excised from the paratenon.

The FHL tendon was harvested through the existing posterior incision. The FiberLoop was attached to the tendon and passed through a tunnel drilled through the calcaneus from the insertion site to the plantar calcaneus. The tendon was tensioned through the tunnel by pulling the FiberLoop and secured with a Bio-tenodesis screw, finishing by cutting the FiberLoop strands at the plantar foot. Recovery room radiographs exhibit the complete resection of the enthesophytes and intra-tendinous calcifications in addition to the retrocalcaneal exostosis (Figure 2).

After a non-eventful postoperative course, the patient presented 11 months post-op with a complaint of a painful mass at the plantar aspect of her heel. The patient reports that the mass appeared 2 months after her procedure and has been increasing in size and has become increasingly painful.

Clinically, there was an appreciable mass to the plantar aspect of the right foot at the heel. The mass was soft, fixed and did not transilluminate. There was focal tenderness at the site of the mass with no apparent skin lesions noted.

MRI revealed a mass within the plantar fat pad. Differential diagnoses provided by Radiology included adventitial bursitis, pressure-related callous with central fluid, and rheumatoid nodule. T1 weighted images show a discrete mass with a slightly increased signal intensity as compared to the surrounding adipose tissue (Figure 1). A linear area of hypointense signal can be seen transecting the mass (Figure 1). T2 weighted/ fat saturated images reveal the mass to have increased signal intensity with the linear area as seen in the previous T1 images having higher signal intensity than the body of the mass. T1 Axial images reveal a conical shaped mass with a hy-

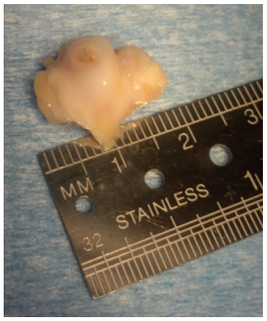

Figure 3: The mass measuring 1.8X1.5 inches

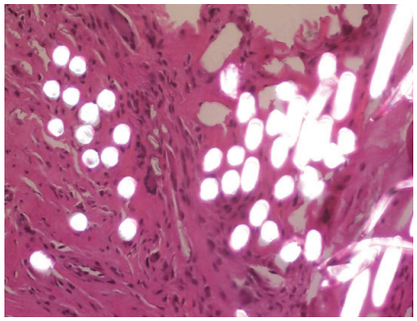

Figure 4: Examination under polarized light displays refractile particles within the foreign body giant cells

pointense core (Figure 2).

A 3 cm linear incision was made to the lateral aspect of the right plantar heel at the site of the lesion. Dissection was carried to the subcutaneous tissue where tendrils extending from the mass were encountered. The mass was dissected and excised (Figure 3), a FiberWire suture strand was found to be encompassed by the mass and additional remaining strands were cut and removed. The plantar fascia was found to be intact with the no violation from the mass.

Histological examination revealed fibrosis and foreign body giant cell reaction. Examination under polarized light displays refractile particles within the foreign body giant cells (Figure 5).

DISCUSSION

As stated earlier, FiberWire is a safe and effective choice for foot and ankle reconstructive surgery. Currently, there is no other published document of Fiberwire granuloma formation on the weight-bearing surface of the foot. Due to this case report, it is advised that FiberWire should not be placed in areas subject to weight-bearing or excessive friction. Arthrex's technique guide no longer advocates the use of a transosseous tunnel for FHL tendon transfers.[6] With the advancement in suture anchors, tenodesis of the FHL to the posterior calcaneus is an acceptable alternative to the transosseous tunneling through the calcaneus. However, if one desires to continue the use of transosseous tunnels to assure proper tensioning of the tendon, we recommend redirecting the tunnel toward a non-weightbearing area. Our institution continues to use FiberWire when indicated.

Although a rare complication, suture granuloma formation must be considered during surgical planning. In the event that a granuloma does present, the clinician must be conscious of the possibility of infection due to the reduced functionality of macrophages as they attach to foreign materials. Attachment of the macrophage to the biomaterial exhausts the cell of its immunologic function and may even result in apoptosis facilitated by the material surface.[5] Therefore, the progressive potential of a granuloma must not be overlooked. As many of the published articles are on animal specimen, further research is needed involving the reactivity of FiberWire in humans to gain an appreciation to the extent of its reactivity.

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HEALTH FACTS

IS MORE, BETTER?

In the past two years, use of advanced imaging (CT or MRI) scans increased from 5% to 17% of emergency department visits. In the past three years, the percentage of adults aged 20 and over with grade 1 obesity [a body mass index (BMI) of 30.0–34.9] increased from 14% to 20%. The percentage of the population taking at least one prescription drug during the past 30 days increased from 38% in 2007 to 49% in 2011.

COST OF CARE

In the past year, among adults ages 18–64, the percentage who reported not receiving or delaying needed medical care due to cost in the past 12 months increased from 10% to 14%. The percentage not receiving needed prescription drugs due to cost increased from 7% to 11%. In 2011, national health care expenditures in the United States totaled $2.6 trillion, a 4% increase from 2010. The average per capita expenditure on health care was $8,400 in 2010.

BAD NEWS

POOR HYGIENE, BAD SANITATION AND LACK OF SAFE DRINKING WATER FILL HALF OF THE WORLD'S HOSPITAL BEDS.

Kidney disease in America

One in 10 American adults or more than **20 million** have chronic kidney disease, with an additional **400,000** people currently depending on dialysis to treat kidney failure. Of them more than **80,000** people are currently on the national waiting list for a kidney transplant.

GOOD NEWS

Three years after a person quits smoking, their risk of having a heart attack is the same as someone who has never smoked before.

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