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STAPHYLOCOCCUS AUREUS (VISA) IN HAWAI'I**

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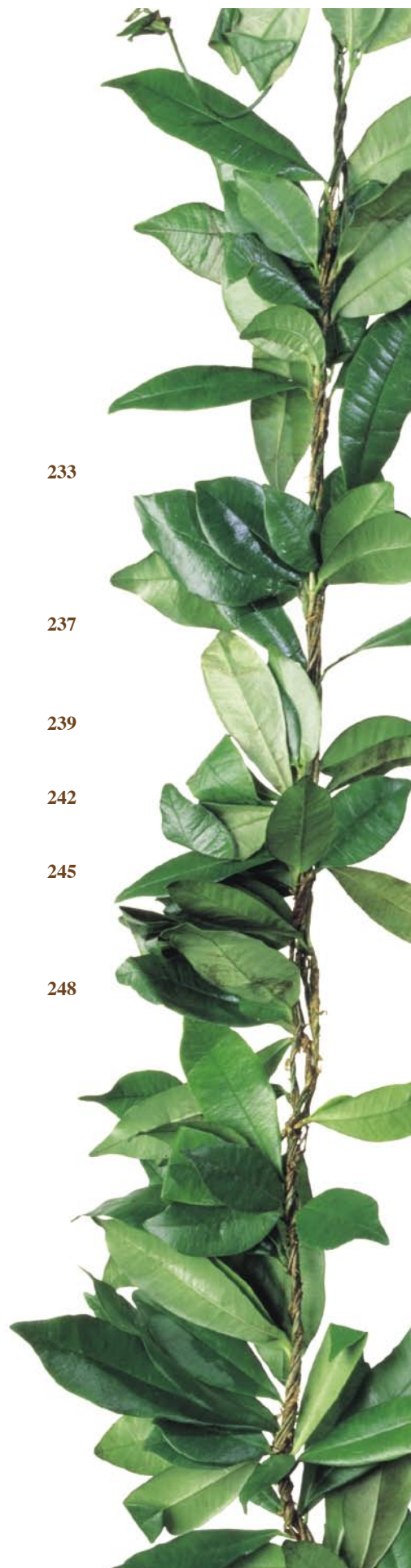
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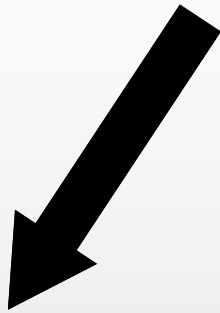
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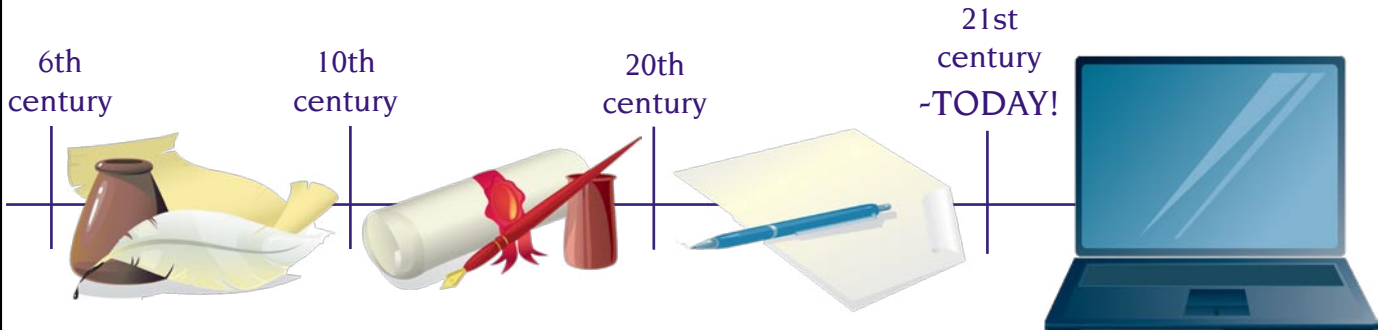
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A Report on The First Case of Vancomycin-Intermediate *Staphylococcus aureus* (VISA) in Hawai'i

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Abstract

The state of Hawai'i has the highest prevalence of methicillin-resistant *Staphylococcus aureus* (MRSA) infection in the United States. Since vancomycin is the most frequently-prescribed antibiotic for healthcare-associated MRSA infection, there is concern for development of vancomycin resistance. We report on a 61 year-old woman with history of previous successful treatments of MRSA bacteremia with vancomycin. She was later hospitalized for catheter-related MRSA bacteremia that persisted despite vancomycin treatment. The vancomycin minimal inhibitory concentration (MIC) was initially 1-2 µg/ml, suggesting susceptibility, but changed to 4µg/ml. At this level, the organism was classified as a vancomycin-intermediate *Staphylococcus aureus* (VISA). Therapy was changed from vancomycin to daptomycin, and the patient's blood cultures were sterilized. High suspicion of VISA should be raised in MRSA-infected patients who fail or have a history of vancomycin therapy so that additional susceptibility testing and appropriate antibiotic therapy can be promptly commenced to reduce the morbidity associated with VISA infection.

Introduction

Methicillin-resistant *Staphylococcus aureus* (MRSA) infection is a major cause of morbidity and, mortality and remains a significant economic burden in healthcare institutions throughout the United States.¹ In 2006, the national prevalence of MRSA infection/colonization in hospitalized patients was 46.3 per 1 000 inpatients, with the highest prevalence rate of 91 per 1 000 inpatients in the state of Hawai'i.² Since 1980, intravenous vancomycin has been one of the most frequently prescribed antibiotics for moderate and severe MRSA infection. It is also indicated for methicillin-sensitive *S. aureus* (MSSA) infections in patients with beta-lactam or sulfa allergies. The overuse of this antibiotic could gradually select MRSA strains that poorly respond to vancomycin treatment.³ In many parts of the world, including the United States, MRSA with reduced susceptibility to vancomycin has emerged. Surveillance data shows vancomycin-intermediate *Staphylococcus aureus* (VISA) infections are uncommon, but the prevalence has been gradually rising and reports of cases have spread throughout the United States.⁴ Due to the high rates of vancomycin clinical treatment failure and associated morbidity and mortality rates of 60%-70%,⁵ these VISA strains deserve serious attention. In this report, we describe the first reported case of VISA infection in Hawai'i.

Case Report

A 61-year-old Japanese woman with history of type 2 diabetes mellitus, hypertension, hyperlipidemia, and end-stage renal disease requiring hemodialysis presented to the hospital in September of 2006 with a left thigh culture-negative pyomyositis and a catheter-related sepsis due to ampicillin-sensitive *Enterococcus faecalis*. The collection from the muscle was drained surgically. Although MRSA was not recovered from any of the culture specimens, she

was empirically treated with a 7-week course of vancomycin during outpatient hemodialysis. She also received a 5-day course of cefepime. The patient returned to an ambulatory clinic in December 2006 due to left toe osteomyelitis associated with *E. coli*. At that time, she was treated with ciprofloxacin and clindamycin for 6 weeks and the infection resolved. In December 2007, the patient underwent an elective T11-T12 spinal laminectomy with instrumentation for a thoracolumbar spinal stenosis. This hospitalization was complicated by postoperative MRSA bacteremia and osteomyelitis. At the time, the vancomycin MIC was 1 µg/ml. The patient was treated with a 20-week course of vancomycin, which resulted in sterile blood cultures. See Figure1 for timeline of events.

In May of 2008, the patient was hospitalized with a cauda equina syndrome as a result of a new spinal compression fracture. During this admission, she was felt to be a poor surgical candidate because of her multiple comorbidities and previous surgical complications. She was again found to have the hemodialysis catheter-related MRSA bacteremia, which persisted for two weeks despite catheter removal and adequate vancomycin treatment. Throughout the two week course of vancomycin treatment (between May30-June13), all vancomycin trough levels were $\geq 19 \mu\text{g/ml}$. Transesophageal echocardiogram did not reveal evidence of endocarditis, indium-111 leukocyte scan did not demonstrate any significant foci of uptake, and there were no other metastatic foci of infections.

All eight *Staphylococcus aureus* blood culture isolates (May30-June13) were initially found to have vancomycin MICs of 1-2 µg/ml from the automated Vitek-2 instrument and daptomycin MICs of 0.25-0.5 µg/ml (Table 1). However, due to clinical treatment failure, vancomycin MIC by broth microdilution was requested and found to be 4 µg/ml at a local laboratory. This MIC was also confirmed by an E-test and broth microdilution performed at the Centers for Disease Control and Prevention (CDC) (Table 1), thus classifying this organism as a VISA. The DiversiLab dendrogram using polymerase chain reaction (PCR) was performed on the four isolates on May 30, June 3, June 10, and June 12 and revealed that these four isolates were indistinguishable with >99% similarity (Figure2). All 4 isolates had staphylococcal protein (spa)-typed as spa t242 and belonged to spa clonal cluster that includes USA800 and USA100 pulsefield types (common hospital acquired clonotypes). All isolates were positive for mecA gene and negative for Pantone-Valentine Leukocidin (PVL). The antibiotic therapy was consequently changed from vancomycin to daptomycin. One day after the change of antibiotic, the patient's blood cultures were sterile. She continued receiving daptomycin two to three times a week after each hemodialysis for 8 weeks. Unfortunately, her hospital course was complicated by *Escherichia Coli* bacteremia from a urinary tract infection but was successfully treated with 2 weeks of cefoxitin after hemodialysis. Despite the pain management and physical therapy, her back pain remained the primary issue and limited her ambulation. She was essentially chair

Table 1. Antibiotic susceptibility of staphylococcus aureus isolates from blood by Vitek2								
Date of Collection Antibiotics	5/30	6/3	6/6	6/7	6/8	6/10	6/12	6/13
Penicillin	≥0.5R	≥0.5R	≥0.5R	≥0.5R	≥0.5R	≥0.5R	≥0.5R	≥0.5R
Clindamycin	4R	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R
Moxifloxacin	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R
Oxacillin	≥4R	≥4R	≥4R	≥4R	≥4R	≥4R	≥4R	≥4R
Tetracycline	2S	≥16R	≥16R	≥16R	≥16R	≥16R	≥16R	≥16R
Ciprofloxacin	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R
Erythromycin	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R	≥8R
Linezolid	2S	1S	4S	4S	2S	2S	2S	1S
Rifampin	≤0.5S	16R	≥32R	≥32R	16R	8R	8R	≥32R
Trimetho/sulfa [#]	≤10S	≤10S	≤10S	≤10S	≤10S	≤10S	≤10S	≤10S
Cefazolin	R	R	R	R	R	R	R	R
Vancomycin* (Vitek2)	≤1S	2S	2S	2S	2S	≤1S	≤1S	2
Vancomycin* (E test and/or broth microdilution)	2S	4I	ND	ND	ND	2S	2S	ND
Daptomycin (broth microdilution)	0.25S	0.5S	ND	ND	ND	0.5S	0.5S	ND

S = sensitive; I = intermediate; R= resistant; *ND = Data not available; #Trimetho/sulfa = Trimethoprim/sulfamethoxazole

and bedridden. In September of 2008, she developed cardiac arrest during hemodialysis and did not survive. Autopsy was declined by the family.

Discussion

Diagnosis of VISA infection in this patient was based on vancomycin breakpoints established by the Clinical and Laboratory Standards Institute (CLSI),⁶ recently modified in January of 2006, which classifies *S. aureus* isolates as follows:

- Vancomycin-susceptible *S. aureus* (VSSA) (vancomycin MIC ≤ 2 µg/ml)
- Vancomycin-intermediate *S. aureus* (VISA) (vancomycin MIC 4-8 µg/ml)
- Vancomycin-resistant *S. aureus* (VRSA) (vancomycin MIC ≥ 16 µg/ml)

The first case of VISA was described in Japan in a 4 month-old boy with a nosocomial surgical site infection in 1996.³ VISA strains were isolated in the US in 1997 and have been reported globally since then.⁷⁻⁹ However, VISA or/and VRSA isolates remain rare and represent less than 0.3% of >300 000 *S. aureus* isolates in the United States.¹⁰

Several risk factors exist for the development of VISA. Fridkin et al. demonstrated that independent risk factors for VISA infection included recurrent MRSA infection and previous vancomycin exposure (with adjusted odd ratios of 32.5 and 13.1, respectively). Although VISA infections have typically been described in patients with diabetes mellitus and chronic renal failure requiring dialysis, as in our patient, these underlying illnesses, compared to MRSA infected patients, were found not to be independent risk factors for

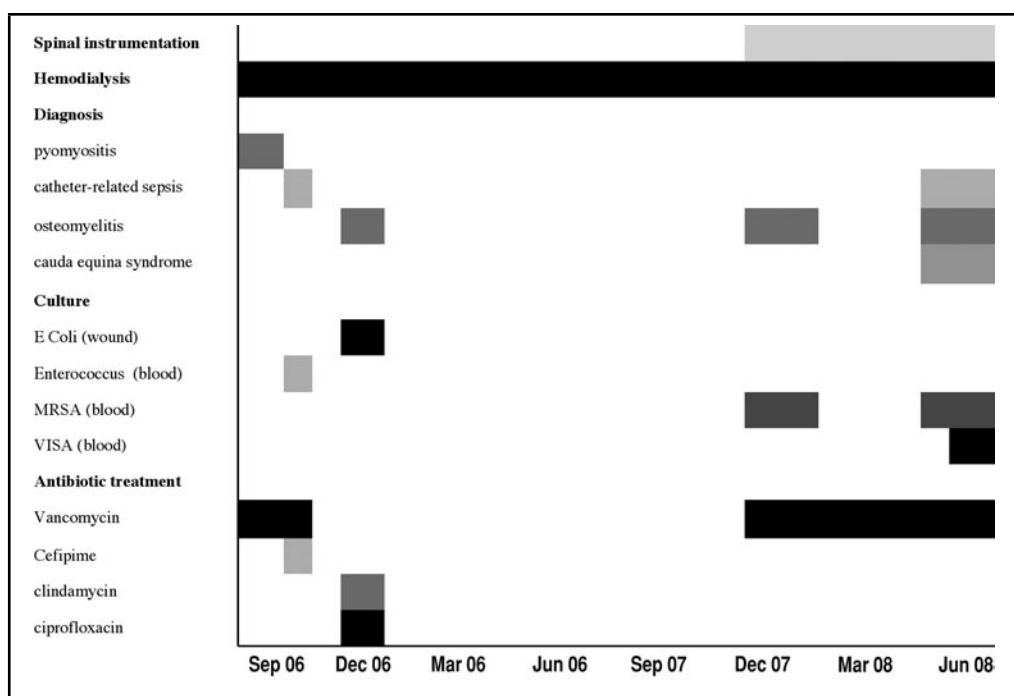


Figure 1. Time Line of Events

VISA infection.¹¹ In addition, a recent retrospective case control study found that VISA infection, compared with VSSA, was associated with higher bacterial load infections including osteomyelitis and prosthetic device infections. VISA infection, was also associated with treatment failure, increased duration of antibiotic therapy, and longer duration of hospital stay, but not overall mortality or hospitalization cost.¹²

Detection of VISA can be difficult and challenging as illustrated in our patient. The diagnosis was missed by an automated Vitek-2 system, but subsequently was uncovered by broth microdilution and E-test from both local laboratory and the CDC, which are confirmatory testing methods. A guideline for investigation and control of VISA and VRSA issued by the CDC recommend using

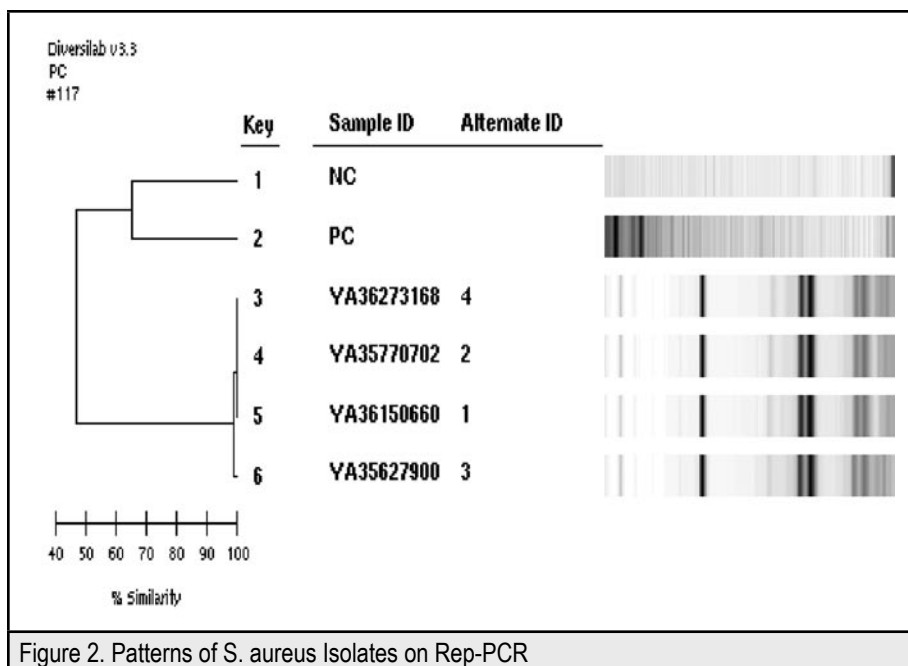


Figure 2. Patterns of *S. aureus* Isolates on Rep-PCR

key1 : NC = Negative Control; key2 : PC = Positive Control; key3 : *S. aureus* isolates on June12;
key4 : *S. aureus* isolates on June3; key5 : *S. aureus* isolates on June10; key6 : *S. aureus* isolates on May30

non-automated MIC methods to detect VISA strains. These methods include broth microdilution, agar dilution, and Etest® using a 0.5 McFarland standard for preparation of inoculums. A guideline also recommends six additional methods to detect VRSA. These additional methods include Microscan® overnight and Synergies Plus™, BD Phoenix system™, TREK sensititre MIC plate, VRSA screen test for VITEK®, disk diffusion and vancomycin screen agar plate (brain heart infusion agar containing 6 µg/ml of vancomycin).⁶ However, disk diffusion and vancomycin screen agar cannot be used reliably to detect VISA strains with vancomycin MIC of 4 µg/ml.¹³ A recent study comparing commercial and reference methods showed that Vitek-2 system, vancomycin screen agar, and disk diffusion inaccurately categorized 22%, 67% and 100% of VISA as VSSA, respectively. In contrast, 98% of VISA were identified using E-test.¹⁴ The difficulty of detecting VISA may be elucidated by the fluctuating vancomycin MIC in our 8 *S. aureus* isolates (Table 1) which may imply the development of VISA from preexisting MRSA in the presence of vancomycin. This hypothesis was supported by a demonstration of >99% similarity of PCR patterns among four isolates (3 MRSA and 1 VISA isolates) (Figure 2). The reason for the decreasing vancomycin MICs back to 2 µg/ml as identified by the E-test at the local laboratory is not clear. Unfortunately the later sample was not submitted to the CDC to confirm vancomycin MIC of 2 or 4 µg/ml. In addition, the variation among the results from the different susceptibility tests could be explained by the difference in the total numbers of bacteria inoculated in each susceptibility test (5 x 10⁴ CFU/well in broth microdilution and 1-2 x 10⁸ CFU/ml in E-test), the different antibiotic preparation (serial two fold dilution of antibiotic in broth microdilution and commercially produced plastic strips with graded antibiotic concentration in E-test), and also the laboratory personnel. However, more studies are needed to verify this. Our strain has typical characteristics of health-care associated MRSA, including the patient's clinical presentation, spa typing as t242, negative PVL, and resistance to multiple antibiotics.

In addition, given the high prevalence of MRSA, the high clonal diversity of community-associated *S. aureus*,¹⁵ and the high frequency of vancomycin use in Hawai'i, our islands may be at high risk for development of more VISA strains. Currently, there is no information as to how many VISA strains there are in our community, but at least 3 additional VISA cases have been identified by the Diagnostic Laboratory Services since May 2008. However, the clinical information is not available. Now the local laboratory service is using the E-test and/or broth microdilution to uncover VISA if the automated Vitek 2 detects the MRSA isolates with vancomycin MIC ≥ 2 µg/ml. If the VISA or VRSA was confirmed, laboratories will notify the infection control, the local and/or state health department, and the Division of Healthcare Quality Promotion, CDC. The local infection control measures are subsequently implemented as MRSA control. However, CDC also works with the public health department to address broader public health implications.⁶

A mechanism of resistance of VISA was proposed in many studies. Thickening of the cell wall, with accelerated peptidoglycan synthesis and reduced cross-linking, were associated with vancomycin trapping in the outer layers of the cell wall and reduced susceptibility to vancomycin.^{16,17} In our VISA strain, there is no available data of the mechanism of resistance. However, the remarkably long duration of prior vancomycin therapy is likely an important predisposing factor in selecting antimicrobial resistance and should have been much shorter.

The optimal antibiotic treatment for VISA infection is unknown. However, the isolates are usually susceptible to newer antistaphylococcal antibiotics including linezolid, daptomycin and quinupristin-dalfopristin.

In summary, the clinicians should suspect VISA infection in MRSA-infected patients who fail to respond to vancomycin therapy, as well as in those previously exposed to vancomycin. Additional MIC susceptibility testing by E-test, broth microdilution, or agar dilution should be requested.

This case report was presented as a poster presentation at the ACP Hawai'i chapter meeting, January 2009.

Disclosure Statement

None of the authors identify any conflict of interest

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Pancreaticoduodenectomy in the Setting of Intestinal Malrotation

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Abstract

Malrotation is an intestinal gestational disorder which not only affects the positioning of the midgut, but also its vascular supply. While this is generally thought of as a pediatric surgical condition, it can have significant implications for adult surgeries as well. Herein we present a patient with asymptomatic nonrotation of the midgut with a concomitant pancreatic adenocarcinoma. The authors review the modifications necessary to perform a pancreaticoduodenectomy in a nonrotated patient. The review includes a caution and emphasis on an understanding of the vascular anatomic variants.

Introduction

Malrotation is a well described intestinal anatomic variant, occurring in 1 in 2,500 to 1 in 3,000 individuals.¹ Although traditionally viewed as a condition of pediatrics, its importance for the care of adult patients should not be underappreciated as 10% - 20% of cases are not diagnosed until adolescence or adulthood.^{2,3} While malrotation is conceptualized as a condition of the intestine and the goals of treatment are to prevent intestinal catastrophe,³ it also influences the mesenteric vascular anatomy.^{4,5} This combination of both enteric and vascular anomalies can have significant implications when performing surgery for conditions unrelated to the malrotation itself.

Case Report

A 69-year-old woman undergoing routine laboratory screening was found to have a transaminase elevation with an aspartate aminotransferase of 96 units/mL, alanine aminotransferase of 158 units/mL, alkaline phosphatase of 114 units/L, and total bilirubin of 0.7 mg/dL. Her laboratory abnormalities were further investigated with a serum gamma-glutamyl transferase level (which was elevated at 59 units/L) and an ultrasound of the right upper quadrant of the abdomen. The ultrasound demonstrated the presence of a 7 mm common bile duct, but was otherwise normal. Subsequent tests include a CT scan of the abdomen which demonstrated the presence of a 2 cm pancreatic head mass and nonrotation of the intestines (Figure 1) and a serum CA 19-9 level of 17 units/mL. A pancreatic endoscopic ultrasound confirmed the presence of a mass in the pancreatic head and biopsy demonstrated the presence of adenocarcinoma. She was therefore taken to the operating room for a pancreaticoduodenectomy.

An exploratory celiotomy was performed through a subcostal chevron incision and confirmed the presence of intestinal nonrotation with the small bowel in the right abdomen (failing to cross the midline), absence of a ligament of Trietz, and large bowel all within the left abdomen. Kocherization of the duodenum was not necessary given the anomalous intestinal anatomy. However, Ladd's bands were present across the 2nd and 3rd portion of the duodenum and were divided. Cholecystectomy, division of the gastroduodenal artery, creation of a retropancreatic tunnel, antrectomy, and division of the pancreas all proceeded in the standard fashion. Distal division of the jejunum was performed just beyond the pancreatic head as there was no ligament of Trietz to serve as a landmark for the distal resection margin. Division of the minor vascular and retroperitoneal attachments was complicated by anomalous vascular orientation.

The superior mesenteric artery was located lateral to the superior mesenteric and portal veins. Dissection along an extended portion of the superior mesenteric artery was required to assure preservation of the superior mesenteric artery and branches going to the jejunum. Pancreaticojejunal and hepaticojejunal anastomoses were performed in the standard fashion; however, given the positioning of the large bowel, it was not necessary to bring a loop of jejunum through a defect in the mesocolon. A stapled gastrojejunostomy was then performed in the standard fashion. The patient did well after her surgery and she was discharged to home on post-operative day nine.

Discussion

Malrotation is a consequence of altered embryologic development of the midgut.^{6,7} During normal development the liver undergoes a period of rapid growth during the fifth gestational week that causes a displacement of the midgut into the umbilical stalk and a 90 degree counterclockwise rotation (when viewed from the anterior) around its vascular pedicle. During the tenth week of gestation the midgut returns to the abdominal cavity and undergoes an additional 180 degrees of counterclockwise rotation. Finally, during the 11th and 12th weeks of gestation the cecum descends from below the liver into its final position in the right iliac fossa.

Altered midgut development can result in a variety of anatomic configurations.^{8,9} Of these the most common is nonrotation.¹⁰ In nonrotation the prearterial segment of midgut is located exclusively on the right side of the abdomen and the postarterial segment of midgut is located on the left side. This variant results from early return of the cecal bud, which comes to rest in the left lower quadrant of the abdomen.¹¹

While malrotation is by definition a condition of the intestines, alterations in anatomic configuration also apply to the mesentery and, as result, the mesenteric vessels. Amongst the most common vascular variants are inversion of the relationship between the artery and vein and vertical position of the vessels. These variants are found in over 60% of patients with malrotation in general.^{4,5,12} More specific data for nonrotated patients alone is lacking. Furthermore, the presence of this vascular relationship, while not the sine qua non of the disease, is often considered pathognomonic for malrotation.¹³

An understanding of the vascular variants is critical to performing a pancreaticoduodenectomy in malrotated patients. Failure to appreciate the anomalous location of the superior mesenteric artery to the left of the superior mesenteric vein can result in devascularization of the short segmental vessels feeding the small bowel. As each of these small vessels is essentially an end artery, their ligation can lead to small bowel death with catastrophic outcomes.

Only a limited number of cases of pancreaticoduodenectomy in a patient with malrotation have been previously reported.¹⁴⁻¹⁶ The recommendation to have a thorough understanding of the vascular anatomy is made in these cases as well as the one presented herein to protect the vascular supply. This familiarity with the aberrant anatomy is critical to successful performance of the procedure in this patient population.



Figure 1A. CT image demonstrating a pancreatic head mass and inversion of the relationship between the superior mesenteric vein (arrow head) and superior mesenteric artery (arrow).

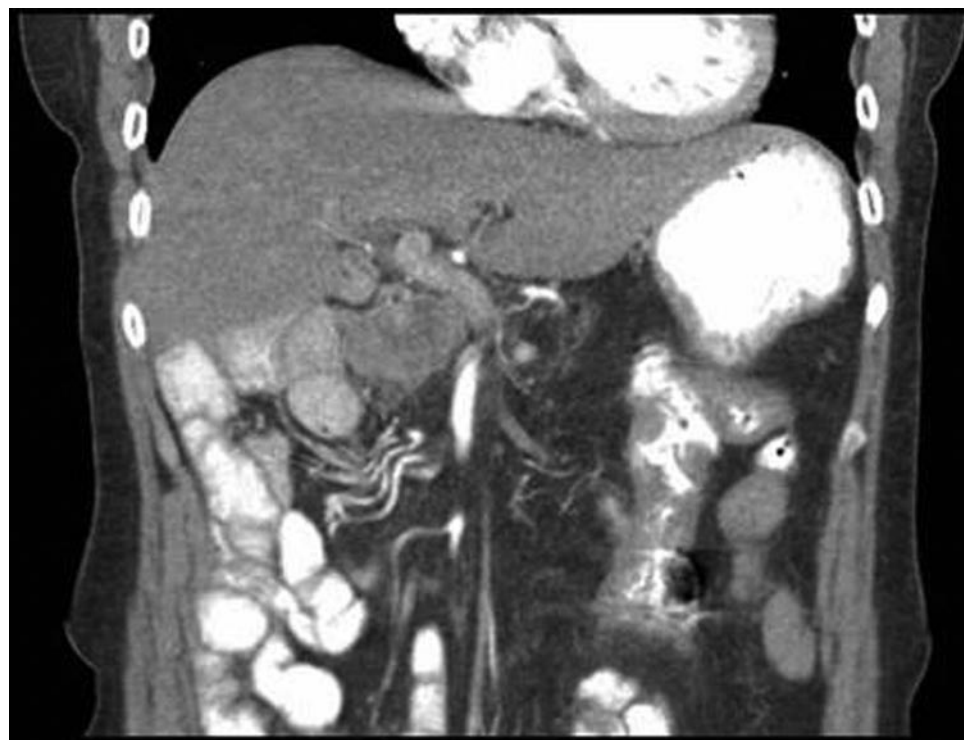


Figure 1B. CT image demonstrating nonrotation with the small bowel located in the right abdomen and large bowel in the left abdomen. Small bowel mesenteric vessels are also seen, highlighting their anomalous positioning.

The views expressed in this manuscript are those of the authors and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the US Government.

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Towards Cultural Competency in End-of-Life Communication Training

Karen T. Lubimir MD, DMD and Aida B. Wen MD

Abstract

To meet the needs of a more diverse population, a culturally sensitive approach to end-of-life communication is critical. This paper describes a unique communication workshop that introduces future physicians to the delivery of culturally responsive care for patients in palliative and end-of-life treatment. The workshop is embedded within the required fourth year medical student rotation in Geriatrics and Palliative Care. Using case-vignettes, role playing, and small group discussions, content areas include: breaking bad news, discussing advanced directives, and decisions regarding withdrawal or withholding of treatment. Post workshop student evaluations reveal an overwhelmingly favorable response to the curriculum, with high scores for overall quality of the workshop, practical value, and appropriateness for level of training. This workshop meets the goal for all graduating medical students to engage in culturally competent palliative and end of life patient care.

Keywords

cultural competency; palliative care; end of life care; curriculum; education; medical

Background

In an increasingly diverse society, a culturally sensitive, patient-centered approach to end-of-life communication is critical. According to the US Census, only 65% of the US population was non-Hispanic White in 2010, and that proportion is expected to decrease to 46% by 2050. Due to its unique history, Hawai'i's non-Hispanic White population has been small, and about 70% of Hawai'i residents are of Asian and/or Pacific Islander (API) heritage. The API group is itself diverse, including more than 30 distinct ethno-cultural groups from the Asia-Pacific region.¹

Ethnic heritage is just one factor that influences health behaviors. Others include cultural norms, socioeconomic status, generational influences, and community of residence. Physicians need to understand how these factors influence health care seeking practices, medical decision making, and ultimately health outcomes. This constitutes the general premise driving the delivery of culturally competent health care.

In 2009, the Joint Commission on Accreditation for Health Organizations (JCAHO)² adopted standards for patient-centered care, requiring the training of all staff in the area of cultural sensitivity. The US Department of Health and Human Services, Office of Minority Health, developed national standards called "Culturally and Linguistically Appropriate Services" (CLAS, 2009), which proposed integrating cultural competency training at all levels of health professional education.³

These standards mandate that health care providers be trained to recognize and respect patients' cultural beliefs and practices. Thus, training often contains information on historical events and cultural values that have shaped groups of immigrant Americans. However, even though historical patterns and shared values have been described in books and other scholarly literature, providers are cautioned not to generalize these descriptions to all members of an ethnic group. Generalizations and stereotyping are not acceptable and can be detrimental to the establishment of therapeutic relationships.⁴

US health care policy further underscores the need for cultural understanding with the 1990 Congressional enactment of the Patient Self Determination Act, which advocates discussion of advanced directives and end-of-life decision making with patients. These practices may cause conflict between physicians and patients/families with culturally specific beliefs about death and terminal medical conditions. Physicians must learn to balance the assumptions of Western medicine regarding medical decision making, which include autonomy and championing individualism, with cultures that view collectivism (family centeredness) as a core principle for major decision making.⁵ Revelation of medical futility may directly affront certain ethnic groups who perceive beneficence as a physician's responsibility to extend life at all costs.⁵ Additionally, the interpretation of non-maleficence (do no harm) may have different cultural interpretations regarding revealing a terminal condition or the use of morphine or other comfort measures. Observational studies about cultural influences reveal the commonly held belief in the power of negative words, so that after words are spoken, they become reality or are harmful to the patient.⁴

Physicians need to know how to truly assess the beliefs and needs of individual patients. Thus, sensitivity training should take a cross-cultural approach, focusing on culturally humble communication skills to recognize and respect individual variability. Learning to take a patient-centered approach is more valuable than just learning "facts" about an ethnic group. The patient-centered approach is more effective than using cultural stereotypes, whether discussing common medical conditions or more complex problems such as end-of-life preferences.⁶

The purpose of this paper is to describe a communication workshop developed and tested at the University of Hawai'i John A. Burns School of Medicine, Department of Geriatric Medicine, that helps prepare future physicians to use a culturally sensitive approach to palliative and end-of-life patient-centered care.

Description of Curriculum

This communication workshop is part of the required fourth year medical student rotation in Geriatrics and Palliative Care at the John A. Burns School of Medicine. During this rotation, students are instructed to view the faculty as role models of expert communication and become active listeners for "words that work." Students also attend weekly seminars that teach core geriatric principles, and incorporate the skills and attitudes requisite in the delivery of patient-centered care. In addition, they write a journal entry to reflect on their development as a physician. This exercise is intended to promote humility, empathy, curiosity, sensitivity, and awareness towards their patients. Recognizing that communication skills are critical in the care of frail and complex patients, seminars were modified in the academic year 2010-11 to be more interactive and case-based than in previous years. This has expanded opportunities for role play and discussion, which allows students to apply core concepts and practice communication skills.

Embedded within the rotation is an interactive 3-session workshop, with faculty coaching students with role playing and providing

feedback on key skills for end-of-life discussions. The workshop is divided into three one-hour sessions: (1) breaking bad news, (2) discussing advanced directives, and (3) discussing withdrawal or withholding of treatment.

Session 1 focuses on breaking bad news. This session begins with an overview of techniques and teaching points on strategies about breaking bad news, followed by a discussion of teaching points regarding communication strategies in a culturally sensitive manner. The problem-based learning case involves a Chinese-speaking widow and her eldest son, who are waiting in the Emergency Room and need to be told about the progression of her cancer. The main teaching points include the appropriate use of medical interpreters, and clarifying who the decision makers are given cultural norms and expectations.⁷ After rules for feedback are reviewed, the students are divided into groups of four. Each person in the group is assigned a role (patient, son, physician, and observer) and given a script. The observer's role is to write down specific observations for feedback. The session concludes with debriefing in the large group, providing feedback and helpful tips.

Session 2 continues with the same patient and family in the previous scenario, but moves the discussion forward to discuss goals of care and advanced directives. The session starts off by explaining to the students that cultural factors often govern medical decision making. Students are taught the importance of investing time early in the encounter in order to understand the patient and family perspectives regarding the social, emotional, relational, and cultural factors that may influence their decisions. The main teaching point emphasizes that while it is important to understand and take cultural norms into consideration, one must not make any assumptions regarding cultural expectations, and it is important to listen carefully to each particular patient/family scenario. Finally, the Physician Orders for Life-Sustaining Treatment (POLST) form is introduced, and students are provided suggestions and examples that may help them discuss advanced directives and correctly complete the form. As in the previous session, the class breaks into groups of four, with each student choosing a role (patient, son, physician, and observer) and using a prepared script. The observer records comments, and the session concludes with time to debrief as a whole group, providing feedback and helpful tips for improving communication skills.

Session 3 addresses the withdrawal of invasive treatments. This session begins with a discussion regarding assessing capacity for medical decision making, and the role of health care surrogates (designated or non-designated), the hierarchy of decision making, and understanding the definition of futility of treatment. The case involves discussing the withdrawal of artificial nutrition and mechanical ventilation in a terminal cancer patient with multi-system organ failure, whose family has expressed their specific cultural and religious beliefs, and whose husband is an attorney. The main teaching points include students' awareness that ethnic minority populations may feel discriminated against and may require careful attention to these sensitivities. It is also important to understand how a family may embrace "hope" from their cultural and religious perspectives, in order to help the patient and family develop more realistic goals of care (ie, from "hope for cure" to "hope for a peaceful and dignified death"). Next the class engages in role play which includes the physician, the husband, and observer. Students practice presenting realistic options to the family and help them come to acceptance of

the poor prognosis in the context of culturally sensitive issues. The observer documents the interactions, and the session concludes with a time to debrief as a whole group, providing feedback and helpful tips.

Program Evaluation

At the conclusion of the Palliative Care communication workshops, trainees completed a mandatory seminar evaluation. The results of this survey from the first 5 months (N=36) of curriculum implementation reveals an overwhelmingly favorable response to the curriculum. Using a Likert scale (1= poor to 5=excellent), the average rating of the overall quality of the seminar was 4.6, content of practical value 4.6, and content appropriate for level of training 4.6. Comments from students included the following statements: "very helpful"; "role playing was very helpful, provided a safe learning environment"; "great topics"; "engaging and informative." Faculty feedback was also positive, and included suggestions of providing additional resources to medical students.

Discussion

The curriculum meets the current goals and standards of the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO),² the Liaison Committee of Medical Education (LCME)⁸ and Accreditation Council for Graduate Medical Education (ACGME),⁹ with the latter two having established core competencies in communication and professionalism for working with increasingly diverse patient populations.

In the authors' review of the literature, while many academic medical institutions have recognized the need for cultural competency training, with successful integration into the first two years of their curriculum, the incorporation and application of such training during the clinical clerkship years is rare.^{10,11}

The curriculum incorporates the recommendations regarding training in cultural competence using an approach that fosters cultural sensitivity and humility. Frequently, medical schools apply "categorical" teaching methods about race and ethnicity, providing information on common practices and beliefs of distinct cultural groups, eg, Asians, Hispanics, or African Americans. However, this factual knowledge is not adequate, and may ultimately result in delivery of disparate health care unless individual preferences are taken into account. Thus the new standard of cultural competence education is that training should focus on cultural sensitivity and humility in patient communication.¹²⁻¹⁴

This newly designed curriculum also utilizes strategies found to be most effective for teaching regarding communication and end-of-life care. Improving communication skills among medical students should exceed the measurement of knowledge and attitudes, and move towards the behavioral assessment of end-of-life communication skills.¹⁵ The Institute of Medicine (IOM) has called for practical case-based curricula to be continually developed and evaluated, and focused on process oriented instruction in medical interviewing and communication. The use of case vignettes, role-playing in small groups, and the opportunity to practice skills and time to debrief are strategies found to be effective in the training of communication skills in end-of-life care.^{16,17}

This is the first such curriculum described in the literature that explicitly teaches about both culturally sensitivity and effective

communication techniques for advance care planning and end-of-life discussions during their clinical clerkships.

Future Directions

The feedback obtained from the initial sessions from both faculty and students will promote increased opportunities for developing culturally appropriate communication tools and skills. Specifically, future sessions will incorporate the use of video vignettes to facilitate discussion regarding the delivery of bad news. Checklists to provide structured feedback to participants and to target desired behaviors during communication exercises are being developed. This curriculum will undergo annual evaluation with modifications based on cumulative workshop feedback. Additionally, outcomes research is planned to compare pre/post curriculum implementation effect on Palliative Care communication skills, using the required Palliative Observed Structured Clinical Exams (OSCE) scores. The goal is for all graduating medical students to be able to provide culturally competent health care to all patient populations, especially those most vulnerable at the end of life.

The authors report no conflicts of interest.

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Celiac Disease Presenting as Severe Osteopenia

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Abstract

The authors describe a unique presentation of celiac disease as multiple non-traumatic fractures in a young male without gastrointestinal complaints. A 29-year-old man presented with back pain and was found to have a non-traumatic compression fracture of the lumbar and thoracic spine on plain X-ray. Dual-energy x-ray absorptiometry (DXA) confirmed osteoporosis at the L3/L4 vertebral bodies. Parathyroid hormone (PTH), calcium, and vitamin D levels were normal. He had no gastrointestinal complaints, but serologic studies were positive to include an elevated gliadin IgA Ab, gliadin IgG Ab, and an elevated tissue transglutaminase IgA Ab. He was treated with a gluten-free diet, calcium, and vitamin D supplementation as well as teriparatide. Follow up bone density showed improvement and has no further fractures to date. Primary care physicians, gastroenterologists, and endocrinologists must have a high index of clinical suspicion for celiac disease in any patient who presents with low bone density regardless of the serum 25-OH vitamin D levels or presence of gastrointestinal complaints.

Overview

Celiac disease is a common gastrointestinal disease that affects up to 1% of the population of European descent.^{1,2} It is often diagnosed in patients with chronic diarrhea, weight loss, and fatigue; however some recent demographic studies have shown that less than 50% will have any of those symptoms and 25% of patients do not have any of these classic symptoms.³ This inconsistent presentation leads to a majority of patients being undiagnosed and more patients presenting later in life as 50% of adults are diagnosed over age 50.^{2,4,5}

The non-classic symptoms include iron deficiency anemia, osteoporosis or low bone density, and dermatitis herpetiformis.⁶ We describe a unique case in which a young male without any of the classical celiac symptoms presented with back pain and no history of trauma but with several vertebral fractures. Low bone density was found on Dual energy x-ray absorptiometry scan prompting further evaluation leading to a diagnosis of celiac disease.

Case Report

A 29-year-old thin Caucasian male with a history of several traumatic childhood fractures presented with a 6-month history of back pain. He denied precipitating events or trauma. He awoke from sleep with severe, non-radiating pain in his lower back, thought it was muscle strain and treated it with ibuprofen and acetaminophen. At the time of presentation he had had three similar episodes. After each incident he described acute pain lasting 2 days to 2 weeks, subsiding to a dull, chronic pain with rest. Past medical history was significant for multiple bone fractures as a child and a fibular stress fracture associated with excessive running. Review of systems was otherwise unremarkable. Physical exam was notable only for kyphosis of the thoracic spine, which the patient stated was stable since childhood.

Plain X-rays of the thoracic and lumbar spine were obtained and revealed anterior wedge compression fractures of the T4, T6, L1, L2, and L4 vertebral bodies (Figure 1). Dual energy X-ray absorptiometry (DXA) showed low bone density with a T-score of -3.5 and a Z-score of -3.2.

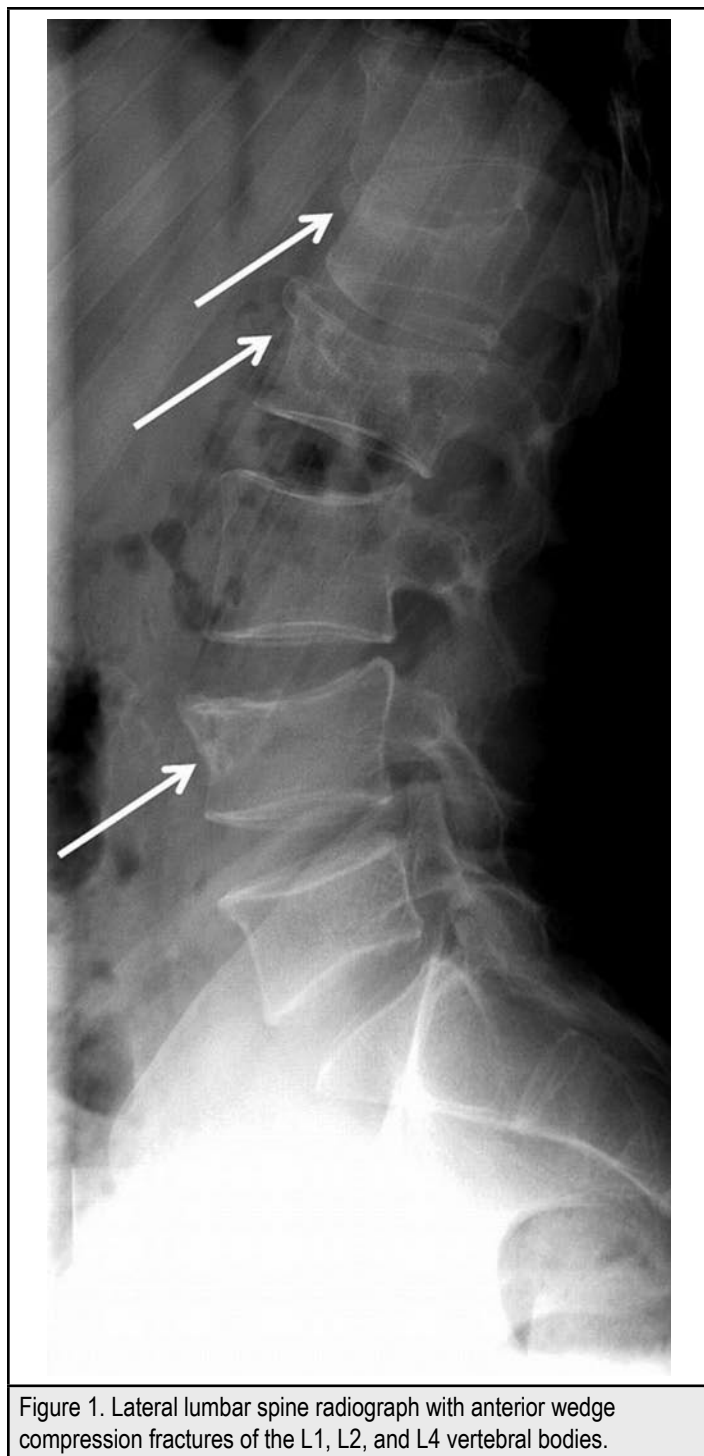


Figure 1. Lateral lumbar spine radiograph with anterior wedge compression fractures of the L1, L2, and L4 vertebral bodies.

The differential diagnosis of osteoporosis in men is broad and includes endocrine disease, hematologic disorders, connective tissue diseases, drug ingestion, and gastrointestinal disease. Testosterone, luteinizing hormone, follicle stimulating hormone, dehydroepiandrosterone sulfate (DHEA), morning cortisol, and thyroid stimu-

lating hormone were normal. Parathyroid hormone (PTH) (33.1pg/ml), calcium (9.2mg/dL) and 25-hydroxy vitamin D level (35ng/ml) were also normal. Complete blood count, differential, erythrocyte sedimentation rate, C-reactive protein, HIV, serum protein electrophoresis, urine protein electrophoresis, rheumatoid factor, and nuclear antibody screen were unremarkable. He had a bone scan that revealed healing vertebral fractures noted above, old fractures of the right fibula and left fifth rib, and a new fracture of the T7 vertebral body (Figure 2). He was not consuming any medications, illicit drugs, and only rarely consumed alcohol. He had no gastrointestinal complaints, but serologic studies were positive for an elevated gliadin IgA Ab at 115 units/ml (>17 is positive), gliadin IgG Ab at 45 units/ml (>17 is positive), and tissue transglutaminase IgA Ab at 198 units/ml (>8 is positive). Upper endoscopy was performed and a duodenal biopsy showed focal villous blunting and atrophy with mildly expanded lamina propria with lymphocytes and plasma cells, consistent with Celiac disease.

He was started on treatment with a gluten-free diet, calcium and vitamin D supplementation as well as teriperatide 20mcg daily for a planned 2-year course. He immediately gained weight and follow up DXA done 8 months after starting treatment showed improvement with a Z-score of -2.7. He has been compliant with treatment and has not had any more fractures through 16 months of follow up.

Discussion

Celiac disease is most commonly found in patients presenting with diarrhea, weight loss and other gastrointestinal symptoms, however that typical presentation is now the atypical presentation as less than 50% of patients diagnosed have diarrhea.⁶ The next most common presenting symptoms are iron deficiency anemia, aphthous ulcers, dermatitis herpetiformis, and low bone mineral density.

These “silent” or atypical presentations are becoming more and more common due to increased physician awareness and the availability of accurate serologic studies. Celiac disease is often a cause of low bone density and patients with celiac disease have an increased fracture risk, a hazard ratio of 1.43 or 43% increased risk when compared to age-matched healthy populations.⁴ This is thought to be due to lack of absorption of vitamin D and calcium causing a

secondary hyperparathyroidism.^{7,8} On presentation, vitamin D levels are often lower and PTH levels are higher than controls.⁹

As seen in our patient this is not always the case, as his vitamin D level was 35ng/ml. There are other contributing factors to this poor bone density. In experimental models gut inflammation is shown to activate inflammatory cytokines that are members of the TNF-alpha family called receptor activator of nuclear factor kappa B (RANK) and its ligand (RANK-L).^{8,10} Gut inflammation also has a direct inhibitory effect on the usual inhibitor of this pathway, osteoprotegerin (OPG).¹⁰ Through this RANK/RANK-L/OPG pathway gut inflammation can have a direct negative effect on bone mineral density (BMD), that is independent of vitamin D absorption and could explain the degree of low BMD out of proportion to PTH and vitamin D levels. The level of gut inflammation was significant as is demonstrated by the significantly elevated level of anti-tissue transglutaminase ab, which is directly tied to severity of disease, but not always gastrointestinal symptoms.^{1,7}

Screening for celiac disease during the evaluation of all patients with osteoporosis is not recommended by all. Previously it was thought that celiac disease would present early in life and usually did not overlap with the expected age range of osteoporosis. However

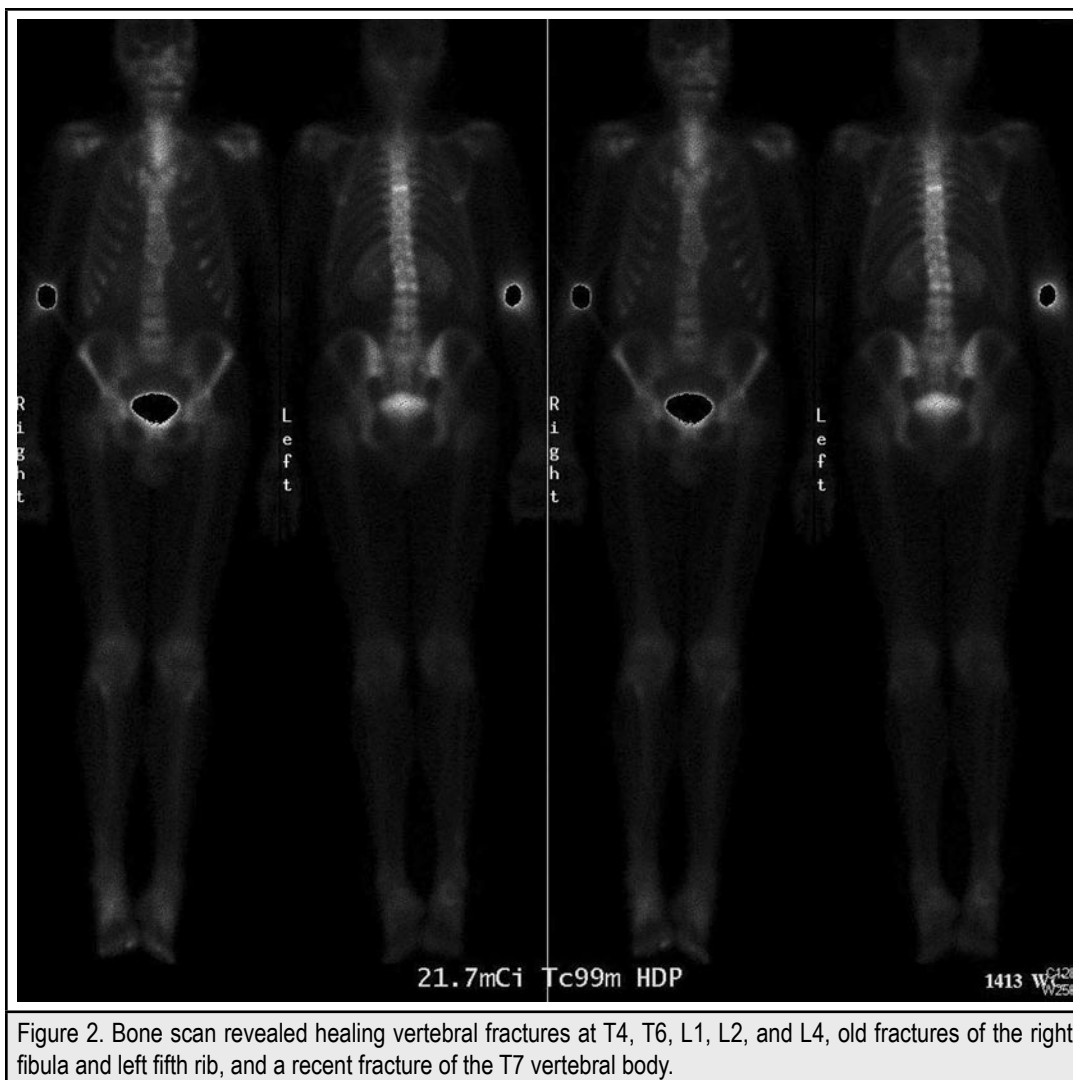


Figure 2. Bone scan revealed healing vertebral fractures at T4, T6, L1, L2, and L4, old fractures of the right fibula and left fifth rib, and a recent fracture of the T7 vertebral body.

50% of diagnoses of celiac disease are in patients over the age of 50.⁵ In 2005 an article by Stenson et al, comprehensively reviewed screening for celiac disease in all osteoporotic patients. In this study the incidence of celiac disease in patients without gastrointestinal complaints who had osteoporosis was 3.4% compared to 0.2% of the general population. This study concluded that all patients with osteoporosis should be screened for celiac disease as treatment with a gluten-free diet would be integral to treating their bone disease as well as the many other known complications of untreated celiac disease. It was estimated this would have a cost of \$1500 to identify one patient with celiac disease.

In contrast, many others suggest that all celiac patients with osteoporosis do not necessarily need to be screened. Some data suggest bone health can be correlated to classic symptoms and their severity.⁴ Additionally, low levels of disease may not have long term complications.⁵ Our case argues against a direct correlation of gastrointestinal symptoms to bone health as is supported in other population studies.³ Celiac patients have a hip fracture hazard ratio of 1.3-1.9 compared to the general population which can be reduced by starting a gluten-free diet thus stressing the importance of screening osteoporotic patients for celiac disease.^{11,12}

There is debate on both ends of the spectrum from screening all patients with osteoporosis to screening only those with GI symptoms. However, given the body of literature most authors agree that patients who are either refractory to treatment or do not have classic risk factors (post-menopausal, thin, females) should be screened for celiac disease regardless of the presence of gastrointestinal symptoms.¹³

This case demonstrates the importance of considering celiac disease in patients without gastrointestinal complaints and the importance of recognizing the disease and treatment. We emphasize considering celiac disease in all patients with idiopathic low bone density even if vitamin D and PTH levels are normal. Furthermore, considering celiac disease in all patients with osteoporosis is reasonable and diagnostic testing is indicated in patients refractory to treatment with calcium and bisphosphonates. The known cases of celiac disease are often described as the tip of the iceberg as there are many undiagnosed patients. Recognition of these patients is important not only for bone health, but also overall health and life expectancy as 10 years in delayed diagnoses has been shown to increase overall mortality.⁵

The views expressed in this abstract/manuscript are those of the authors and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the US Government.

Declaration of Interest

There are no conflicts of interest.

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Turning the Tragedy of Tobacco Around: How Revenue from Cigarettes Improves Health in Hawai'i

Tina M. Shelton BA and Jerris R. Hedges MD, MS, MMM, John A. Burns School of Medicine, University of Hawai'i

She is young, in her early 20's. Still, she has never met her grandmother. The older woman died at age 52 from smoking-related disease. She gave up cigarettes the day she was diagnosed with lung cancer—but it wasn't soon enough. She never met the grandchild who would grow up to aspire to be a physician; the grandchild whose heart never lets her forget the missed opportunity to know her *tutu* (grandmother).

"It's the *keiki* (children) who suffer" from the harmful effects of smoking, the young lady wrote in a message to Hawai'i lawmakers in 2010. If her grandmother had known "that the toxic effects of smoking would prevent her from one day holding her grandchildren," she continued, "There is no doubt in my mind she would have quit sooner, perhaps never started."

Our young people choose to become physicians for many reasons, but stories like this one, from a John A. Burns School of Medicine (JABSOM) second-year medical student, are among the most heart breaking. Long after biomedical science has proven that using cigarettes causes lung cancer, families are still torn apart by the health effects of smoking.

In the anatomy lab at the University of Hawai'i (UH) medical school, visitors even younger than the average medical student are shown a set of blackened and scarred human lungs. The woman who donated her body to the school insisted that children old enough to consider smoking see the damaged organ—her own lungs. She was a smoker, convinced too late in her own life that inhaling tobacco kills, intent that at least a new generation would learn from her mistake.

Indeed the entire medical school complex at Kaka'ako stands as testimony that smoking kills. The Hawai'i State Legislature, under the administration of Governor Benjamin Cayetano, grasped the nexus between smoking and death, and the need for the best-educated physicians to treat those who suffer from smoking-related disease. Lawmakers designated money tied to the use of tobacco to fund the JABSOM's state-of-the-art medical education, research building, and Wellness Center and the new University of Hawai'i Cancer Center rising on the campus right now.

In the case of the medical school, legislators approved the issuance of \$150 million in general revenue bonds to build the new campus complex, and then generously set aside a portion of the Master Settlement Agreement to pay the principal and interest on

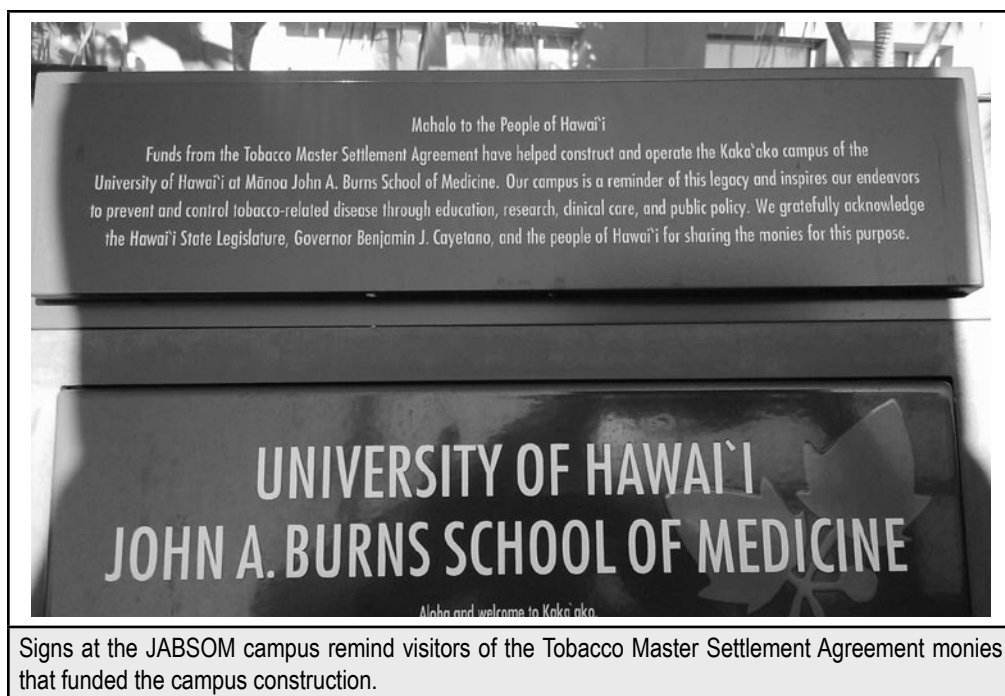


JABSOM medical students meet with Representative Mark Nakashima (D-North Kohala-South Hilo) during Kick Butts Day at the Hawai'i State Legislature on February 14, 2011. The students used the opportunity to thank lawmakers for their support of the medical school and to inform them of activities at the school related to tobacco cessation.

the buildings, about \$9.5 million annually. The Master Settlement Agreement is the groundbreaking legal settlement accepted by tobacco manufacturers who were being sued by the states for the past and future harm caused by their products. A separate revenue-generating measure, involving taxes on cigarettes, was passed to provide financial support for health-related causes including cancer research at the University of Hawai'i Cancer Center. Two cents for every cigarette sold in the state is currently assigned to the cancer center.

An understanding of the harm from tobacco use, the management of tobacco-use related illnesses, and approaches to tobacco cessation are central themes in the curriculum of JABSOM. Outlined in detail in the October 2011 Hawai'i Medical Journal, these facts and personal stories are woven into our problem-based learning and lecture sessions, standardized patient and clinical experiences, and in the community outreach required of medical students at the school.

The authors, Jill Omori MD, and Kenton Kramer PhD, noted that a 1999 study published in the *Journal of the American Medical Association* (JAMA) showed nearly 70% of medical schools did not require any educational experience addressing smoking cessation, while at the UH medical school, content related to tobacco dependence or the management of tobacco-related medical complications is part of the main educational platform.



A Strong Medical School Contributes to the Community and Other Parts of the University

JABSOM is able to make health contributions every day throughout Hawai'i because of the Hawai'i State Legislature's continuing commitment to a strong medical school. The school has trained or employs nearly half of the physicians currently treating patients statewide. Its physician-faculty are essential members of the medical teams at health care centers and hospitals throughout Hawai'i, including at the school's partner medical training sites, The Queen's Medical Center, Hawai'i Pacific Health hospitals, Kuakini Medical Center, Wahiawa General Hospital, Kaiser Permanente, the Kuakini Health Systems, Tripler Army Medical Center, and the Veterans Administration.

Advanced medical research and technology in Hawai'i are facilitating breakthroughs in both the understanding of the human body and the development of high quality healthcare. Here, too, the school and its partners throughout the University of Hawai'i System provide vast contributions and key leadership.

JABSOM is a leader in research related to emerging infectious diseases, health disparities, neuroscience, Native Hawaiian health, and complementary and alternative medicine. The School's Office of Public Health Studies has active international exchange programs with Wuhan and Fudan Universities in China. Public health has a vital economic influence through control and management of infectious disease transmission, eg, severe acute respiratory syndrome (SARS), pandemic influenza, chronic disease management (to maximize workforce productivity), environmental health, and injury prevention — including tobacco use cessation.

The Multidisciplinary And Translational Research Infrastructure Expansion (RMATRIX) health disparities grant led by the medical school looks at six health initiative areas where locally based investigators have begun to address some significant health disparities in Hawai'i. RMATRIX focuses upon cardiovascular health, pulmonary health, metabolic health and neurocognitive decline in elderly

patients, dementia in AIDS patients, perinatal health and development, and cancer health. Many partners are helping extend this health focused translational (bench to bedside to community) research. Scientists from the Department of Native Hawaiian Health's Center of Excellence help engage our Native Hawaiian and Pacific Islander populations in community-engaged health disparities research.

The University of Hawai'i Cancer Center is doing exciting work that will bring important benefits to Hawai'i and the Asia Pacific region. For example, a large epidemiological study, the Multiethnic Cohort Study, is following over 200 000 individuals to improve our understanding of ethnic/racial differences in cancer occurrence. This study includes over 70 000 Asians and Pacific Islanders living in Hawai'i.

The Center's new \$120 million facility (scheduled to open in early 2013) will provide a new state-of-the-art home for the nation's leading cancer researchers, united in their quest to combat and cure cancer.

The UH Manoa School of Nursing & Dental Hygiene, along with JABSOM, is providing innovative chronic disease management and interdisciplinary education using problem-based learning, simulation and clinical skills laboratories, and 3D technology.

Nursing faculty members also are investigating the educational and cost-effectiveness of different types of simulation learning and developing Pacific Rim centric simulation modules for the health professions. Nursing faculty are collaborating with the World Health Organization Western Pacific Regional Office to analyze the nursing and midwifery workforce in Asia and the Pacific Region and are using community building strategies to support retention in the workforce including a regional nurse residency model.

The UH Manoa College of Tropical Agriculture and Human Resources is active in developing culturally sensitive nutritional programs for Hawai'i and the greater Pacific. Other programs include aquaponics work in social and institutional settings to improve both the nutrition and the life skills of homeless and mental health patients. Many of its programs address the health of communities and are shared on the Hawaii Foods Web site. The College also is adapting a Science, Teaching, Engineering & Mathematics (STEM) curriculum to encourage school gardens and is improving the fatty acid profile of farmed fish.

The UH Manoa Myron B. Thompson School of Social Work is advancing biopsychosocial research in gerontology, child welfare, health, and behavioral health, that has direct applications for Native Hawaiian, other Pacific Islander, and Asian populations, and broad ramifications for global well-being. The School hosts or is affiliated with Centers engaged in pioneering research, policy, and practice around healthy aging. Ha Kupuna — National Resource Center for Native Hawaiian Elders, and the Center on Aging, provide innovative information on aging among diverse populations. The

School maintains active contracts with the Hawai'i Department of Human Services to improve child welfare for children and families in Hawai'i through training, evaluation, and case reviews, and engages in research that seeks the translation of cultural practices into social work interventions for indigenous peoples. The School is at the forefront in developing content and instructional methodologies for social welfare with Native Hawaiians and also is developing strong linkages with Asian nations around improving social services through field internships, policy formation, and collaborative research.

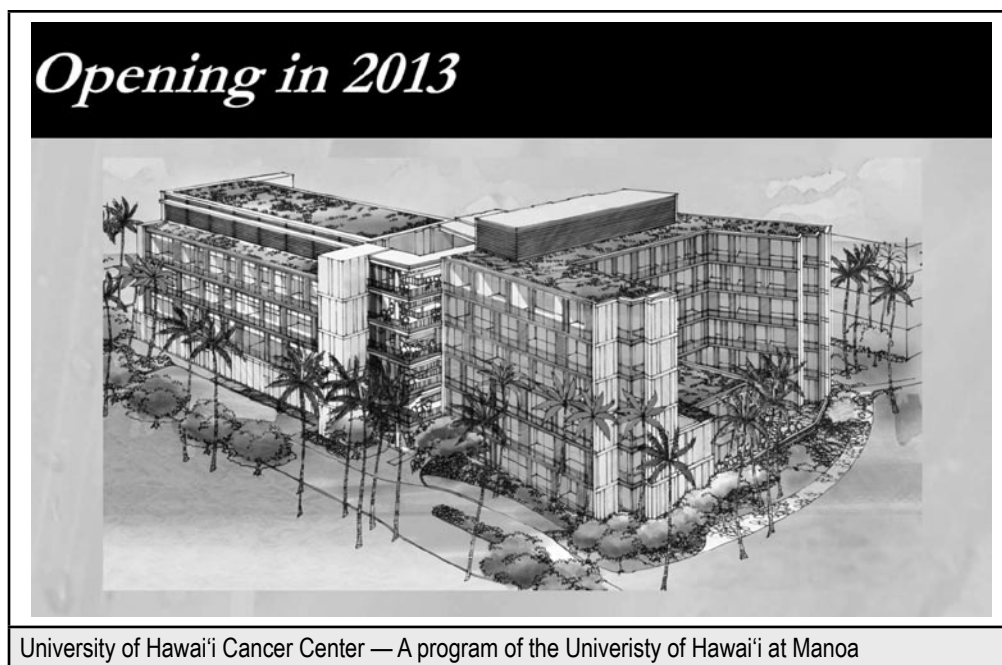
The UH Manoa College of Engineering works with JABSOM and local companies to develop new medical device technology that supports health care delivery and medical and life science research. Examples include secure medical adhesives, cutting tools for minimally invasive orthopedic surgery, wirelessly monitoring human vital signs, self-powered biosensors, and improved imaging techniques using ultrasound and magnetic resonance imaging. Scientists are characterizing the biophysical interactions between corticosteroids and lung surfactant to improve the efficacy of inhaled steroid therapy in treating premature babies for chronic lung disease; using ultrasound to facilitate plasmid delivery and to scan lymph nodes; and developing micro fluidic devices to sort live versus dead cells, culture specific cells in three dimensions, or encapsulate cells for immuno-isolation.

Finally, the UH Hilo College of Pharmacy is the lead organization for the Hawai'i Island Beacon Community (HIBC). The HIBC is a consortium of healthcare providers, health plans, and other stake-

holders committed to improving healthcare quality, cost-efficiency, and population health on Hawai'i Island through the collaborative use of Health Information Technology. Other partners include the three acute care hospitals in the county, the largest Independent Physician Association in the county, the three federally qualified health centers, the Native Hawaiian Health Care System, physician leaders, the largest health plan in the state, the Medicaid health plan, the Mayor's office, and the state-designated Health Information Exchange organization. All of Hawai'i Island is considered rural and designated as a low income medically underserved population with a significant shortage of healthcare professionals.

Summary

JABSOM takes its responsibility to improve health among Hawai'i's people to heart. The school's vision is, ALOHA: to Attain Lasting Optimal Health for All, a theme adopted through a strategic planning process which engaged JABSOM's partners in the health and life sciences including its private sector collaborators and its sister colleges throughout the University of Hawai'i's ten-campus system. JABSOM's ability to collaborate and contribute in these areas has been irrevocably enhanced by tobacco-related funding that the State of Hawai'i has committed to develop the Kaka'ako campus. The taxpayers' generosity has improved the education and reach of clinicians and researchers who, in turn, dedicate their lives to preventing, treating and eliminating the deadly grip tobacco holds on too many of the people of Hawai'i.





GET READY WITH THE RESPIRATOR AND INTENSIVE CARE UNIT.

Forbes magazine presented a sad commentary on the present status of the American Medical Association. Membership has fallen off steadily in recent years and is now down to 17% of practicing physicians. Of those members, a mere 13% support the AMA's position in endorsing President Obama's health plan. Almost half (47%) of drop-outs cite AMA support of Obamacare as their reason for leaving. A physician recruitment firm, Jackson and Coker, cited the February National Physicians Survey which revealed that physicians are turning to Doctors4Patient Care and the Association of Physicians and Surgeons for representation. Many are also looking to their specialty organizations for help and guidance. Is the American Medical Association near death after 166 years of claiming to speak for physicians? No, but it is getting close to life support and desperately needs an injection of stimulating leadership.

EVERYONE HAS A PHOTOGRAPHIC RETINA. SOME JUST DON'T HAVE FILM.

A prevalence study done for evidence of age-related macular degeneration (ARMD) on 7000 patients age 40 and beyond was accomplished at the University of Wisconsin. Examinations were regularly conducted for years 2005 to 2008 across all races and ethnicities. The highest rate of ARMD is in the non-Hispanic white population age 60 and older. Most striking was the reduction that this most common cause of blindness is now 6.3% which is almost one-third less than the 9.4% measured two decades ago. Non-Hispanic black individuals had lower rates than others in the study. Theories as to the decrease in frequency are less use of tobacco, and possibly dietary changes. Many cases appear to be genetic in origin and beyond treatment.

IF YOU FEED THEM, THEY WILL COME.

Are you looking for an exotic vacation at a luscious tropical ocean site? Be careful. Travelers to the coast of Brazil's northeast state of Piaui have been frightened off the beach. It's not a problem with sharks, but a much more aggressive carnivorous creature, the piranha! On a current week-end over 100 ocean bathers wound up at the hospital in Jose de Freitas near the state capital Terezina. These fearsome fish really do behave as seen in horror movies with frighteningly sharp teeth to dig into flesh. An environmental official said, "Since they have no predators, piranhas have started attacking people on the beach." Authorities are rushing to reduce the piranha outbreak by adding tilapia with the hope it will quell the piranha appetite for human flesh. That's doubtful. It seems more likely that chumming will only increase the number of grazing piranha. And you thought jellyfish were scary.

KEEP DIGGING, GANG! THERE'S GOTTA BE A PONY HERE SOMEWHERE.

In 2009, studies at Whittemore Peterson Institute, in cooperation with other labs, released data that pointed to a retro-virus as the cause of chronic fatigue syndrome (CFS). The theory excited scientists and people with CFS. Alas, a recent sort-of retraction was published in Science along with a paper by the Blood XMRV Scientific Research Working Group. Nine labs testing for XMRV or for evidence of XMRV infection in the blood of CFS patients, either could not find the retro-virus or reproduce the earlier findings. Two members of the original team of thirteen went back to blood samples they analyzed and found they were contaminated with XMRV genetic material that could not have come from their patients. Fearing the CFS retro-virus could enter the nation's blood supply, the American Association of Blood Banks (AABB) had advised members to discourage donations from those with CFS. With the current report AABB says forget screening for XMRV. Judy A. Mikovits of the Whittemore Peterson Institute is sticking to her theory that CFS is caused by a retro-virus, even if it isn't XMRV.

YOU ARE WHAT YOU EAT.

Generally speaking, the placenta is considered bio-hazard waste. Not so with New York City placenta chef Jennifer Mayer. She believes the placenta is a nutrient-loaded meat that can alleviate postpartum depression, aid lactation, and provide other unverified benefits. "Some are joyful, big and round. Others are really intense with grief, sadness or uncertainty." She typically sets up in the new mother's kitchen (presumably after a home delivery), drains the placental blood, blots the organ dry, and cooks it for

30 minutes. It looks somewhat like a brisket which she cuts into slices and dehydrates overnight. The next step is to grind it in the blender and pour it into capsules for one-a-day use. Bon appetit!

THE FIRST POINT AND CLICK INTERFACE WAS SMITH AND WESSON. GO AHEAD, MAKE MY DAY!

In Benton Harbor, Michigan, two masked gunmen burst into an all-night Walgreens pharmacy. One jumped over the counter and pointed a gun at the pharmacist. The pharmacist, who had a permit to carry a concealed weapon, pulled his own gun and fired at the intruders. They fled. A surveillance video documented the event in careful detail. The pharmacist was hailed as a hero and received national attention. Walgreens fired him. Employees are barred from carrying weapons, and receive comprehensive training on robbery procedures. He brought a lawsuit claiming wrongful termination, stating that he had a right to defend himself and others when they were threatened. Walgreens is contesting the suit in U.S. District Court and contends that his actions violated store policy. One wonders if we are headed for the west of 150 years ago, except that it's not limited to the west.

WE MUST DO AWAY WITH PAINFUL WORDS LIKE BLUBBER, CELLULITE, PORKY AND FATSO.

Paul Kramer wrote an amateurish rhyming picture book for children four to eight years old which is recommended on Amazon. The title is "Maggie Goes on a Diet" and is about an obese, unhappy 14 year-old girl. Oh, the outrage! The not-yet-published book describes how the bullied girl is transformed through time, exercise and hard work into a popular, confident and average size soccer star. The only page that most people have seen shows Maggie hunched over the fridge during a two-fisted eating binge. Angry reactions on Facebook and Twitter are "Say no to Maggie," etc. But there are supporters. One responded to a book slammer with "She's fourteen, not six. Are you seriously suggesting that with the obesity problem in this country, that a book teaching children to exercise and eat right is somehow immoral? I bet you're fat." Wake up, people! Obesity means type 2 diabetes, high blood pressure, vascular disease and excess belching.

THE ROAD TO HELL MAY BE PAVED WITH GOOD INVENTIONS.

Law-enforcement authorities have been concerned with drivers who talk on the phone or text at a traffic signal. How superficial and old hat! The Toyota Entune system and Audi, BMW, Mercedes Benz, Lincoln, and Hyundai are into major WiFi expansion for motorists. We will be overwhelmed with dashboard panel devices that connect, inform, translate, provide airline schedules, street direction, recommend restaurants, hotels, gasoline stations, weather, and stock reports. I forgot to mention football games and soap operas. Many new cars feature a glass screen with multiple functions displayed for touch control or a knob to roam the panel. The driver must follow the cursor to acquire the action desired, all the while watching the road, traffic signals, possible lane changes, the car ahead and maybe even pedestrians. Transportation Secretary Ray LaHood says all this information poses yet another source for driver distraction which is already a growing problem. Is there any opportunity for common sense in this electronic maelstrom?

GUILT BY ASSOCIATION?

Mary C. Norton, PhD, and her team at the University of Utah studied 1221 couples over age 65 for the incidence of dementia. They found that a subject whose spouse experienced incident dementia onset had a six times greater risk for incident dementia than those whose spouses were dementia free. The conclusion is that the severe stress associated with dementia care-giving may exert substantial risk for the development of dementia in spouse care-givers. So, it is not an infection, but perhaps it is.

ADDENDA

— Jack Hart teed up his golf ball at Cog Hill golf course in Lemont, Illinois, hit the ball cleanly and watched it disappear into the hole. At age 89 he is the oldest on record to hit a hole-in-one at Cog Hill.

— A government study found that dozens have fallen ill from insecticides while attacking bed bugs in the home. A North Carolina woman died after using 18 cans of a chemical fogger. Eighteen cans! Geez, no wonder she died.

— Saint Lydwina is the patron saint of ice skating.

— If you are going to shoot a mime, use a silencer.

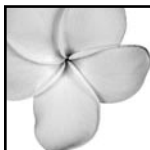
— Beware of geeks bearing discs.

ALOHA AND KEEP THE FAITH **rts** (Editorial comment is strictly that of the writer.)

UPCOMING CME EVENTS

Interested in having your upcoming CME Conference listed? Please contact Brenda Wong at (808) 536-7702 x103 for information.

Date	Specialty	Sponsor	Location	Meeting Topic	Contact
November 2011					
11/11	PLM, PMD	Queen's Medical Center	Queen's Conference Center, O'ahu	Conference on Pain & Palliative Care	Email: cme@queens.org
December 2011					
12/7-12/8	PLM, PMD	Queen's Medical Center	Queen's Conference Center, O'ahu	Conference on Pain & Palliative Care	Email: cme@queens.org
January 2012					
1/8-1/13	R	University of California San Francisco School of Medicine	Fairmont Orchid, Kona, Hawai'i	A Practical Approach to Breast Imaging	Web: www.cme.ucsf.edu/cme
1/16-1/20	CD	Mayo Clinic	Mauna Lani Hotel, Hawai'i	Hawai'i Heart 2012: Case-Based Clinical Decision Making Using Echocardiography & Multimodality Imaging	Web: www.mayo.edu/cme
1/15-1/20	R	University of California San Francisco School of Medicine	Fairmont Orchid, Kona, Hawai'i	Body Imaging: Hot Topics in the Tropics	Web: www.cme.ucsf.edu/cme
1/23-1/27	IM	Mayo Clinic	Ritz Carlton Kapalua, Maui	24th Annual Selected Topics in Internal Medicine	Web: www.mayo.edu/cme
1/23-1/27	AN	California Society of Anesthesiologists	Hyatt Regency Maui, Ka'anapali Beach, Maui	2012 CSA Winter Hawaiian Seminar	Web: www.csahq.org
1/30-2/3	CD	Mayo Clinic	Grand Hyatt Kaua'i, Kaua'i	19th Annual Arrhythmias & the Heart: A Cardiovascular Update	Web: www.mayo.edu/cme
February 2012					
2/5-2/10	GS	Mayo Clinic	Grand Hyatt Kaua'i, Kaua'i	Mayo Clinic Interactive Surgery Symposium 2012	Web: www.mayo.edu/cme
2/13-2/18	IM	University of California San Francisco School of Medicine	Grand Hyatt Kaua'i, Kaua'i	Infectious Diseases in Clinical Practice: Update on Inpatient and Outpatient Infectious Diseases	Web: www.cme.ucsf.edu/cme
2/18-2/21	OTO, FPS, OMF	University of California San Francisco School of Medicine	Moana Surfrider Hotel, O'ahu	Pacific Rim Otolaryngology Head and Neck Surgery Update Conference	Web: www.cme.ucsf.edu/cme
2/19-2/24	D	Skin Disease Education Foundation	Hilton Waikoloa Village, Kohala, Hawai'i	36th Hawaii Dermatology Seminar	Web: www.scientificsymposiums.com
2/20-2/24	ON	Scientific Symposiums	Mauna Kea Resort, Hawai'i	Women's Cancers: Surgical Pathologic, Cytologic, IHC, and Molecular Diagnosis of Breast & Genital Tumors	Web: www.scientificsymposiums.com
March 2012					
3/25-3/28	GS	University of California San Francisco School of Medicine	JW Marriott Ihilani, O'ahu	The Postgraduate Course in General Surgery	Web: www.cme.ucsf.edu/cme
April 2012					
4/2-4/7	IM	University of California San Francisco School of Medicine	Wailea Beach Marriott, Maui	Primary Care Medicine: Update 2012	Web: www.cme.ucsf.edu/cme
June 2012					
6/13-6/16	OPH		Hilton Waikoloa Village, Kohala, Hawai'i	35th Annual Ophthalmology Symposium	Web: www.ucdmc.ucdavis.edu/cme



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