

URGENT CARE ALERT

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Urgent Care Alert
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The Tonal Qualities of Providers' Voice Predictive of History

ABSTRACT & COMMENTARY

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Synopsis: *Surgeons' tone of voice in routine visits is associated with malpractice claims history.*

Source: Ambady N, et al. Surgeons' tone of voice: A clue to malpractice history. *Surgery*. 2002;132:5-9.

MEDICAL MALPRACTICE HISTORY IS NOT ONLY ASSOCIATED WITH medical negligence but is also associated with a provider's interpersonal skills — the nature and quality of communication with a patient. The quality of the care is not the only reason patients initiate a law suit. Rather, the decision to sue is based upon a number of factors, including the relationship the patient has with their provider.

This study is the first to evaluate the tone of voice of surgeons, as opposed to the content of the conversation, as a predictor for malpractice claims. The tone or manner in which a physician communicates may be as important as what was actually said to the patient. If the patient believes, based on the provider's tone, that they were harsh or negative, the patient may be much more likely to initiate a suit if the outcome is not what was expected.

This study recorded 114 conversations between 65 surgeons and patients during their pre-op visit. Half of the surgeons had 2 or more malpractice claims; the other half did not have any malpractice history. Two 10-second clips were extracted from each surgeon from the first and last minute of their conversation, with 2 different patients. The tapes were content-filtered to remove the content of the message, leaving only the tonal qualities of the conversation. These tapes were "judged" by Harvard undergraduate students and ranked on a 7-point scale for the following voice characteristics: warm, anx-

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ious/concerned, interested, hostile, sympathetic, professional, competent, dominant, satisfied, and genuine.

Using the 4 10-second clips from each surgeon, the judges were able to determine which of the surgeons had previous malpractice history and which surgeons did not. Controlling for content, ratings of higher dominance and lower concern/anxiety in their voices tones significantly identified surgeons with previous claims compared with those who had no claims. For dominance: Odds ratio 2.74, 95% CI 1.16 to 6.43. For concern/anxiety odds ratio: 0.46, 95% CI 0.21 TO 1.01. Dominance was described as deep voice tone, which was loud, moderately fast, unaccented, and clearly articulated. According to Ambady and colleagues, this may communicate a lack of empathy and understanding for the patients, in contrast to the tonal qualities of concern/anxiety, which were felt to be positively related to feelings of concern and empathy.

This suggests that how something is communicated may be just as important as what is communicated. This study adds another piece to the already compelling data, which suggest that outcomes, such as patient dissatisfaction, provider shopping, poor adherence to medical directions, and medical malpractice claims are related not only to medical negligence but also to the content and tone of the communication with the provider.

COMMENTARY

I first came upon this study while reading the book

Blink by Malcolm Gladwell. Although surgeons were the subject of Ambady et al's study, the findings are particularly relevant to urgent care practitioners. Given the nature of our patient encounters, urgent care providers need to be aware of any possible breaches in care or service which may lead to a malpractice complaint. We do not have the luxury of a long standing provider-patient relationship to help smooth out areas where we, or our staff, fell below the patient's expectations. Therefore, as urgent care providers we should be utilizing every tool we have to lower our medical malpractice risk. We can train ourselves and our colleagues to appreciate that both their verbal (content and tone) and non-verbal (posture and presence) communication will influence a provider's malpractice exposure.

Other ways an urgent care group can improve the malpractice exposure are to: Hire providers without previous malpractice history; identify patients with high risk complaints; identify patients who demonstrate by their actions that they may have unrealistic expectations; identify providers who engage in high-risk activities (yelling at staff, swearing in the clinic, dating patients, etc.).

Urgent care medicine ranks up with other high risk medical specialties and anything we can collectively and individually do to lower our malpractice exposure will benefit the entire specialty. ■

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Diagnosing Spondylolysis

ABSTRACT & COMMENTARY

By Matt Shores, MD

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Dr. Shores reports no financial relationships relevant to this field of study.

Synopsis: *The one-legged hyperextension test is not accurate in screening for spondylolysis and bone scintigraphy (with SPECT) should remain the gold standard in diagnosing spondylolysis.*

Source: Masci L, et al. Use of the one-legged hyperextension test and magnetic resonance imaging in the diagnosis of active spondylolysis. *Br J Sports Med.* 2006;40:940-946.

LOW BACK PAIN IS A COMMON PRESENTATION IN primary care offices, urgent care facilities, and emergency departments across the nation. However,

low back pain in an adolescent, or an otherwise young healthy adult, is a bit curious, particularly when occurring in an active individual. The most common cause of low back pain in the active, athletic population is spondylolysis, an acquired defect in the pars interarticularis. Spondylolysis may be seen in a wide spectrum of patients; however, it is most commonly seen in individuals whose activities require repetitive lumbar extension and rotation. For example, spondylolysis is more common in football offensive lineman, gymnasts, and divers. It is important to recognize active spondylolysis, given that early recognition has been associated with improved fracture healing. In the past, reproduction of pain with the one-legged hyperextension test has been pathognomonic for spondylolysis. Given a positive one-legged hyperextension test, patients are often then referred for bone scintigraphy with SPECT, the gold standard in diagnosing spondylolysis. If bone scintigraphy (with SPECT) is positive, a follow-up CT scan is done to look for a fracture.

The purpose of this study in the November 2006 *British Journal of Sports Medicine* is to determine the efficacy of the one-legged hyperextension test in screening for spondylolysis and to compare the use of MRI vs the gold standard, bone scintigraphy (with SPECT), with follow-up CT when positive. Patients were chosen if they were between the ages of 10 and 30 and participated in regular activity. Patients must have had back pain for 6 months or less, with a tentative diagnosis of spondylolysis. Finally, the patients needed to have been referred for bone scintigraphy (with SPECT) as the initial evaluation. Also, patients were excluded if they had a contraindication to MRI or if they had a diagnosis of spondylolysis confirmed by bone scintigraphy (with SPECT) within the last 12 months. The patients chosen proceeded to complete a study questionnaire under the supervision of the main investigator. In addition, the main investigator had the patients perform the one-legged hyperextension test. Finally, each patient had both bone scintigraphy (with SPECT) and an MRI; CT scan was only done on those patients with a positive bone scintigraphy (with SPECT).

The results of this study did not bode well for the one-legged hyperextension test. One main investigator examined 71 patients using the one-legged hyperextension test (the patient stands on one leg as the opposite leg is raised with its knee in flexion and the hip slightly flexed, while the patient actively extends their lumbar spine). When the left leg was tested, 42 of the 71 patients had a positive test (reproduced

pain); however, only 17 of those 42 actually had an active spondylolysis confirmed by bone scintigraphy (with SPECT). The results were equally poor when examining the right side; 39 of those patients had a positive one-legged hyperextension test, while only 21 truly had an active spondylolysis. These results rendered the one-legged hyperextension test, with a sensitivity of 50% and 55.2% on the left side and right side, respectively. The tests specificity was equally poor; 67.6% and 45.5% on the left side and right side, respectively.

The study also took a look at the use of imaging in diagnosing spondylolysis. Bone scintigraphy (with SPECT) is currently the gold standard in diagnosis; however, MRI has been thought of as a possible alternative. The study performed both bone scintigraphy (with SPECT) and MRI on all subjects. In the 71 subjects, a total of 50 pars interarticularis were found (11 patients had bilateral uptake and 28 patients had unilateral uptake). When MRI was performed, only 40 pars interarticularis were found. Therefore, MRI only detected 80% of the pars interarticularis that bone scintigraphy picked up. When bone scintigraphy (with SPECT) is positive, a follow-up CT scan is performed to look for fractures. In the 50 pars interarticularis, follow-up CT scan found 19 fractures; MRI detected 18 fractures.

The conclusions of this study are fairly straightforward. The one-legged hyperextension test has a very poor sensitivity and specificity when looking for spondylolysis. It may, therefore, be determined that it alone is a sub-par screening tool and can neither rule-in nor rule-out spondylolysis. A positive test should no longer be pathognomonic for spondylolysis. In addition, it would be nice if MRI was as efficient in picking up pars interarticularis as bone scintigraphy (with SPECT); however, MRI only picked up 80% of those pars interarticularis that bone scintigraphy (with SPECT) detected, and frankly that's just not good enough. MRI did have comparable results to CT in detecting fractures; however, MRI cannot differentiate between acute and chronic fractures, a feature attributed to the CT scan. So, in the end, bone scintigraphy (with SPECT) should remain the gold standard in diagnosing spondylolysis, and it should be ordered on clinical suspicion, not on whether or not a one-legged hyperextension test was positive or negative.

■ COMMENTARY

Spondylolysis is the most common cause of low back pain in the young athlete or any young active indi-

vidual. Simply put, spondylolysis is a stress reaction of the pars interarticularis. It is most commonly seen at the levels of the fourth and fifth lumbar vertebrae. As mentioned previously, the mechanism of injury is repeated hyperextension of the lumbar spine, and is most common in young athletes whose sports require such repetitive motion, such as divers, gymnasts, or offensive lineman. The injury occurs as a continuum, in that the stress reaction may progress to a true stress fracture given repeated hyperextension activity in the face of low back pain. As this study has shown, the one-legged hyperextension test is not proficient in screening for spondylolysis. Referral for imaging should be approached on a strong clinical suspicion. A referral for bone scintigraphy (with SPECT) would be prudent to evaluate any young active individual that presents with low back pain that does not improve after 2 weeks of conservative treatment. Treatment of spondylolysis includes the use of a lumbosacral orthosis in a position of slight flexion. Bracing and inactivity should occur for a time period of at least 6 weeks and/or until the patient is pain free, which may take up to 6 months. Once the patient is pain free, a rehab program may be started and the patient may return to activity if rehab is tolerated well.⁵

In an urgent care setting, low back pain is often briefly evaluated. The pain is treated with a short course of medication, and the patient is advised to follow up with their PCP for further evaluation and pain management. Of course, this is appropriate care in the urgent care setting. However, it can never hurt to have more knowledge as to what we are treating as physicians, as well as equipping our patients and their PCPs with this knowledge so that we steer them in the right direction. ■

References

1. Masci L, et al. Use of the one-legged hyperextension test and magnetic resonance imaging in the diagnosis of active spondylolysis. *Br J Sports Med.* 2006;40: 940-946.
2. Micheli LJ, Wood R. Back pain in young athletes: Significant differences from adults in causes and patterns. *Arch Pediatr Adolesc Med.* 1995;149:15-28.
3. Kraft DE. Low back pain in the adolescent athlete. *Pediatr Clin North Am.* 2002;49:643-653.
4. Campbell RS, et al. Juvenile spondylolysis: A comparative analysis of CT, SPECT and MRI. *Skeletal Radiol.* 2005;34:63-73.
5. DeLee; DeLee: DeLee and Drez's Orthopaedic Sports Medicine. 2nd Edition. Saunders an Imprint of Elsevier. 2003. Chapter 27.

There Is No Cure for the Common Cold

ABSTRACT & COMMENTARY

By John P. Santamaria, MD

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Dr. Santamaria reports no financial relationships relevant to this field of study.

Synopsis: *Despite the fact that cold remedies are not proven to be effective, and that some safety issues are associated with their use in the pediatric age group, physicians still recommend them.*

Source: Cohen-Kerem R, et al. The attitude of physicians toward cold remedies for upper respiratory infection in infants and children: A questionnaire survey. *Clin Pediatr (Phila).* 2006;45:828-834.

OVER-THE-COUNTER COLD MEDICATIONS ARE WIDELY available and commonly used in infants and children. Cohen-Kerem and colleagues present a brief review of the literature, reminding us that critical reviews generally fail to demonstrate a beneficial effect over placebo in the relief of cough and cold symptoms in children, particularly for preschoolers and infants. The goal of this article was to query a random sample of Canadian family practitioners and pediatricians and study the attitudes of these physicians toward the use of cold remedies in infants and children. Of those sent questionnaires, 266 physicians (53.2%) responded. Overall, many respondents were willing to recommend over-the-counter cold remedies to young children; 50.6% for 1 to 3-year-olds, 30.1% for 6 to 12-month-olds, and 12.7% for 0 to 6-month-olds. Pediatricians and university-affiliated physicians were less willing to recommend these medications to children than family practitioners.

Reasons given for these recommendations included the need to treat the parent who is anxious and will procure the medications even if not recommended by the physician. Cohen-Kerem et al conclude that cold remedies are not of proven effectiveness and may have associated safety issues, yet they are still recommended by physicians. They suggest implementing medical education programs, practice guidelines, and policy statements to prevent the use of cold remedies in infants.

■ COMMENTARY

Cohen-Kerem et al provide a cogent argument against the use of cough and cold preparations in small children. Efficacy data lacking, these medications are a multi-billion dollar industry in the United States, a significant portion being spent on pediatric formulations. Significant side effects may be associated with the use of cough and cold medication in small children. In particular, combination cold and cough medications are not innocuous and their use in infants is ill-advised. Instead, increasing fluid intake, positioning, bulb suction of the nose, and parent education should be attempted. If a cough and cold medication is deemed necessary by the physician, the use of a single-ingredient medication is recommended. Since many untoward effects of these drugs are a result of improper administration, clear instructions should be given for their use, especially when used in infants for whom no dosing schedule is provided by the manufacturer. ■

Best Option for Treatment of Pain Secondary to Ankle Sprain

ABSTRACT & COMMENTARY

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Dr. Shufeldt reports no financial relationship to this field of study.

Synopsis: *This study compares Tramadol and acetaminophen to Hydrocodone and Acetaminophen versus placebo for the treatment of acute ankle sprain.*

Source: Hewitt DJ, et al. Tramadol/acetaminophen or hydrocodone/acetaminophen for the treatment of ankle sprain: A randomized, placebo-controlled trial. *Ann Emerg Med.* 2007;49:468-480.

PAIN IS THE LEADING REASON FOR SEEKING CARE IN the emergency department,¹ yet it is often undertreated in the ED because of inadequate assessment and treatment, for fear of addiction.² The goal of this study was to compare the analgesic efficacy and safety of tramadol/acetaminophen with hydrocodone/acetaminophen vs placebo in the ED, using ankle sprain with partial ligament tear as the prototypical model of acute musculoskeletal pain.

This multicenter, randomized, double blind, outpatient, placebo-controlled, parallel-group clinical trial compared 3 groups: tramadol/acetaminophen, hydrocodone/acetaminophen, and placebo. Subjects reported pain scores hourly in a diary for the first 4 hours, then daily for next 5 days. The subjects were from 47 urgent care sites and 39 emergency departments. Study subjects were adults age 18 to 75 presenting with ankle sprains from the previous 48 hours, who had a clinical diagnosis of partial ligament tear, findings of pain on ambulation, and ankle swelling.

Patients were randomized in a 1:1:1 ratio and received either 2 capsules of tramadol 37.5 mg, acetaminophen 325mg, hydrocodone 7.5 mg, acetaminophen 650 (plus one placebo capsule), or 2 placebo capsules. Tramadol/acetaminophen and hydrocodone/acetaminophen provided greater total pain relief than placebo during the first 4 hours, decreased pain intensity during the first 4 hours, and increased average pain relief on days one through 5. There was no difference in effectiveness between the tramadol/acetaminophen group as compared to the hydrocodone/acetaminophen group. Familiar adverse side effects included nausea, vomiting, dizziness and somnolence. Hewitt and colleagues concluded that one or 2 capsules of 37.5 mg of tramadol/325 mg of acetaminophen and one capsule of 7.5 mg of Hydrocodone/650mg of acetaminophen were well tolerated, had equivalent clinical utility, and were both more effective than placebo in the treatment of acute ankle sprain.

■ COMMENTARY

This study is useful to help determine which pain medication is the best choice for the urgent care patients who present with acute musculoskeletal trauma. Like the emergency department, urgent care centers are frequented by patients who are seeking pain relief from musculoskeletal trauma.

Until this study, the typical choice for pain relief in a patient with an acute musculoskeletal injury was a non-steroidal anti-inflammatory or hydrocodone /acetaminophen, or both in combination. After this study, tramadol/acetaminophen appears to be as effective as hydrocodone/acetaminophen for acute ankle sprain. This adds to the armamentarium of effective pain medications we can safely prescribe out of an urgent care center.

On a side note, I have noticed that many physicians are very reluctant to prescribe narcotics for the relief of acute pain for fear that this prescription will lead to addiction. However, when faced with their own acute injury, these same physicians have no qualms about using short-term narcotic pain medication for their acutely painful injury. This dichotomy is troubling since it highlights a double standard which exists for many of

us in health care. It has been shown time and again that physicians under-treat patients in pain by prescribing less pain medication than is realistically needed, or by prescribing a dosage that will not relieve the patient's painful symptoms. Perhaps now, these providers will, at minimum, prescribe an appropriate dose of the tramadol/acetaminophen combination for those patients who present in acute pain. ■

References

1. Cordell WH, et al. The high prevalence of pain in emergency medical care. *Am J Emerg Med.* 2002;20:165-169.
2. Rupp T, Delaney KA. Inadequate analgesia in emergency medicine. *Ann Emerg Med.* 2004;43:494-503.

Validating the San Francisco Syncope Rule

ABSTRACT & COMMENTARY

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Dr. Shufeldt reports no financial relationship to this field of study.

Synopsis: *The San Francisco Syncope Rules is used to identify patients presenting to the ED with a low risk of adverse outcome in the succeeding seven days. This study attempts to externally validate the rules.*

Source: Sun BC, et al. External validation of the San Francisco Syncope Rule. *Ann Emerg Med.* 2007;49:420-427.

THE OBJECT OF THIS ORIGINAL STUDY WAS TO DETERMINE if the San Francisco Syncope Rule can be externally validated. The San Francisco syncope rule was developed to try to stratify which patients are at low risk for an adverse event within the succeeding 7 days. In the initial study, the Rule was determined to be 96% to 98% sensitive.

Syncope is defined as a transient loss of consciousness, and may be the first sign of a life-threatening event. Syncope accounts for 1-3% of all emergency department visits and admissions to the hospital. Approximately 39-50% of all patients admitted with syncope leave without a definitive diagnosis.

The San Francisco Syncope Rule predictors include an abnormal EKG, complaint of shortness of breath, a

hematocrit level less than 30%, a systolic blood pressure less than 90 mm Hg, and a history of congestive heart failure. Of note, age was not a predictor.

In this study, both the primary outcome included all 7-day serious events and the secondary outcome included all 7-day outcomes that were diagnosed only after the original ED visit. Of the 709 patients who were screened initially, 477 were eventually enrolled in the study. The proportion of patients with a serious 7-day event was 11.7%. The proportion of patients who had a serious event diagnosed only after admission was 3.4%. These serious events included: arrhythmia, hemorrhage/anemia, structural heart disease, stroke/TIA, pacemaker placement, PTCA, MI, PE, ICH, and aortic dissection.

Out of the 477 patients who provided informed consent, telephone follow-up was completed in 463. There were 56 (12%) patients who had a serious 7-day clinical event, including 16 (3%) who received a diagnosis after the initial ED evaluation. The sensitivity of the San Francisco Syncope Rule for the primary outcome was 89% (95% confidence interval 37% to 48%). The specificity for the primary outcome was 42% (95% confidence interval 81% to 97%). For the secondary outcome (diagnosis after ED visit), sensitivity was 69% (95% confidence interval 46% to 92%) and specificity was 42% (95% confidence interval 37% to 48%).

This study used the San Francisco Syncope Rule to predict serious events within 7 days of the initial event. Sun and colleagues determined that the Rule had a lower sensitivity and specificity than was previously reported.

■ COMMENTARY

This study is useful to those of us in urgent care centers who struggle with the disposition for patients with the diagnosis of syncope. Syncope is a frequent presenting complaint in urgent care centers. If your center has ECG and hematocrit available, you may be able to manage those patients presenting with syncope, provided that the patient does not have an abnormal EKG, complaint of shortness of breath, a hematocrit level less than 30%, a systolic blood pressure less than 90 mm Hg, and a history of congestive heart failure.

If you elect to manage them on an outpatient basis as opposed to sending them to the emergency department, you have some data to support you. Recall that age was not a variable which Sun et al used and will obviously weigh into your decision process. Also recall that Sun et al were only looking in a 7-day window. In other words, try to determine which patients may benefit from hospitalization. One important caveat is that if you send the patient home who meets criteria, ensure that they have adequate follow-up to complete their syncope work up. ■

To Compete or not to Compete: The Athletic Physical

ABSTRACT & COMMENTARY

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Dr. Shufeldt reports no financial relationship to this field of study.

Synopsis: *Thousands of young athletes receive sports physicals every year. This article discusses what findings should cause concern.*

Source: Giese EA, et al. The athletic participation evaluation: Cardiovascular assessment. *Am Fam Physician.* 2007; 75:1008-1014.

CARDIOVASCULAR ABNORMALITIES THAT CAUSE OR contribute to a traumatic sudden death during athletic events are believed to occur in 1 out of every 200,000 young athletes.¹ Often time, these cardiac abnormalities are found only upon autopsy. These findings include hypertrophic cardiomyopathy, congenital coronary anomalies, repolarization abnormalities, myocarditis, and Marfan syndrome. Since these abnormalities are difficult to detect, physicians should use standardized history and physical exam forms. When practicable, the athlete's parents should also be questioned about family history of sudden death.

The four components of the preparticipation cardiovascular exam are blood pressure measurement, palpation of femoral and radial pulse, dynamic cardiac auscultation, and evaluation for Marfan syndrome (eg, slit lamp exam, and echo to assess the aortic root). A normal radial pulse should have a smooth, rapid upstroke, a smooth summit and a gradual downstroke. Radial and femoral pulses should be palpated simultaneously to screen for coarctation of the aorta. If the femoral pulse is delayed, further evaluation is needed to rule out coarctation.

The cardiac assessment should be performed in a quiet setting and should include inspection, palpation, and auscultation. Precordial palpation is used to detect thrills or abnormal apical impulse locations. Physicians should auscultate for a split S2. The widening of the S2 during inspiration is normal and a reassuring sign. A fixed S2 during inspiration or narrowing S2 can be a sign of atrial septal defect, severe aortic stenosis, hypertrophic cardiomyopathy or left bundle branch block. Blood pressure elevation above the 95th percentile

should be rechecked after the patient sits quietly for a period of time. If it is still elevated, a recheck should be performed in one to two weeks and then a prompt referral if the BP remains elevated.

There are a number of specific signs and symptoms which should raise the red flag. These include exercise related syncope or presyncope, palpitations (a gradual onset and relief signifies sinus tachycardia, a rapid onset or abatement can signify ventricular tachycardia). Dyspnea on exertion may simply be a sign of poor conditioning; however, it may also be a sign of pulmonary hypertension, anemia, or exercise induced reactive airway disease. A family history of sudden cardiac death particularly at a young age (less than 50 years old) may signify a congenital abnormality.

Liability exists for providers who stray outside the recommended guidelines when they allow an athlete to engage in sporting events despite history or physical exam findings which may indicate pathology.

■ COMMENTARY

Urgent care providers are often called upon to perform sports physicals. It is imperative that we do not allow ourselves to be lulled into complacency while performing these exams. This article gives a great overview of what to look for and what tests and exam criteria you should use to discover the high risk conditions.

The challenge is that finding a life threatening condition during one of these physicals is like finding the proverbial needle in a high stack. However, if one is overlooked, the liability and more importantly, the risk to the patient is very significant. ■

Reference

1. Maron BJ. Sudden death in young athletes. *N Engl J Med.* 2003;349:1064-1075.

CME Questions

12. **True or False?** A 44-year-old patient presents with a complaint of syncope. His ECG reveals a right bundle branch block, and his initial troponin is negative. At this point, based upon the San Francisco Syncope Rule, the patient is at risk for a serious event within 7 days.
 - a. True
 - b. False
13. **Which of the following physical exam findings is both highly sensitive and specific in diagnosing active spondylolysis?**
 - a. straight leg raise
 - b. seated straight leg raise
 - c. one-legged hyperextension test
 - d. None of the above

14. Which of the following is the gold standard in diagnosing spondylolysis?
- MRI
 - CT Scan
 - bone Scintigraphy (with SPECT), followed by CT if positive
 - bone Scintigraphy (with SPECT), followed by MRI if negative
 - None of the above
15. A 17-year-old offensive lineman from the local high school presents with 6 months of low back pain. Which of the following is the most appropriate management?
- Perform a physical exam, including the one-legged hyperextension test; if this test is negative (does not reproduce pain), patient may resume activities.
 - Perform physical exam and begin conservative treatment; if after 2 weeks of conservative therapy the patient continues to have low back pain, then refer for bone scintigraphy (with SPECT).
 - Perform physical exam and order MRI of lumbar spine.
 - Place patient on NSAIDs and rest back for 2 weeks; patient may resume activities after 2 weeks of rest and NSAIDs.
 - None of the Above
16. What 2 tonal qualities seem to show an affect on the surgeon's malpractice history?
- humor and disgust
 - anxiety and boredom
 - dominance and concern
 - sincerity and condescending
17. True or False? A 3-month-old patient presents with a complaint of nasal stuffiness. Her exam is completely benign, yet her parents remained concerned. The best course of action is to prescribe an over-the-counter formulation of Dimetapp decongestant infant drops with pseudoephedrine.
- True
 - False

ANSWERS: 12. (a); 13. (d); 14. (c); 15. (b); 16. (c); 17. (b)

CME Objectives

The objectives of *Urgent Care Alert* are to:

- quickly recognize or increase index of suspicion for specific conditions;
- apply state-of-the-art therapeutic techniques to treat patients with particular problems; and
- identify both common and rare complications that may occur. ■

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