This retrospective study found a greater risk of a cardiovascular event in COPD patients who used ipratropium than in those who didn't.

**Background:** Inhaled anticholinergic agents, such as ipratropium and tiotropium, are a mainstay of therapy for chronic obstructive pulmonary disease (COPD) patients. Nevertheless, one concern has been a possible link between anticholinergics and an increased risk of death. Three studies have expressed potential concerns regarding anticholinergics and cardiovascular compromise such myocardial infarction and cardiovascular death.

**Objective:** To explore further the association between inhaled anticholinergics and cardiovascular events (CVE) in COPD patients.

**Design:** Retrospective cohort analysis.

**Participants:** 82,717 military veterans with newly diagnosed COPD.

**Methods:** These COPD veterans were collated from 1999 to 2002. They were followed until they had their first hospitalization for a cardiovascular event, they died, or the end of the study. Cumulative anticholinergic exposure was calculated from the records within the past year. A Cox regression model estimated the risk of CVE associated with anticholinergic exposure and compared the result to a cohort of veterans who were not exposed to anticholinergics.

**Results:** Within the study group, there were 6234 CVEs (ie, 44% congestive heart failure, 28% acute coronary syndromes, and 28% dysrhythmias). Compared to those who were not on anticholinergics, exposure to anticholinergics within the past 6 months was associated with an increased risk of a CVE (hazard ratio [95% CI] for <4 and >4 30-day equivalents of anticholinergic therapy: 1.40 [1.30 to 1.51] and 1.23 [1.13 to 1.36], respectively).

**Conclusions:** There is an increased risk of CVEs associated with the use of inhaled ipratropium.

**Reviewer's Comments:** This study caused quite a stir in some circles when it was published. That stir went as far as the FDA. Within a matter of days, that agency came out with a statement that repudiated those findings. Interestingly, a companion piece examined cardiac complications associated with tiotropium and discovered that the risk of a CVE was greater with placebo than with tiotropium (Spiriva). Where does this leave us? As before, you do what you have to to make the patient better. (Reviewer-Paul P. Rega, MD).

Keywords: Ipratropium Bromide, COPD, Cardiovascular Events

Print Tag: Refer to original journal article
Screening Tool Proposed for Risk-Stratifying Elderly Patients With Syncope

Predictors of 30-Day Serious Events in Older Patients With Syncope.

Sun BC, Derose SF, et al:


Seven clinical factors appear to be associated with the risk of an adverse outcome in elderly subjects within 30 days of a syncopal event.

Background: As we in EM know, the syncope population is apparently boundless and growing older by the day. Risk-stratification is a fiscal and public health imperative. Useful data on outcomes are necessary. While expert society guidelines suggest that most patients aged <60 years without an obvious cause of syncope, and without cardiac or ECG abnormalities can be managed safely as outpatients, guidance for older subjects is lacking.

Objective: To identify predictors of 30-day serious events after syncope in older adults.

Design/Methods: This was a retrospective review of adults aged ≥60 years presenting to an ED with syncope or near syncope over a 3-year period. Syncope or near syncope was based on discharge coding of the reviewed record pool. The primary outcome measure was occurrence of a predefined serious event within 30 days after ED evaluation. Predefined events included arrhythmia, myocardial infarction, stroke, pulmonary embolism, aortic dissection, subarachnoid hemorrhage, anemia or internal hemorrhage requiring transfusion, or confirmation of structural heart disease. The authors employed multivariate logistic regression to identify predictors of 30-day serious events.

Results: The authors identified 2584 patients with complete records. Of these, 173 (7%) experienced a 30-day serious event. The authors identified 7 factors that were associated with a greater or lesser risk of future events. The 6 high-risk predictors were age >60 years, male sex, history of arrhythmia, triage systolic blood pressure >160 mm Hg, abnormal ECG result, and abnormal troponin I. Each of these contributed 1 point to a cumulative risk score. The sole low-risk predictor was a complaint of near syncope, contributing a value of -1. A risk score, generated by summing high-risk predictors and subtracting the low-risk predictor, stratified study patients into low- (score -1 or zero; event rate 2.5%); intermediate- (score 1 to 2; event rate 6.3%); and high-risk (score 3 to 6; event rate 20%) groups.

Conclusions: Predictors of 30-day serious events after syncope in adults aged ≥60 years can be used to compile a simple score, which, if validated in subsequent prospective studies, may aid in ED decision making.

Reviewer's Comments: You can't have too many syncope scores, evidently. Again, these finding await validation, but it is interesting to note that near syncope appears to be a negative predictor. Elderly patients comprise an ever increasing proportion of our patient population; many will have lived long enough to compile overt cardiovascular disease so the utility of this score remains to be seen. I note that, in general, near syncope engenders quite a bit of controversy, but I've always felt that there's a world of difference between patients who have almost fainted versus those who go that extra bit and actually collapse. This is 1 of 2 syncope articles this month. (Reviewer-Steven B. Abrams, MD).

Keywords: Syncope, 30-Day Serious Event, Risk Assessment, Risk-Stratification

Print Tag: Refer to original journal article
Infants With Fever <24 Hours After Vaccination Are at Lower Risk for SBI

Serious Bacterial Infection in Recently Immunized Young Febrile Infants.

Wolff M, Bachur R:

Acad Emerg Med 2009; 16 (December): 1284-1289

In infants 6 to 12 weeks of age with fever, immunization within 24 hours is associated with a lower risk of serious bacterial infection compared to those without recent immunization. Urine testing should still be considered.

Objective: To investigate the prevalence of serious bacterial infections (SBI) in infants with fever after vaccinations.

Design/Methods: This was a retrospective review of the records of infants between 6 and 12 weeks of age with fever ≥38°C without a source who were seen in the ED at Boston Children’s Hospital from 2000 to 2007. These patients were classified as having received vaccinations within a 72-hour period (this time frame was divided into 12-hour blocks) or having received no recent immunizations. The main outcome studied was a documented SBI. Patients were included in the study if, at a minimum, they had blood and urine cultures. Many patients had additional studies including lumbar punctures, stool cultures, chest x-rays, and point of care testing for respiratory syncytial virus (RSV) or influenza. A definite SBI required positive cultures or pneumonia on x-ray. The prevalence of a serious bacterial infection was then compared for patients with and without recent immunization.

Results: 1978 febrile infants were studied, of whom approximately 10% (213 of 1978) had received recent immunizations. Median age for both groups was about 64 days. Definite SBIs were found in 7.0% of those without recent immunizations versus only 2.8% of those with recent immunizations. If a patient had received a vaccination in the previous 24 hours, the prevalence of an SBI decreased to 0.6%. If over 24 hours since vaccination, this rate increased to almost 9%. The relative risk for an SBI was 0.41 if a recent immunization had been given. All SBIs in the recently immunized group were urinary tract infections. Among those not recently immunized, there were cases of bacteremia, urinary tract infection (UTI), bacterial meningitis, and pneumonia.

Conclusions: In febrile infants who have recently received immunizations, if the immunizations were given <24 hours before the fever, there is still a substantial risk of urinary tract infection, and urine testing is warranted in this group. Infants who were vaccinated >24 hours previously should be managed similarly to those without recent immunizations.

Reviewer's Comments: This paper gives clinicians some evidence-based ammunition to limit septic work-ups in situations of lower risk, in this case, fever associated with recent immunizations. Other situations, such as recognizable viral illnesses (for example, RSV), have also been shown to have lower a likelihood of SBI. Although the protocol at Boston calls for lumbar punctures for all patients aged <3 months with fever, most of us still balk at the need for cerebrospinal fluid analysis in a smiling 2-month-old infant with fever. Once again, the main serious bacterial infection to consider remains a UTI. (Reviewer-Mark F. Ditmar, MD).

Keywords: Serious Bacterial Infection, Infants, Fever, Vaccination

Print Tag: Refer to original journal article
New Pediatric Tool Uses Bruising to Differentiate Abuse From Accident

*Bruising Characteristics Discriminating Physical Child Abuse From Accidental Trauma.*

Pierce MC, Kaczor K, et al:

Pediatrics 2010; 125 (January): 67-74

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**Background:** It has been published that up to 75% of abuse cases may be misdiagnosed in the acute care setting.

**Objective:** To identify any bruising characteristics that may differentiate abuse from accident and to develop from that data a decision tool that could be used to screen children at high risk for abuse.

**Design:** Prospective analysis.

**Participants:** 95 patients (mean age, 12.3 months [range, 0 to 48 months], 63% male).

**Methods:** Subjects were admitted to pediatric ICU because of trauma. There were 42 cases judged to be victims of abuse and 53 controls whose injuries were judged to be accidental (motor vehicle accidents, falls, etc). Bruising characteristics and patient age in both groups were evaluated. From these data, a decision rule to predict abuse was developed.

**Results:** In 95 patients, 71 sustained bruising. Bruising appeared in 33 of 42 patients in the abuse group and in 38 of 53 controls. Characteristics that were predictive of abuse included bruising on the torso, ear, or neck (TEN) in a child aged ≤4 years and bruising on any part of the body in an infant aged <4 months. From these data, a bruising clinical decision rule was derived (TEN-4 BCDR). This decision rule for predicting abuse has a sensitivity of 97% and a specificity of 84%.

**Conclusions:** The causes of bruising differ between injuries associated with abuse and those caused by accident. The bruising clinical decision rule stands as a good screening tool to identify young children who may require further evaluation for abuse.

**Reviewer's Comments:** The TEN-4 BCDR, a specific body region- and age-based bruising characteristic either based on the first or second criteria, indicates the need for greater evaluation of children. (Reviewer-Paul P. Rega, MD).

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Keywords: Bruising Characteristics, Abuse Screening, Children

Print Tag: Refer to original journal article
DMV Has a Differential...So Stay Calm and Methodical

Difficult Mask Ventilation.

El-Orbany M, Woehick HJ:


Difficult mask ventilation arises from many factors that are technique and/or airway related, and few clinicians are familiar with the range of etiologies.

**Background:** Mask ventilation is the most fundamental airway skill. Difficult mask ventilation (DMV) may forebode disaster, and it is thus a major branch point in any difficult airway scenario.

**Objective:** To discuss pertinent current information regarding the definition, causes, incidence, and prediction of DMV. **Discussion:** The definition of DMV is relatively nonspecific, and many definitions have been suggested and used by different investigators. Circa 2005 to 2006, DMV was defined variously as mask ventilation (MV) inadequate to maintain oxygenation, MV requiring 2 clinicians, MV without chest movement, MV with ongoing desaturation, MV with perceptible gas leak, and others. The best prospective studies of DMV suggest an incidence of about 1.4% in the general population. Causes of DMV are diverse. Operator- or equipment-related causes of DMV include inexperience, improper mask size or fit, difficult mask fit (beard, bony anomalies, etc), a leaky circuit, a faulty valve, suboptimal positioning of the head and neck, incorrectly applied cricoid pressure, and an improper oral or nasal airway size. Opioids may induce vocal cord closure, succinylcholine may induce masseter rigidity, or the patient may be inadequately relaxed. Upper airway causes to consider include an obstructing tongue or epiglottis, redundant soft tissue in obese patients, or patients with sleep apnea, tonsillar hyperplasia, and oropharyngeal tumors. Other upper causes include edema or compression from repeated intubation attempts, trauma, angioedema, or laryngeal spasm, as well as from compressing neck masses or a neck hematoma. Do not forget that lower airway obstruction can cause DMV, with culprits including severe bronchospasm, tracheal or bronchial tumors, anterior mediastinal mass, foreign bodies, pneumothorax, bronchopleural fistula, and chest wall deformities. Prediction of DMV is often recommended but poorly performed in practice. Obesity, age >55 years, snoring or sleep apnea history, lack of teeth, presence of a beard, Mallampati Class III or IV, and an abnormal mandibular protrusion test independently predict DMV. Generally, difficult tracheal intubation is more frequent in patients who experience DMV, so clinicians should be familiar with corrective measures and options. DMV can be even more challenging in infants and children, who develop hypoxemia much faster than adults.

**Reviewer’s Comments:** DMV is like porn: nobody can define it, but hopefully we all know it when we see it. DMV arises from multiple techniques and/or airway-related variables. Proper MV and DMV scenarios are poorly taught, so real-life responses are often tinged with panic. Some pears: go immediately to a 2-man technique. Remember…if feasible, wake the patient up! Reverse the paralytic! I've come to love a properly fitting nasopharyngeal trumpet--put one in if the tongue is large and floppy, and make sure it isn't clotted with blood or mucus. If DMV is followed by a difficult intubation scenario, don’t be reluctant to go for the cricothyrotomy. (Reviewer- Steven B. Abrams, MD).

**Keywords:** Airway Management, Resuscitation, Difficult Airway, Ventilation

**Print Tag:** Refer to original journal article
Don’t Overlook Urolithiasis in Children With Recurrent Abdominal Pain

Recurrent Abdominal Pain in Childhood Urolithiasis.
Polito C, La Manna A, et al:

Pediatrics 2009; 124 (December): e1088-e1094

Children with recurrent abdominal pain and a family history of urolithiasis should be evaluated for the presence of calculi even if there are no urinary signs or symptoms and, in younger patients, if the pain is diffuse.

Background: Acute and/or recurrent abdominal pain, hematuria, and dysuria are common presentations of urolithiasis. However, recurrent abdominal pain (RAP) is also associated with other conditions including many functional disorders.

Objective: To determine the clinical features and manifestations of pain attacks in children with RAP and urolithiasis.

Design: Case-control and prospective observational study.

Participants: 100 white subjects aged 3 to 18 years with RAP and urolithiasis were followed up in a pediatric urology/nephrology office; 270 control subjects aged 3.0 to 18.5 years with respiratory infections were evaluated to determine rates of appendectomy expected in the general population.

Methods: Subjects in the urolithiasis and RAP group were identified from a longitudinal study of 188 subjects with urolithiasis. Subjects were excluded if they had other forms of pain and significant medical conditions. RAP was defined as 3 episodes of diffuse or localized abdominal pain over a period of 3 months. Children and parents were asked about the location and frequency of pain attacks. Urine collections were obtained to look for urinary solute excretion abnormalities.

Results: Mean age of study patients was 9.8 years. Mean duration of RAP before the first visit was 12.5 months, and mean duration of pain attacks was 127 minutes. A family (first or second degree) history of urolithiasis was seen in 88 patients. A negative ultrasound for calculi was noted in 37 subjects, 21 of whom (57%) had no history of hematuria or dysuria. The rate of appendectomy was 16.0% versus 1.5% in the control group ($P < 0.0001$). A majority of patients had hematuria or dysuria 3 days to 18 months after the procedure. Patients aged <8 years were more likely to have central/diffuse pain (69%) than those aged >8 years, who were more likely to have lateral/flank pain. The frequency of attacks was 4 to 9 times lower than that reported in historical controls of patients with RAP. There was no history of gross hematuria or dysuria in 53 patients. There were 41 patients with no hematuria or dysuria at the first visit. Central/diffuse pain without gross hematuria or dysuria was reported in 34% of patients aged <8 years. In many cases, evaluation for urolithiasis in the face of negative studies was prompted due to a positive family history.

Conclusions: Urolithiasis should be considered even when hematuria or dysuria and flank pain are absent, especially in younger children with infrequent pain attacks and a positive family history.

Reviewer’s Comments: This paper reminds us that the clinical presentation of urolithiasis is inconsistent and that clinicians need to look for more than the classic symptoms of hematuria and flank pain. If a young child has infrequent episodes of RAP and a positive family history, consider urolithiasis. (Reviewer-Seth L. Schulman, MD).

Keywords: Urolithiasis, Abdominal Pain

Print Tag: Refer to original journal article
Emergency physician-administered regional nerve block under ultrasound guidance provides sustained, safe analgesia for elderly patients with hip fractures.

**Background:** Regional anesthesia offers a practical, safe, and long-lasting alternative to bolus opioid dosing for management of acute pain, and may have application in various emergency settings.

**Objective:** To evaluate the feasibility of femoral nerve blocks in elderly emergency patients with hip fractures and to examine the efficacy of this technique as an adjunct for pain control in the ED.

**Design/Participants:** Prospective observational study encompassing a convenience sample of 13 patients with radiographically proven femoral neck or intertrochanteric fractures.

**Methods:** All blocks were placed under ultrasound guidance by an emergency medicine resident and an ultrasound fellowship-trained emergency medicine attending physician. The investigators evaluated time required to perform the procedure, number of attempts, and complications. Efficacy was assessed with pain scores at baseline, 15 minutes, 30 minutes, and hourly thereafter for a period of 4 hours following the procedure. The ultrasound probe was placed 1 cm distal to the inguinal ligament. The nerve was identified as a hyperechoic structure about 1 cm lateral to the artery. The needle was introduced at a 45° angle in-plane to the probe, and 25 mL of bupivacaine was injected along the sheath. Spread of anesthetic was visualized throughout the procedure and was observed to be in the correct fascial plane.

**Results:** The patient median age was 82 years (range, 67 to 94 years). The median time required for the procedure was 8 minutes (range, 7 to 11 minutes). The block was successful in all patients, and procedures were successfully performed with only 1 attempt. There were no complications. Pain scores at 15 minutes and 30 minutes showed 44% and 67% relative decreases in pain scores, respectively, and these changes were statistically significant. Pain relief was sustained, with scores remaining unchanged from 30 minutes to 4 hours following the procedure. Three subjects required rescue analgesia (ranging from 1 to 5 mg of morphine) at ≥1 hours after the procedure (range, 1 to 4 hours).

**Conclusions:** Ultrasound-guided femoral nerve block for analgesia following hip fracture is feasible in an ED setting, achieving significant, safe, and sustained decreases in pain scores.

**Reviewer's Comments:** This was a noncomparative study, obviously, and most of these patients had modest amounts of morphine to help them through their work-up phase. We've seen this before using a simple landmarks approach. Note large volumes of local anesthetic are required to fill the space. Also note that eligible patients had normal lower extremity neurovascular function--a good thing to check for routinely and especially if you are contemplating an intervention around the femoral artery. And ultrasound guidance or not, make sure you are not in a vessel before injecting bupivacaine, because this is the one that carries a host of complications in the event of inadvertent intravascular administration. (Reviewer-Steven B. Abrams, MD).

**Keywords:** Hip Fracture, Analgesia, Femoral Nerve, Ultrasonography, Regional Anesthesia

**Print Tag:** Refer to original journal article
The presence of fever predicts the need for >24-hour hospitalization in soft tissue infections.

**Background:** The disposition of soft tissue infections in the ED is guided by little empiric evidence.

**Objective:** To generate a clinical decision rule to predict the need for >24-hour hospital admission for patients presenting to the ED with soft tissue infection.

**Design:** Retrospective cohort in which data abstractors were blinded to patient outcome.

**Participants:** Adult hospital ED patients with non-facial soft tissue infections.

**Methods:** Standardized chart review collected 29 clinical variables, which included age, sex, vitals, recent antibiotics, medical history, location and duration of wound, wound mechanism, and qualities including abscesses and those that were incised and drained. The primary outcome was hospitalization for >24 hours. Included were patients that returned after ED discharge for hospital admission. Classification and regression tree analysis and multivariate logistic regression were used to analyze data.

**Results:** 846 patients with soft tissue infections presented to the ED. After merging records, 674 patients remained. Overall, 12% (81) required hospitalization of >24 hours. The strongest predictors of admission were temperature and mechanism of infection. Temperature in triage had an odds ratio for each degree over 37° Celsius of 2.91; 95% CI, 1.65 to 5.12. A history of fever had an odds ratio of 0.32; 95% CI, 1.41 to 6.43. Bite wounds and IV drug-associated wounds were also higher risk for prolonged admission. There was no combination of variables that reliably predicted >90% of target patients.

**Conclusions:** The authors were unable to generate a high sensitivity decision rule to predict which soft tissue infections require admission to the hospital. The presence or history of fever is the strongest predictor of hospital stay.

**Reviewer's Comments:** Hospitalization for >24 hours in these patients may have certainly depended on other reasons, such as social factors or other comorbidities. These unfortunately were not addressed. Further, this study fails to include laboratory values such as glucose and white blood cell count, which have demonstrated prognostic value in other studies. (Reviewer-Gretchen S. Lent, MD).

Keywords: Cellulitis, Soft Tissue Infection, Fever, Length of Stay, Observation Unit

Print Tag: Refer to original journal article
Objective: To describe children undergoing cardiac evaluation for syncope for whom a trigger of hair-grooming has been identified.

Participants/Methods: The authors, a group of cardiologists, looked at their experiences in outpatient consultations over a 9-year period. Of >65,000 patients seen, 1525 who had syncope as their chief complaint were identified. Of these 1525 patients, 111 (7%) had hair grooming as the trigger. The authors then did a retrospective analysis of these patients’ records for clinical observations.

Results: Nearly 80% of patients were girls, who had a mean age of 11 years. Most males were cutting their hair when the syncope occurred, while most girls were combing or brushing their hair. In total, 75% of patients were standing when the syncope occurred. Approximately 50% had previous syncopal episodes that were not hair-related. Nearly two thirds had a prodrome prior to the collapse. In nearly 9 out of 10 patients, the event lasted <60 seconds. As part of the authors’ standard protocol, all patients seen with syncope had both an electrocardiogram (ECG) and an echocardiogram done as part of the work-up. All 111 patients with hair-grooming syncope had ECGs and echocardiograms done. None had significant contributory arrhythmias or structural abnormalities.

Conclusions: In this group, the largest reported series of children presenting with syncope who had a hair-grooming trigger, this particular trigger appears to stimulate a benign form of neurocardiogenic reflex syncope.

Reviewer’s Comments: I must confess that I do not usually ask about personal hygiene actions (other than toileting) when confronted with a patient who has fallen down in the bathroom. However, I will now, as this study demonstrates that nearly 1 of 10 syncopal episodes involving adolescents, at least in Las Vegas, are associated with fussing with the hair in one form or another. Hair grooming in selected individuals appears to be a powerful autonomic trigger. Since most of the episodes occurred while standing, there was likely some orthostatic-venous pooling that may have been involved. When such a trigger is identified, parents can be reassured that the likelihood of significant cardiac disease is very low (in this study, zero). However, the authors, who are cardiologists, do not make the leap of faith that more detailed studies can be eliminated if hair-grooming is the trigger for syncope. Of course, it is important to look for additional details of history involving both family and patient. If a patient with hair-grooming syncope is identified, he/she should be encouraged to drink fluids before and to sit down during the hair ritual. (Reviewer-Mark F. Ditmar, MD).

Keywords: Syncope, Triggers, Hair-Grooming

Print Tag: Refer to original journal article
Calculation of pneumothorax size based on expiratory views may identify more patients who are appropriate for an intervention.

**Background:** Guidelines for management of primary spontaneous pneumothorax (PSP) advocate intervention for unstable patients, but treatment for stable patients is based on pneumothorax size on plain film. There is no published evidence quantifying the difference in PSP size calculated on expiratory versus inspiratory radiographs.

**Objective:** To compare the estimated size of PSP calculated on inspiratory and expiratory radiographs using the standard Collins method and to evaluate whether respiratory phase influences the threshold for treatment according to published guidelines.

**Design/Participants:** Retrospective cohort study of patients evaluated for PSP in 2 urban academic emergency departments.

**Methods:** The authors calculated the Collins score, and classified the PSP extent according to current guidelines. The Collins method, derived from helical CT studies, is as follows: pneumothorax size (%) = 4.2 + 4.76 x [sum of interpleural distances in centimeters taken at the apex, the midpoint of the upper half of the collapsed lung, and the midpoint of the lower half of the collapsed lung]. The primary outcomes were difference in size estimated between radiograph types and agreement in size classification for guideline-compliant intervention. The cut-off for a "small" PSP per the American College of Chest Physicians (ACCP) correlates with roughly a 16% pneumo by Collins, and that by British Thoracic Society guidelines correlates with a 32% pneumo.

**Results:** 44 patients (49 PSPs) with inspiratory and expiratory films were identified. Median age was 22 years; 66% were men, and 71% of the pneumothoraces were on the left side. Median PSP size on inspiratory radiographs was 24% (interquartile range, 14% to 31%; range, 5% to 100%). The average size difference between expiratory and inspiratory films was 9%, with the PSP on expiratory radiographs appearing larger. Although the 95% limits of agreement were wide (-5% to 23%), inspiratory films evaluated per British guidelines classified 25 (51%) PSPs as small, while the same criteria applied to expiratory films classified only 18 (37%) as small. Inspiratory films evaluated with ACCP criteria classified 15 PSPs (31%) as small, falling to 8 (16%) when expiratory films were used. For each guideline, size estimation on expiratory rather than inspiratory radiographs would have attained a threshold value for an intervention in an additional 7 patients (14%; 95% CI, 7% to 27%).

**Conclusions:** On average, PSP size calculated per Collins on expiratory radiographs is 9% higher than that calculated on matched inspiratory radiographs; this size difference may alter initial guideline-compliant treatment for some patients.

**Reviewer's Comments:** The best care is always in the details. End-expiratory films emphasize the contrast between intrapleural air and the deflated lung on the affected side. The standard chest film is taken in full inspiration; a stable patient in whom the extent of a pneumothorax is unclear should be sent for both inspiratory and expiratory films. (Reviewer-Steve Abrams, MD).

**Keywords:** Pneumothorax, Guidelines, ACCP, BTS
Background: The choking game is a dangerous recreational activity, especially among adolescents. In this game, the participants seek to achieve euphoria by intentionally depriving their brains of oxygen. This can be accomplished by pressure on the neck via someone’s hands, ties, belts, etc. It can also be achieved by taking a deep breath while someone bear hugs from behind. Besides death from asphyxiation, other injuries may occur such as seizures, headaches, fractures, brain damage, and persistent vegetative state. It has been reported that recently there have been >100 deaths annually from this "game," but the incidence may be grossly underestimated. The medical literature is scanty about this activity.

Objective: To evaluate the knowledge pediatricians and family practitioners have about this activity and to gauge their opinion regarding its inclusion in guidance materials for adolescents.

Design/Participants: Prospective analysis of 865 pediatricians and family practitioners.

Methods: A survey was created to gauge the participants' awareness of the choking game, its warning signs, its prevalence among adolescents, and the willingness of physicians to include its dangers in educational programs to the youth.

Results: 163 physicians completed the survey (21.8%). Mostly through popular sources, 68.1% had heard of the choking game. General pediatricians were more aware of this activity than family practitioners or pediatric subspecialists ($P=0.004$). Of those who were aware of the game, 75.7% identified ≥1 warning signs and 52.3% identified ≥3. With regard to prevalence, only 7.6% of those aware of the practice believed that they had patients who engaged in the game. While 64.9% of participants believed this should be an aspect for adolescent education, only 1.9% currently did so.

Conclusions: Close to one third of physicians surveyed were unaware of the choking game, a potentially life-threatening activity practiced by adolescents. Nevertheless, with increased education of health care providers, the inherent dangers of this risky behavior should be provided to adolescents and their families.

Reviewer's Comments: The warning signs include: bruising/red marks around the neck, bloodshot eyes/petechiae on the face, ligatures (belts, ties, sheets) found in unusual places, suspicious websites, curiosity about asphyxiation, disorientation after being alone, locked rooms, severe headaches, and change in behavior. (Reviewer-Paul P. Rega, MD).

Keywords: Asphyxiation, Educational Programs

Print Tag: Refer to original journal article
3% of Syncope Patients Experience an Adverse Cardiac Event Within 7 Days

Predictors of Short-Term (Seven-Day) Cardiac Outcomes After Emergency Department Visit for Syncope.

Gabayan GZ, Derose SF, et al:

Am J Cardiol 2010; 105 (January 1): 82-86

Keep an eye out for any suggestion of arrhythmia or valvular heart disease in patients aged <60 years who sustain a syncopal event, as they may be a high risk group.

Background: Syncope is a common reason for an emergency presentation with subsequent admission to exclude syncope of cardiovascular origin. Data regarding the risk of short- and long-term adverse outcomes may improve decision-making.

Objective: To identify patterns and predictors of short-term cardiac outcomes (within 7 days) in ED patients with syncope.

Design: Retrospective review of 3-year data from a single integrated health system encompassing 11 EDs.

Methods: Syncope and cause of death were identified by standard ICD-9 codes. Cardiac outcomes included cardiac death, hospitalization for cardiac cause, or interventional/surgical procedure consistent with ischemic heart disease, valvular disease, or arrhythmia. Predictors of cardiac outcomes were identified through multivariate logistic regression.

Results: Records were evaluated for 35,330 adult subjects, representing 39,943 ED visits for syncope over the 36-month study period. A 7-day cardiac outcome occurred in 893 cases (3%). Data demonstrated that most cardiac events occurred within the first 3 days following an ED visit. The overall risk of an adverse cardiac outcome sharply decreased beyond the 7th day after syncope, essentially returning to baseline. The authors identified positive predictors of an adverse 7-day cardiac outcome. These were age ≥60 years, male gender, and presence of congestive heart failure, ischemic heart disease, cardiac arrhythmia, and valvular heart disease. Negative predictors for a cardiac cause of syncope included dementia, pacemaker, previous coronary revascularization, and cerebrovascular disease, with this last predictor presumably making syncope from neurogenic cause more likely. Looking specifically at arrhythmia, the authors found considerable age-dependent risk that was greater in younger patients (age 18 to 49 years) in comparison with older patients, suggesting that younger patients who sustain a syncopal event merit special attention for signs relevant to arrhythmia and (to a lesser extent) valvular heart disease.

Conclusions: The risk of an adverse cardiac event is greatest in the first 7 days after syncope, and special attention should be given to younger patients presenting with cardiac comorbidities, particularly arrhythmia and valvular disease.

Reviewer's Comments: Not sure exactly what to make of this one. As far as I can tell, all of these patients were admitted for an evaluation, but the article seems to suggest that subjects sent home after a short hospitalization still need to be watched very carefully for the first 3 to 7 days, which is clearly not going to inspire confident decision-making. This is not a risk-stratification report--it is more of a qualitative description of an at-risk population. What do we learn here? Older males with established heart disease warrant admission, and you don't want to be young and with a heart problem because that means you're, well, hmmm…young and sick? No score, nothing upon which to mount a validation study, and ultimately no help for us in the ED. (Reviewer-Steve Abrams, MD).

Keywords: Syncope, Alteration of Consciousness, Epidemiology, Ischemic Heart Disease

Print Tag: Refer to original journal article