



Thoracolumbar Evaluation in the Low-Risk Trauma Patient

This pilot study was conducted to collect and analyze evidence for the development of a clinical decision rule to exclude the thoracolumbar (TL) spine in non-severe blunt trauma patients in order to avoid unnecessary imaging in low-risk cases. The results showed that absence of midline tenderness conveyed the highest negative predictive value, followed by a non-severe mechanism of injury, lack of neurological examination findings, and age under 65 years. No patient in this cohort with these four findings had a TL-spine injury.

Vagal Maneuvers in Supraventricular Tachycardia

For acute termination of supraventricular tachycardia (SVT), vagal maneuvers are first-line intervention. This prospective, randomized, controlled study was performed to analyze the success rate of three vagal maneuvers: the standard Valsalva maneuver, the modified Valsalva maneuver, and the carotid sinus massage. The results demonstrated that the modified Valsalva maneuver was superior to the other two maneuvers in termination of SVT and maintaining sinus rhythm at the 5th minute.

Fever Characteristics and Risk of Infection in Febrile Infants

In the neonate, a missed bacterial infection can have devastating consequences. To determine the association between various fever characteristics and the risk of serious bacterial infection, a secondary analysis was performed from a large study of febrile infants. Infants with a fever were prospectively enrolled at 26 emergency departments (EDs) between 2008 and 2013. Data were analyzed on a total of 4,821 patients. The results of this analysis showed that height of fever was significantly associated with risk of serious bacterial infection. This was not true of duration of fever nor location where fever was documented.

Rate of Airway Intervention for Croup

The aim of this retrospective study was to describe rates of further interventions among patients (ages 3 months to 8 years) presenting to a tertiary children's hospital with croup following initial ED or outside hospital management. The study clarifies the rate of further racemic epinephrine or airway intervention in patients presenting with croup over a 2-year period. The study found a low rate of further airway interventions following initial management. There was an increased rate of admission and additional interventions with increased doses of epinephrine.

High-flow Nasal Cannula Oxygen vs. Conventional Oxygen Therapy and Non-invasive Ventilation in Acute Respiratory Failure

A systematic review and meta-analysis was performed of randomized controlled trials comparing high-flow nasal cannula oxygen therapy to conventional oxygen therapy and non-invasive ventilation in ED patients. The results of this study suggest that the high-flow nasal cannula does not offer any benefit in ED patients with acute respiratory failure over conventional oxygen therapy and non-invasive ventilation in terms of intubation requirement, treatment failure, hospitalization, and mortality. On the contrary, conventional oxygen therapy was better tolerated by patients.

Can Ultrasound Detect Traumatic Knee Arthrotomy?

Traumatic arthrotomy of the knee can lead to septic arthritis. Current diagnosis of this condition is dependent on an invasive procedure. This study sought to determine the diagnostic capability of point-of-care ultrasound for traumatic knee arthrotomy by identifying intra-articular air in cadaver knee joints. Twenty knees were included in the study, 10 randomized to receive air injection and 10 to act as controls. The results of the study showed that air is identifiable in the cadaver knee joint. The sensitivity and specificity of ultrasound for intra-articular air were found to be fair.