

## ***Abstract from Current Literature***

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### **Echocardiographic Prediction of Patent Ductus Arteriosus In need of Therapeutic Intervention**

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**Aim:** To evaluate the efficacy of various echocardiographic markers in predicting a patent ductus arteriosus (PDA) in need of treatment.

**Methods:** Forty-five preterm infants with a mean (SD) gestational age of 27.7 (1.9) weeks underwent echocardiography at a postnatal age of 24 ± 6 and 72 ± 6 h. Four echocardiographic markers were studied: ductus diameter, ductal flow Doppler curves, the left atrial to aortic root (LA/Ao) ratio and Doppler pixels representing ductal shunting.

**Results:** Twenty-eight infants had a PDA with a detectable left-to-right shunt. Of these, 12 (43%) were treated for a shunt through the PDA. Ductal diameter was the most accurate echocardiographic marker when it came to predicting a significant shunt, with a sensitivity of 89%, a specificity of 70%, a positive likelihood ratio of 2.97 and a negative likelihood ratio of 0.16 at the age of 72 h. The efficacy of the method at 72 h of age was 84%. The corresponding efficacy of the pulsatile Doppler curve was 72%, percentage of green colour pixels 63% and the LA/Ao ratio 53%.

**Conclusion:** Ductus diameter appears to be the most important variable in determining the need for therapeutic intervention for PDA in preterm infants.

### **Clinical Profile and Outcome of Swine Flu in Indian Children**

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*Indian Pediatrics 373 Volume 48: May 17, 2011*

**Objective:** To describe the clinical characteristics and outcome of Indian children infected with 2009 H1N1 influenza virus.

**Study design:** Retrospective chart review.

**Setting:** Outpatient department and hospitalized patients in a tertiary care hospital.

**Methods:** Clinical details of 85 children (positive for the 2009 H1N1 virus infection tested by real-time reversetranscriptase–polymerase-chain-reaction assay) were analyzed from medical charts.

**Results:** Of the 85 (55 boys) children positive for 2009 H1N1 virus infection, 64.7% were between 5 years to 16 years, and 35.3% were below 5 years age. The mean age of these children was 7.5±3.5 yr. Contact history was positive only in 22 (26%) cases. High grade fever was the most common symptom, followed by cough and rhinorrhea. Twenty-nine (34%) patients had an underlying co-morbid condition. Of the 34 patients who underwent chest radiography during evaluation, 18 children (52.9%) had findings consistent with lower respiratory tract infection. Antiviral therapy was initiated in 76 patients.

Hospitalization was required in 30 (35.3%) children. Risk factors for hospitalization included underlying co-morbid condition, respiratory distress, vomiting, wheezing, diarrhea, hypotension and infiltrates/consolidation on chest radiograph. Mean length of hospitalization was 131+76 hours, irrespective of underlying disease. Three children developed Acute Respiratory Distress Syndrome and died.

**Conclusions:** Clinical features and routine laboratory investigations in children with swine origin influenza were non-specific. Children with co-morbid condition, respiratory distress, vomiting, wheezing, diarrhea,

hypotension and infiltrates/consolidation on chest radiograph were at higher risk of hospitalization.

### **Breastfeeding and Risk of Epilepsy in Childhood: A Birth Cohort Study**

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*The Journal of Pediatrics. Volume 158, Issue 6, June 2011, Pages 924-929*

**Objective:** We asked whether breastfeeding reduces the risk of epilepsy in childhood.

**Study design:** We included 69 750 singletons born between September 1997 and June 2003 in the Danish

National Birth Cohort and observed them to August 2008. Information on breastfeeding was reported by mothers in two computer-assisted telephone interviews at 6 and 18 months after birth. Information on epilepsy (inpatients and outpatients) was retrieved from the Danish National Hospital Register. Cox proportional hazards regression models were used to estimate incidence rate ratios and 95% CIs.

Results: Breastfeeding was associated with a decreased risk of epilepsy, with a dose-response like pattern. For example, children breastfed for 3 to 5, 6 to 8, 9 to 12, and  $\geq 13$  months had a 26%, 39%, 50%, and 59% lower risk of epilepsy after the first year of life, respectively, compared with children who were breastfed for <1 month. The association remained when we excluded children who had adverse neonatal conditions or children who were exposed to adverse maternal conditions during pregnancy.

Conclusions: The observed protective effect of breastfeeding may be causal. Breastfeeding may decrease epilepsy in childhood, thereby adding another reason for breastfeeding.

### **Ultrasonography for detecting enthesitis in juvenile idiopathic arthritis**

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Objective: Enthesitis is a major feature of juvenile idiopathic arthritis (JIA) but is difficult to diagnose

clinically. Our objective was to compare the accuracy of ultrasonography with power Doppler (US-PD) versus clinical examination for diagnosing enthesitis in patients with JIA and healthy controls.

Methods: Twenty-six consecutive patients with JIA and 41 healthy volunteers underwent standardized clinical and US-PD examinations of 5 enthesal sites (proximal and distal quadriceps tendon insertions, Achilles tendon, and plantar fascia). US-PD reproducibility was evaluated. US-PD enthesitis was defined as a PD signal at the enthesis insertion. Bursitis, erosions, and cartilage vascularization were recorded.

Results: In the JIA group, 27 (12.5%) of the enthesal sites exhibited clinical enthesitis (distal patellar ligament in 45% of cases) and 20 (9.4%) exhibited US-PD enthesitis (distal patellar tendon in 30%), including 10 clinically normal sites (50%). US-PD enthesitis was found in several patients with oligoarthritis or polyarthritis. Clinical enthesitis ( $P < 0.0001$ ) and HLA-B27-positive ( $P = 0.05$ ) status were significantly associated with US-PD enthesitis. Erosion and bursitis, but not tendon thickening, were associated with US-PD enthesitis. US-PD enthesitis was not found at any of the 410 enthesal sites in controls; grade 1 cartilage vascularization was noted at 6% of the control sites.

Conclusion: Enthesitis is a rare phenomenon in JIA. Clinically silent enthesitis is detected by US-PD and can be found in JIA categories other than enthesitis-related arthritis. Tendon thickening and cartilage vascularization can be detected in healthy controls. These findings may have implications for patient classification of the use of US-PD.