Subject & Method A hospital based, retrospective case-review study was carried out in Pediatric department, Al-Adan Hospital, State Of Kuwait. The files of all patients less than 12 year age, and for whom CT lung was performed during the last five years (2000–2005) were reviewed.
Results Thirty patients for whom CT lung was performed were reviewed. The main indication for requesting chest CT was persistent abnormal CX-ray findings (90%) in a patient with uncontrolled wheeze and/or recurrent pneumonia. Findings of chest CT was the same as CX-ray findings (80%) and more specific +/- new diagnosis (20%). Results of chest CT influenced medical treatment only in seven of the cases (23%) and led to surgical intervention in two patients (0.06%), (hernia, cystic adenomatoidmalformation).
Conclusion Our data demonstrate that the result of CT lung in children doesn't alter clinical decision and management of most of the cases. Therefore CT lung should be requested mainly for the high risk patients, preferably by a pulmonologist and after discussing the chest x-ray findings with a radiologist.

1709 ESTIMATION OF NEONATAL ENDOTRACHEAL TUBE RESISTANCE BY WATER MANOMETER

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Background The loss of pressures at the distal end of ET tube can be affected by the size and diameter of the ET tube and the flow rates.
Aim To study in vitro the pressure drop using varying sizes of ET tubes commonly used in preterm infants at different lengths, flow rates using different gases.
Methods We used Portex tubes for this in-vitro study. A water manometer (scale 0–300mm) was used to measure the pressure drop across ET tube. We used two different lengths (7 and 14cms); different sizes (2.5; 3.0; 3.5 and 4.0mm), different flow rates (4 to 11 litres/min) and two different gases (medical air and 100% oxygen) to assess the resistance across the ET tube. SPSS version 17® was used for statistical analysis. Data presented as mean(SD).
Results

1. There was no difference in the pressure drop at lengths of 7cms and 14cms respectively using air [120.6 (66.12) vs.127.3 (68.74)cms H_2O; p=0.297]; but with 100% Oxygen there was statistically significant increase at 14cm compared to 7cm length [146.73 (72.94) vs. 130.48 (72.94cms H_2O; p=0.015] at similar flow rates.
2. At all flow rates there was no difference in pressure drop at different tube diameters using air or 100% oxygen.
3. There was a statistically significant (p<0.05) increase in pressure drop at flow rates increasing from 4 to 11 litres/min.

Abstract 1709 Table 1 Comparison of pressure drop with air and oxygen

Flow (l/min)	Pressure drop with Air cmsH_2O (Mean/SD)	Pressure drop with oxygen cmsH_2O (Mean/SD)
4	42.4/6.4	55/26.3
5	58.1/8.3	74.5/20.3
6	77.9/10.8	97.7/16.0
7	101.6/13.5	129/14.6
8	125.9/16	162.1/18.9
9	156.7/20	198/25.6
10	197.9/25.7	236.2/33
11	227.7/59.3	182.4/129

Conclusion The results from this study could be utilised to optimise ventilation settings to achieve the desired pressure delivery using air or oxygen at different flow rates and with varying ETtube sizes.

1710 SEROPREVALENCE OF CHLAMYDIA PNEUMONIAE AND MYCOPLASMA PNEUMONIAE IN CHILDREN WITH CHRONIC COUGH

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Background Chronic cough is one of the most common symptoms in children. Postinfectious etiologies plays an important role in chronic cough in childhood. The pathogenesis of the postinfectious cough may be related persistant inflammation and the epithelial damage in the upper and lower airways, with or without transient airway hyperresponsiveness. We evaluated Mycoplasma pneumoniae and Chlamydia pneumoniae serology and treatment in children referred with chronic cough.
Methods This study enrolled 41 children between 6 and 14 years of age having cough which lasted than 4 weeks. They were evaluated according to American College of Chest Physicians guideline. Pulmonary function test and chest x-ray were performed to all patients. M. pneumoniae and C. pneumoniae serologies were analyzed by ELISA. They were reevaluated with 2 to 4 weeks intervals until cough disappeared.
Results The study included 41 children, 27 of whom were female (65.9%). The mean age was 8.00±1.96 year. M. pneumoniae IgM positivity was found in 17.07% (7/41) of patients, C. pneumoniae IgM positivity in 2.85% (1/35), M. pneumoniae IgM and/or IgG positivity in 41.46% (17/41), C. pneumoniae IgM and/or IgG positivity in 25.7% (9/35). Symptoms were not improved alone with clarithromycine treatment so inhaled/nasal steroids were added according to diagnosis.
Conclusion In children with chronic chough, aged 6 to 14 years old, M. pneumoniae and C. pneumoniae play important roles in the etiology. Clarithromycine alone may not be enough in the treatment of chronic cough due to these agents, so the treatment should be planned according to clinical findings.

1711 THE RELATIONSHIP BETWEEN THE FIRST EPISODE OF WHEEZING AND MATRIX METALLOPROTEINASES-9 AND –2 AND TIMP-1 LEVELS IN PRETERM INFANTS

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Background Elevated concentrations of matrix metalloproteinases (MMP) have been associated with neonatal morbidity. There are no data on the serum levels of MMP-2, MMP-9, tissue inhibitors of matrix metalloproteinase (TIMP-1) from preterm infants recovering from these morbidities. We aimed to compare MMP-2, MMP-9, and TIMP-1 levels in preterm and term infants hospitalized with their first episode of wheezing.
Methods We prospectively evaluated 18 preterm infants with a history of chronic lung disease, respiratory distress syndrome and 14 age- and sex- matched term infants who were admitted for a first episode of wheezing. We quantified total serum concentrations of MMP-2, MMP-9, and TIMP-1 to assess whether these serum markers levels were associated with wheezing with a history of oxygen therapy during the neonatal period.
Results Upon hospitalization for the first episode of wheezing, MMP-2 and TIMP-1 levels were higher in preterm infants than in term infants.