**Background and aim** Timely and accurate diagnosis of children with osteomyelitis is crucial, diagnostic imaging play a major role in determining the presence of acute osteomyelitis, treatment planning and follow up. Physicians encouraged to take the advantage of all available modalities as early intervention would prevent all possible adverse outcomes of late diagnosis. The aim of this study is to explore the different imaging modalities in verifying the diagnosis of paediatrics acute osteomyelitis.

**Methods** All cases diagnosed with Acute Osteomyelitis between January 2000 and December 2013 were retrospectively reviewed at main tertiary children hospital. Our approach included a detailed description of radiological features of paediatric patients with acute haematogenous osteomyelitis.

**Results** 79 cases of acute osteomyelitis were diagnosed. 68 (86.1%) of children had X-Ray within first two weeks. (51.5%) reported as normal compared to (48.3%) abnormal (Periostal reaction- Ostetlyic lesions- soft tissue swelling). Ultrasound done in 34 (43%) of children, (70.6%) reported normal vs. (29.4%) abnormal (effusion). MRI study done in 73 (92.4%) and revealed osteomyelitis in 100% of imaging. 16 patients (20.3%) had Bone Scan,(12.5%) reported normal compared to (87.5%) abnormal. (100%) of children with positive bone scan had similar osteomyelitis on MRI.

**Conclusion** Our study confirmed that MRI is the gold standard of imaging modality which combines high sensitivity with specificity to confirm osteomyelitis in children despite having normal X-ray, Ultrasound and Bone scan. Simple X-ray might be useful to diagnose osteomyelitis if MRI is difficult to perform or if the cost plays a major role in the patient care.
Background
Rapid diagnosis and early treatment of bacterial meningitis is so important.

Goal of study: Comparison the amount of procalcitonin, in CSF of children with bacterial and non-bacterial meningitis.

Methods
A cross-sectional study conducted in Rasoul Akram and Bahrami hospital in Tehran during 2 years (2011–2013) upon 57 children with suspected meningitis selected Convenience. CSF samples obtained, and routine laboratory examinations (cell count, protein, sugar, smear, culture) had done. 0.5–3 cc of CSF was collected and stored at- until assayed. Amount of Procalcitonin (ELISA Ray biotech kit) detected in CSF. A receiver-operating – characteristic curve (ROC) was used to illustrate various cut-offs of Procalcitonin levels in differentiating between 2 groups of meningitis.

Results
57 children with meningitis were between 1 months–13 years; mean age 26.5± 2.98 months, were enrolled in this study. Mean age of 30 cases with bacterial meningitis was 2.5 years, and in 27 cases with aseptic meningitis was 1.6 years. For differentiation of bacterial meningitis; A PCT level in CSF >=0.235 ng/mL had a sensitivity of 96.4% and a specificity of 80%.

We evaluated whether procalcitonin (PCT) might aid diagnosing serious bacterial infections in a general paediatric ICU population. 201 patients accounted for 332 PCT samples.

Conclusion
The presence of PCT in CSF can potentially assist clinicians in faster diagnosis and appropriate treatment in bacterial meningitis. These data suggest PCT can assist in identifying patients without bacterial meningitis and limit antimicrobial use.

Background and aims
RSV is the main pathogen associated to hospitalisation for respiratory infections in infants. Prematurity, congenital heart disease and chronic lung disease are known risk factors for severe RSV infection. However, most infants that require hospitalisation do not have known risk factors. The identification of new markers of disease susceptibility is important in order to develop novel preventive measures. Natural killer cells are an essential component of the innate immune system and constitute one of the first lines of defense against viral infections. We analysed the KIR genotype in a group of infants with RSV infection requiring hospitalisation to assess whether this trait influences the risk of severe infection.

Methods
Thirty-five infants without underlying conditions who required hospitalisation for RSV infection were included in this analysis. Oral swabs were used to collect samples for DNA extraction and the KIR genotype was determined by detection of the presence or absence of each of the KIR genes. Genotype frequencies were compared to a group of 300 healthy donors from the same hospital. In addition, characteristics of infants with AA and Bx genotypes were compared.

Results
KIR AA/Bx genotype frequencies in infants with RSV infection (34.3% and 65.7%) were similar to those of the comparison group (34% and 66%). There were no significant differences in age, intensive care unit admissions, hospitalisation duration, or condition on discharge between infants with AA and Bx genotypes.

Conclusion
Our results suggest that the KIR genotype does not influence the risk of developing severe RSV infection.

Objective
Our study evaluates the epidemiological and demographic of the children who were admitted to Suleyman Demirel University, Medical Faculty, Paediatrics Department with the pre-diagnosis of pandemic influenza.

Methods and Materials
Demographic characteristics, clinical findings, laboratory tests results and radiological researchs of 64 patients (n = 64), who were admitted to Suleyman Demirel University, Medical Faculty Paediatrics Department with the pre-diagnosis of pandemic influenza were analysed and evaluated.

Results
Average age of the patients, that were admitted and observed with pre-diagnosis of pandemic influenza, was 32.4 months (1–188 months) and 34% (n = 22) of the cases were female. H1N1v diagnosis was confirmed in 14% (n = 9) of the patients with pre-diagnosis of pandemic influenza. Most common complaints during submission were severe cough (85.9%), fever (68.8%) and weakness (57.8%). Among the the patients who were H1N1v positive, 55% (n = 5) of them, had preexisting diseases. Five patients needed intensive care during the observation and treatment. Two (22.2%) of them did not survive.

Conclusion
Clinical findings of pandemic influenza and seasonal influenza are quite similar in children. Pre-existing diseases increase the rates of morbidity and mortality.

Objective
6-Mercaptopurine (6-MP) is an oral purin analogue which inhibits the purine synthesis via being converted to ribonucleotide. 6-MP is being widely used in cancer chemotherapy and immunosuppressive therapy. The major side effects which limit its clinical practice are hepatotoxicity and bone marrow suppression. In this study, the protective effect of Capparis ovata (CAP) which is an antioxidant plant, against the hepatotoxicity induced by 6-MP is investigated.

Methods
Thirty-eight paediatric rats were separated into four groups. We administered saline solution to the control group (C) (n:8), 6-Mercaptopurine to the second group (6-MP) (n:10), Capparis ovata to the third group (CAP) (n:10) and 6-Mercaptopurine plus Capparis ovata to the last group (6-MP+CAP) (n:10) for 14 days, respectively. On the fifteenth day, we measured complete blood count and ALT, AST for hepatotoxicity.

Background and aims
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