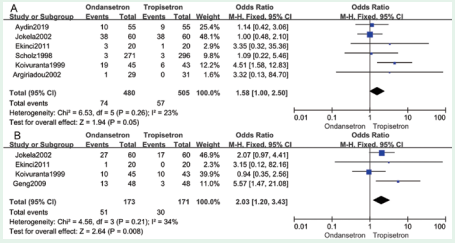
In this issue

Systematic Review

Comparison of ondansetron and tropisetron in preventing postoperative nausea and vomiting. *A meta-analysis of randomized controlled trials*



Forest plot of comparison of the side effects experienced by patients receiving ondansetron and tropisetron treatment: A) headache and B) dizziness

Wang et al compare the efficacy of prophylactic ondansetron and tropisetron for postoperative nausea and vomiting (PONV). Two independent investigators extracted relevant data from the included studies. The primary outcome was PONV, while additional outcomes included the requirement of antiemetic treatment and the related complications. The final pooled analysis included 14 studies totaling 1705 patients and indicated that ondansetron was 39% less effective than tropisetron in preventing postoperative vomiting with a higher incidence of dizziness. However, no significant difference was detected between ondansetron and tropisetron in PONV, postoperative nausea, antiemetic treatment, and headache. They conclude that tropisetron is superior to ondansetron in preventing postoperative vomiting.

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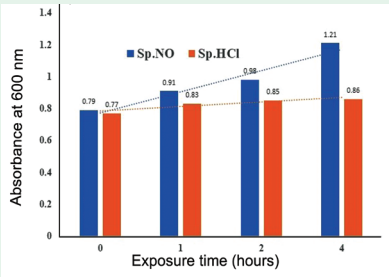
Original Articles

HspX-mediated survival pathways of pathogenic mycobacteria



Total protein concentration of Mycobacterium bovis on exposure to spermine-nitric oxide and spermine hydrochloride. Sp.NO: spermine-nitric oxide, Sp.HCl: spermine hydrochloride

Alhusain optimize an enzyme-linked immunosorbent assay (ELISA) for measuring the HspX protein (α-crystallin) levels and then evaluate its correlation with the accumulation of lipid bodies in *Mycobacterium bovis (M. bovis)* during hypoxia and exposure to nitric oxide. During the optimization, non-specific binding was ruled out by eliminating various components individually. Experiments were also conducted to optimize the concentration of the monoclonal primary detection antibody (anti-Acr1) and the HRP-conjugated detection antibody. The incubation time and temperature were also optimized. They conclude that the optimized ELISA protocol in this study can detect HspX protein levels in *M. bovis* growing in normal and hypoxic environments. Importantly, hypoxia led to enhanced expression of HspX protein, which correlated with the enhanced production of lipid bodies.

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The impact of the coronavirus (COVID-19) pandemic on the development of obsessive-compulsive symptoms in Saudi Arabia

Alateeq et al explore the impact of the COVID-19 pandemic on the development of obsessive-compulsive disorder (OCD) symptoms and its correlation with the level of perceived stress among the Saudi population. Most participants were female (73.9%) with a university level of education or higher (81%). The prevalence of new-onset obsessions was 57.8%, compulsions 45.9%, and moderate/high perceived stress 72.4%. A significantly higher level of perceived stress was reported among those in the 18-29 age group, females, singles, participants with no children, students, non-smokers, those who were unemployed, living with families, diagnosed with a psychiatric disorder, living in the northern region, quarantine discipliners, and those who spent 60 or more days in quarantine. They conclude that this study revealed a significantly higher prevalence of high perceived stress in respondents with new-onset OCD contamination symptoms during the COVID-19 pandemic. This implies that a biodisaster is associated with high psychological morbidity.

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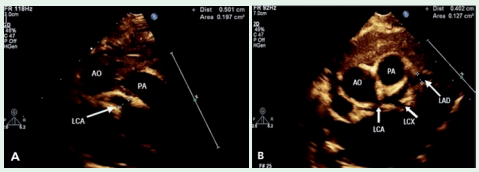
Case Report

Kawasaki disease in an infant after administration of hexavalent vaccine



*Echocardiogram **A)** from high parasternal view showing significant dilatation of left main cornary artery (LCA), **B)** parasternal short axis view showing significant dilatation of left anterior descending artery (LAD). AO: aorta; PA: pulmonary artery; LCX: left circumflex artery*

Almeshary presents a 4-month-old Saudi infant with an unremarkable antenatal and perinatal history. At the age of 4 months, he presented to the emergency department with a 9-day history of fever. He was in his usual state of good health until he developed fever 8 hours post-hexavalent vaccine (DTPa-HBV-IPV/Hib). His temperature started suddenly and was measured at home as 38.9°C axillary by his mother with no clear focus. A laboratory investigation upon admission showed a white blood cell count of 17.4 ×103 cells/ul with 52% neutrophils, hemoglobin level of 11 g/dL, mean corpuscular hemoglobin level of 27, mean corpuscular volume of 80, platelets of 600/µL, C-reactive protein level of 96 mg/L, erythrocyte segmentation rate of 91 mm/h, and albumin level of 19.9 g/L. The author cannot hypothesize that hexavalent vaccination is a trigger for KD based on a single case report, and the association observed in this child may have been coincidental.

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