J Vaccines Vaccin 2016, 7:8(Suppl)
http://dx.doi.org/10.4172/2157-7560.C1.052

Pandemic influenza: Experience in flu OPD of a tertiary care hospital

Arvind Singh Kushwaha
Station Health Organization, India

Background: In April 2009, Mexican health authorities announced an outbreak of a novel H1N1 influenza virus, which subsequently caused a pandemic. The world is now moving into the post-pandemic period. The experience gained in handling this pandemic at various levels under different settings has provided us many lessons for the future.

Objective: To study the profile of various activities undertaken at flu screening centre as a response to pandemic influenza in a tertiary care hospital.

Methods: Record-based study conducted in a tertiary care hospital of Pune. Required data was collected from records of flu OPD, ward and local health authority and interviewing related staff. Study included data from October 2009 to October 2010.

Results: A total of 8020 people presenting with influenza like illness (ILI) were screened in the flu OPD under this study. Out of these, only 388 (4.84%) met clinical criteria where throat samples were collected, out of which only 81 were found to be positive (20.88%). Total three fatalities (3.7%) occurred out of 81 who had tested positive. Most cases of flu were managed at home (76.54%) while only 19 (23.4%) lab confirmed cases of H1N1 required hospitalization.

Conclusion: Majority of cases of H1N1 (2009) were managed at home. Early diagnosis, quick initiation of treatment, infection control measures and good care at the hospital can effectively reduce morbidity and mortality in H1N1 pandemic.

arvind6077@yahoo.com

Kolaviron resolves influenza-associated redo-immunopathology in BALB/c mice by mediating NfκB and STAT3 activation

Ifeoluwa Oluleke Awogbindin, David Olufemi Olaleye and **Ebenezer Olatunde Farombi**
University of Ibadan, Nigeria

Implicated in influenza-associated pathology are innate defense overzealousness and unabated secretion of oxidative tissue-sensitive anti-microbial agents. We investigated the redo-immunomodulatory effect of kolaviron (KV), a natural antioxidant and anti-inflammatory agent, on A/Perth/H3N2/16/09 (Pr/H3N2) escape mechanisms in mice model of influenza pneumonitis. KV (400 mg/kg) was administered orally, in different experimental set-ups, to BALB/c mice for 3/5 days prior and 2 days post infection (dpi) (intranasal; 2 or 3 LD50). Blood, lungs and spleen were collected on 2, 4, 6 and/or 8 dpi. Pr/H3N2 multiplication and expression of induced signatures of pathology in lung were immunohistochemically detected and confirmed with RT PCR. Infiltration and activation of innate immunity with resulting oxidative damage were assessed in spleen cells biochemically, immunohistochemically with RT PCR and further with flow cytometry. Disease outcome regulators were also estimated by immunohistochemistry and flow cytometry. Viral antigen hemaglutinin was sparsely detected in the lungs of KV-treated animals possibly due to reduced polymerase activity attributable to moderate recruitment of innate cells, reduced RIG-I, NOD-2, iNOS and COX-2 expressions, reduction of NO and MDA levels, diminished MPO activity and restoration of cellular redox status. KV significantly doused influenza pneumonitis and increased lung aeration. Activated signaling cascade was markedly down-regulated as hyperinduction of acute pro-inflammatory cytokines IL-1β, RANTES, MCP-1, their transcription regulators Nf-κB and STAT3 was prominently suppressed. Adaptive cellular response was evidently compromised by IAV as significant recruitment of activated and differentiated cytotoxic T-lymphocytes was accompanied with increased viral multiplication and enhanced pathology. However, KV administration resulted in moderate CD4+, CD8+ sensitivity and timely NK cells recruitment resulting in improved viral clearance and enhanced resolution of immunopathology. These data indicate that kolaviron may confer disease-dwindling properties during acute influenza infection via mechanisms involving multiple targets especially at the early stage of the infection.

awogbindin.ifeoluwa@yahoo.co.uk