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12.001

MERS

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Coronaviruses have been known to cause human infection since the 1960s. In September 2012, a novel corona virus was isolated from a patient in Saudi Arabia presenting with acute respiratory distress and acute kidney injury. Soon after, similar clinical syndromes were described in additional patients in Saudi Arabia. Analysis revealed the disease syndromes to be due to a novel virus closely linked to the Middle East Respiratory Coronavirus (MERS-CoV). Since its initial discovery initially in 2012 a total of 1806 cases have been reported from 27 countries, with a case fatality rate of 36%. Zoonotic transmission is of significant importance and evidence is growing implicating the dromedary camel as the animal host. The clinical picture of MERS-CoV includes asymptomatic infections, mild or moderately symptomatic cases and fatal disease. Transmissions of MERS-CoV within healthcare settings are facilitated by overcrowding, poor compliance with basic infection control measures, unrecognized infections, the superspreaders phenomenon and poor triage systems. The actual contributing factors to the spread of MERS-CoV are yet to be systematically studied, but data to date suggest viral, host and environmental factors play a major role. Supportive care has been the mainstay of management for patients with MERS-CoV infection. To prevent spread of MERS-CoV within health-care settings, it is important to eliminate practice variation by adopting a respiratory screening program and to practice the best available infection control measures. Risk assessment and training of all HCWs on recognizing, isolating, and cohorting possible cases are of great importance to further decrease transmissions within the health-care facilities.

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12.002

Transboundary animal diseases and social instability

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The world is experiencing an increased risk of disease threats that are emerging or re-emerging at the human, animal, environment, and social interface. These threats can spread quickly and, if not mitigated, can evolve into major crises, seriously affecting animal and human health, food security and social stability. It is well documented that the poor and politically marginalized are disproportionately affected by all crises, including recurrent animal disease emergencies.

Social instability may occur as a consequence of recurrent or protracted crises and conflicts, or natural disasters such as earthquakes, floods, droughts and epidemics. Animal disease outbreaks, including zoonoses, can many times be the result of social instability, but disease can also precede, trigger and contribute to community hardship, which leads to wider social instability, particularly if they disrupt social infrastructure or reduce food availability. The relationship between disease and social instability may appear indirect but real, particularly in the hardest hit countries in the developing world. Coping mechanisms, such as sound policies, trust in government, and robust infrastructure quickly breakdown at times of civil instability. Such breakdown often leads to a decline in public health, medical care, food accessibility and affordability, marketing certification practices and food safety, or employment stability. Furthermore, the agricultural-livestock base is often undermined, which in turn creates a vicious cycle of inadequate nutrition, social fragmentation, threatened livelihoods, and further food insecurity. The complexity to isolate instability and health or disease as the interaction is a multifactorial circular argument.

Animal disease management experts myopically tend to focus on traditional veterinary specialties of epidemiology, laboratory diagnostics, risk assessment, and emergency management when assessing and analyzing disease events. The animal health sector would greatly benefit from fully recognizing and understanding the driving factors beyond the disease event itself that impact improved upstream prevention measures and disease management. Expanding the ‘One Health’ approach to embrace the social and economic sciences would likely yield great value in the way that the international community manages animal disease threats. Every person has a daily need for accessible, affordable, and nutritious food; without this the social fabric unwinds and can become unstable. Attendance to animal health through professionally guided community-based involvement needs to be an increasing component of humanitarian assistance programmes to avoid consequential major epizootics and epidemics. Because food and agriculture production supports social stability and peace, the Food and Agriculture Organization of the United Nations believes that transformational change is required in the way humanitarian crises are approached.

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12.003

Crimean-Congo hemorrhagic fever

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The objectives of this presentation is updating all the information related to Crimean-Congo Hemorrhagic Fever (CCHF). The titles of the presentation will be epidemiology, pathogenesis, treatment, prevention and vaccination. CCHF is a fatal viral infection with the reported mortality rate of 3-30%. Every year >1000 laboratory confirmed cases were reported from Africa, Asia and Europe. Recent autochthonous cases were reported from Spain in August of 2016. In pathogenesis of CCHF infection like in other viral hemorrhagic fevers, inflammatory processes are key elements of immune response, and the release of proinflammatory cytokines were suggested to be related with the disease course and clinical outcome. Since then, some other studies also reported the critical role of proinflammatory cytokines in disease course, however complete understanding of the pathogenesis of CCHF infection was needed. Many studies showed the beneficial effect of ribavirin previously, benefit was shown by a recent powerful study, which included 281 laboratory confirmed CCHF patients. Severity-scoring index was defined, and the patients were grouped as mild, moderate, and severe accordingly. The CFR among patients who received ribavirin was significantly lower than that among those who did not receive ribavirin (1.49% vs 17%; P = .001). Among severely ill patients, use of corticosteroid therapy was beneficial (P = .014). After stratifying patients on the basis of the SSI described here, ribavirin was found to be effective in reducing the CFR among moderately ill patients, whereas steroids were found to be beneficial among patients with more severe disease.