

THE EBOLA VIRUS EPIDEMIC

In February 2014, in the forested areas of Guinea in West Africa, the first cases of an unexplained viral hemorrhagic fever were reported. By March 2014, the Ministry of Health Guinea acknowledged that this viral hemorrhagic fever had a high mortality rate. Ebola virus was suspected to be the cause, and subsequently proven when samples were sent to Senegal and France. Since then cases have been reported also from adjacent Sierra Leone and Liberia. Nigeria became the fourth West African country involved in the outbreak when Samuel Patrick, a US-Liberian citizen infected with Ebola flew into Lagos on 20th July. Since then, eight people who came in contact with him were infected, including the doctor and nurse who treated him; the nurse subsequently died. In Sierra Leone, a high profile doctor who was leading the fight against Ebola has also died of the disease. Two US aid workers – a physician and a nurse – were also infected, and were flown out to the US and given an experimental medication ZMapp. They are being treated by an infectious disease specialist of Indian origin in Emory Medical Hospital, Atlanta. Both have shown remarkable improvement. Because of the high mortality rate and lack of any specific therapy, there is mass hysteria and bodies of infected people are being left on the streets. A total of 1779 suspected cases with 961 deaths have been reported by WHO as on 6th August 2014, of which 1134 cases and 622 deaths have been laboratory confirmed to be Ebola. This has been the largest epidemic of Ebola virus with maximum number of deaths since it was first reported from Democratic Republic of Nigeria in 1976. On 8th August 2014, the World Health Organization (WHO) declared the outbreak a Public health emergency of international concern.

Ebola Virus is a viral hemorrhagic fever of the family Filoviridae. The natural reservoirs are suspected to be animals (probably bat, pig or monkey) and the first patient is usually infected from an animal. Human to human transmission occurs via infected secretions, including urine, stool and blood. Incubation period is 2-21 days. Symptoms are initially non-specific with fever, bodyaches, vomiting and diarrhea, followed by bleeding due to coagulopathy and thrombocytopenia. Mortality can go up to 90%. Diagnosis is based on antibody-capture enzyme-linked immunosorbent assay (ELISA), antigen detection tests, serum neutralization test, reverse transcriptase polymerase chain reaction (RT-PCR) assay, electron microscopy and virus isolation by cell culture. Therapy is supportive with correction of hydration and coagulopathy. Close physical contact with Ebola patients should be avoided. Gloves and appropriate personal protective equipment should be worn when taking care of ill patients at home. Regular hand washing is required after visiting patients in hospital, as well as after taking care of patients at home.

There are 47000 Indians in the affected countries and India placed all of its airports on high alert and stepped up surveillance of all travellers entering the country from Ebola-affected regions. (<http://www.cdc.gov/vhf/ebola/resources/pdfs/ebola-factsheet.pdf>; www.who.int/mediacentre/factsheets/fs103/en/)

PEDIATRICIANS AND POULTRY FARMERS

Why do pediatricians need to worry about poultry farmers? The answer lies in a very revealing study by the Centre for Science and Environment (CSE). They took 70 samples of chicken from various outlets in Delhi, Noida, Gurgaon, Faridabad and Ghaziabad and tested muscle, liver and kidney tissue for tetracyclines, fluoroquinolones and neomycin. They found that 23% contained residues of one antibiotic, 17% had more than one, and one sample from Gurgaon actually had a cocktail of 3 antibiotics. Five of the 6 antibiotics tested for were found in the range of 3.37-131.75 µg/kg. It appears that poultry farmers indiscriminately use antibiotics both to treat and prevent infections. It is often mixed with feed to promote growth. This rampant misuse has led to antibiotic resistant bacteria in chicken. Subsequently these antibiotics find their way into human beings probably leading to the development of antibiotic resistant bacteria in humans. Man does not live in isolation, and in this complex interconnected web, mistakes by one are paid for by many others. This study is a clarion call for stricter regulation of antibiotic use in the poultry industry and controls on the unregulated sale of antibiotics in the industry (*The Hindu* 31 July 2014).

AGAINST VIOLENCE IN GAZA

On 23rd July 2014, The Lancet published an open letter by 24 doctors and scientists from around Europe against the Israeli violence on innocent people of Gaza. The letter has a graphic description of the destruction wreaked by Israeli forces on the people of Gaza, including the wounded, sick, women and children. Hospitals, clinics, ambulances, mosques, schools, and press buildings have all been attacked, with thousands of private homes bombed. They describe it as a ruthless assault of unlimited duration, extent, and intensity with an aim to terrorize and wound the soul and the body of the people, and make their life impossible in the future. The massacres and threats to the medical personnel in emergency services and denial of entry for international humanitarian convoys are despicable. They declare that as scientists and doctors they find it impossible to be silent while this crime against humanity continues. As they aptly put it these actions “terrifies those who are not directly hit, and wounds the soul, mind, and resilience of the young generation.” (*The Lancet*. 2014;384:397-8)

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