

## Measles in Medical Students

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Dear Madam,

There was a recent outbreak of measles amongst the students of Karachi Medical and Dental College and I was one of the victims of this dreadfully contagious disease. Thus, I am writing to your revered journal to draw attention to this issue and to inform fellow readers about possible ways of prevention since healthcare workers are maximally exposed to it.

A total of 3380 suspected measles cases were reported in the first quarter of 2016 in Pakistan by the Expanded Program on Immunization (EPI) out of which 415 were found positive for measles, by measles IgM antibody<sup>1</sup>. The virus is transmitted by airborne infectious droplets and is extremely contagious; hence, early recognition of symptoms and isolation of infected people is essential if an outbreak needs to be avoided. Apart from children, adults over the ages of 20 are at a greater risk of complications arising from measles including otitis media, diarrhea, acute encephalitis and respiratory infections<sup>2</sup>.

Measles is a viral respiratory disease, caused by the Measles virus belonging to the family Paramyxoviridae. It starts off with a prodromal period wherein the person who has contracted the virus will suffer from vague symptoms like fever, malaise and "the three C's"- cough, coryza and

conjunctivitis, lasting for 4 to 7 days. During this time, some white spots appear inside the mouth; these are known as Koplik's spots and are pathognomonic for this disease. This is followed by the appearance of a maculopapular rash initially starting from the face and spreading to the chest, back, arms and legs. The communicable period begins 4 days before the appearance of rash and lasts till 4 days after the appearance<sup>3</sup>. Early recognition of these symptoms can help in effective isolation and reduction in outbreaks.

In my case (though i was completely vaccinated as a child), there was a moderate fever accompanied by a sore throat and runny nose for 4 days for which I was taking over-the-counter antipyretics. On the 5<sup>th</sup> day, I woke up to find rashes on my face and neck which spread all over my body. I consulted a physician who prescribed acetaminophen for my fever, domperidone along with cefixime because I was feeling nauseous and cetirizine for my rash. The rash resolved along with the other symptoms in 4 days. There were 3 more students who I found out had also caught measles, but none of them developed serious complications.

Vaccination is the most important stepping stone of prevention from measles and it is recommended by the Centers for Disease Control and Prevention (CDC) that if unvaccinated, then two doses of the MMR vaccine should be immediately administered, 28 days apart<sup>4</sup>. Health care workers and medical students who have started their clinical education should get vaccinated before hand and hospital administration should have a check and balance regarding this especially during epidemics and community outbreaks.

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The vaccine does not ensure complete safety; the measles vaccine has been known to fail according to various studies conducted in Pakistan. One such study carried out in Karachi<sup>5</sup> shows that amongst the children who received two doses of measles vaccine, only 64% had measles IgG antibodies. Another study carried out in Faisalabad and Jhang area<sup>6</sup> revealed that out of 264 children who were vaccinated for measles, only 194 tested positive for sufficient anti-measles antibodies, which is only a 73% success rate. Therefore, research needs to be carried out to find out the cause of the high vaccine failure rate in Pakistan and effort needs to be put in by EPI to ensure that vaccine handling, distribution and administration is impeccable.

In order to win the fight against measles, our approach needs to be multidimensional. Measles is preventable, if only we put our efforts into early isolation, effective and large-scale vaccination and spreading awareness about this issue, we can have a future without it.

## References

1. VPD surveillance: Jan-Mar 2016 [Internet]. Islamabad: Extended Programme on Immunization; 2016. Available from: <http://epi.gov.pk/wp-content/uploads/2016/06/VPD-FIRST-QUARTER-REPORT-2016.pdf>. Accessed on February 4, 2017.
2. Measles (Rubeola) [Internet]. Centers for Disease Control and Prevention [updated August 10, 2016; cited February 4, 2017]. Available from: <https://www.cdc.gov/measles/hcp/>. Accessed on February 4, 2017.
3. Measles fact sheet [Internet]. Geneva: World Health Organization; 2016. Available from: <http://who.int/mediacentre/factsheets/fs286/en/>. Accessed on February 4, 2017.
4. Centers for Disease Control and Prevention. Immunization of health-care personnel: recommendations of the Advisory Committee on Immunization Practices (ACIP) MMWR Recomm Rep 2011;60:1-45.
5. Sheikh S, Ali A, Zaidi AK, Agha A, Khowaja A, Allana S, et al. Measles susceptibility in children in Karachi, Pakistan. *Vaccine* 2011;29:3419-23.
6. Zahoor MA, Rasool MH, Waseem M, Aslam B, Zahoor MK, Saqalein M, et al. Prevalence of measles in vaccinated and non-vaccinated children. *EXCLI J* 2015;14:504-7.

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## ANSWER OF PICTURE QUIZ

Proliferative diabetic retinopathy with macular oedema (there are neo vessels at the disc and elsewhere, pre-retinal haemorrhage at the macula and a ring of hard exudates).