

Correspondence

Adult varicella pneumonia. Possible nosocomial spread

To the Editor

Abba et al¹ have meticulously reviewed records of 12 adults with varicella pneumonia (VP) admitted to Riyadh Medical Complex, Riyadh, Kingdom of Saudi Arabia. Nevertheless, it would be essential if any nosocomial varicella transmissions in the hospital setting at Riyadh Medical Complex were to be watched closely. At Dalhousie, Nova Scotia varicella exposures had occurred in inpatient, and ambulatory settings, with patients, staff, and siblings serving as the index cases. Transmission only occurred when the index case, and contacts were in the same room, and not in a multi-room setting.² Prospective surveillance data would also guide towards possible usage of chemoprophylaxis in the hosting environment. Furthermore, that would eliminate any failures with any vaccine or acyclovir recipe. Without any prejudice towards the efficacy of varicella vaccine, its failure in a 6-year-old boy attending an elementary school in Minnesota has been alarming. The sick child with approximately 40 lesions, and fever was present in the school for 3 days. The 32 students acquired varicella involving both vaccinated, and unvaccinated students. Nevertheless, previously vaccinated students, 53% of those infected, had fewer lesions, and a sickness of shorter duration.³

The efficacy of prophylactic acyclovir in the hospital setting has been rather unpredictable. That was demonstrated in Ogaki in Japan when the mother infected her female infant with varicella. Prophylactic intravenous acyclovir at a dose of 15 mgm/kg body weight after exposure was unsuccessful, and she developed clinical varicella during hospital stay. Nonetheless, nosocomial spread of varicella was barred by oral acyclovir to 6 preterm infants in contact with this case. Oral acyclovir, 40 mgm/kg daily in 4 divided doses, was not associated with any adverse effects.⁴

To conclude, a comprehensive strategy at Riyadh Medical Complex against varicella incorporating vaccine, immunoglobulin, and acyclovir would prevent any spread of varicella among hospital personnel, and patients.

Subhash C. Arya
Nirmala Agarwal
Sant Parmanand Hospital
18 Alipore Road
Delhi 110054, India

Reply from the Author

We would like to thank Drs. Arya and Agarwal for their interest, and constructive comments on our article. Although we did not mount any active

surveillance for nosocomial spread at Riyadh Medical Complex, Riyadh, Kingdom of Saudi Arabia we are not aware of any such occurrence. Transmission within the hospital setting especially to healthcare workers (HCW) is of course of immense interest. First though, it will be important to identify those at risk, and define the extent of the problem. Two recent studies indicated an overall seronegativity of 6.5-7.6% among HCW and 2.2% among medical students.^{5,6} Anecdotal evidence of vaccine failure notwithstanding, varicella vaccine has been shown to be safe, and cost-effective leading to its routine use in the United States of America in 1995. In 1998, the European Working Group on Varicella (EuroVar) was formed and it recommended the vaccine for all healthy children 12-18 months old, all susceptible children before their 13th birthday, catch up vaccination in older children without history of varicella, and adults at high risk.⁷ A review of the United States national death records to assess the effect of the vaccination program has shown that the program has resulted in a sharp decline in the rate of death due to varicella.⁸ It is therefore important to define in each environment the extent of seronegativity among HCW, and apply appropriate measures.

Abdullah A. Abba
Department of Medicine
King Khalid University Hospital
PO Box 50726, Riyadh 11533
Kingdom of Saudi Arabia

References

1. Abba AA, Al-Khuwaitir TS, Al-Moghairi AM, Garg H. Presentation and outcome of varicella pneumonia in adults. *Saudi Med J* 2005; 26: 338-340.
2. Hayakawa M, Kimura H, Ohshiro M, Kato Y, Fukami E, Yasuda A, et al. Varicella exposure in a neonatal medical center: successful prophylaxis with oral acyclovir. *J Hosp Infect* 2003; 54: 212-215.
3. Langley JM, Hanakowski M. Variation in risk for nosocomial chickenpox after inadvertent exposure. *J Hosp Infect* 2000; 44: 224-226.
4. Lee BR, Feaver SL, Miller CA, Hedberg CW, Ehresmann KK. An elementary school outbreak of varicella attributed to vaccine failure: policy implications. *J Infect Dis* 2004; 190: 477-483.
5. Chong CY, Lim SH, Ng WY, Tee N, Lin RV. Varicella screening and vaccination for healthcare workers at KK Women's and Children's Hospital. *Ann Acad Med Singapore* 2004; 33: 243-247.
6. Kukino J, Naito T, Mitsuhashi K, Oshima H, Sekiya S, Isonuma H, et al. Susceptibility of medical students to vaccine-preventable viral diseases: a serological study. *J Infect Chemother* 2004; 10: 335-337.
7. Rentier B, Garson AA, EuroVar. Routine varicella vaccination for healthy children. 1998 The European Working Group on Varicella (EuroVar) *Pediatr Infect* 2004; 23: 379-389.
8. Nguyen HQ, Jumaan AO, Seward JF. Decline in mortality due to varicella after implementation of varicella vaccination in the United States. *N Eng J Med* 2005; 352: 450-458.