

Micro News

October 2007

1. CA-MRSA carriage in healthy individuals

The problems caused by community-associated MRSA (CA-MRSA) appear to be spiralling out of control in some parts of the world. However, an article in *Infection Control and Hospital Epidemiology* reports a low carriage rate of MRSA in the community (Rim and Bacon, III 2007). Only 3 (1%) of 295 healthy volunteers from two colleges, one church and one restaurant in two cities in Delaware, USA, were colonised with MRSA. Two of the three colonised individuals had healthcare-associated risk factors and all three isolates were genetically related to hospital strains. Therefore, it appears that the prevalence of CA-MRSA in healthy individuals (in these two American cities at least) remains low.

2. Beware the vaccination nurse! A CA-MRSA outbreak following vaccination

An outbreak of severe CA-MRSA infection, including one case of fatal toxic shock syndrome, occurred in nine Vietnamese children, eight of which had been vaccinated by the same nurse (Tang et al. 2007). An indistinguishable strain of PVL-positive MRSA was cultured from the healthcare worker and four of the children. This incident, which occurred in April / May 2006, had wide-ranging consequences including a dip in national vaccine uptake and a temporary suspension of the administration of the MMR vaccine!

3. Spread of *C. difficile* 027 in The Netherlands

A prospective national survey of *C. difficile* in The Netherlands has identified *C. difficile* in 18.3% of the 109 hospitals in The Netherlands, and *C. difficile* 027 is now the single most common ribotype, accounting for 25% of all *C. difficile*-associated disease (CDAD) (Goorhuis et al. 2007). CDAD caused by *C. difficile* 027 was associated with older patients, fluoroquinolone use, more severe diarrhea, higher attributable mortality and more frequent recurrence. *C. difficile* is now widespread in the Netherlands and appears to be moving ominously from a collection of outbreaks to an endemic problem.

4. Non-pathogenic bacteria to inhibit colonization with MRSA?

The non-pathogenic bacterial flora of newborns may inhibit colonization with pathogenic bacteria in later life. A retrospective study of 110 extremely low birth-weight newborns in Japan showed that the incidence rate of MRSA colonisation 6 weeks after birth was significantly lower in infants with non-pathogenic bacterial flora in the oral cavity during the first week of life (Shimizu et al. 2007). This supports the concept of "bacterial interference" prophylaxis, where colonization with a non-pathogenic strain is used to protect against colonization with a pathogenic strain.

5. And finally...‘Out of the eater came something to eat...’

A study this month in the *Journal of Wound Care* has highlighted the potential of “Medical grade” honey for the treatment of chronic wounds caused by MRSA (Blaser et al. 2007). The article covers a small case series with only seven patients, some of whom were on systemic antibiotics. Nevertheless, the natural antibacterial qualities of honey could be harnessed for the treatment of chronic and possibly even acute bacterial infections.

References

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