

Successful MRSA-eradication in a horse and its owner

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Introduction

A health care worker (HCW) tested MRSA-positive during a MRSA surveillance at the dialysis unit of a Dutch hospital. The HCW was decolonized twice, initially successful, but during the follow up screening she tested MRSA-positive both times. Her household members, including 3 cats and 1 horse, were screened. MRSA, both MLVA type MT398, was isolated from the HCW and her horse suggesting that the horse might be the most likely source. Evidence-based strategies exist for MRSA-decolonization in humans, but it is unclear whether these strategies are applicable for MRSA eradication in horses.

Start

- Screening of HCW → MRSA-positive (throat)
- Screening of horse → MRSA-positive (nose and skin)
- Screening of 3 contact horses → all MRSA-negative

Eradication protocol for colonized horse

- Day 1 -5: administer oral combination therapy of trimethoprim/sulfadiazine (30 mg/kg) and rifampicin (10 mg/kg), both 2x daily
- Day 1 and day 5: wash horse with disinfecting soap (chlorhexidine soap 40 mg/ml)
- Day 1-5: keep horse outside and isolated from other animals
- Day 5: clean and disinfect stable and equipment

Simultaneous eradication of the HCW according to the protocol of the hospital

Results follow-up screening (Figure 1)

The horse tested MRSA-negative at all sampling moments (sample no. 1-9) so far. The HCW tested MRSA-negative in sample 1-5, but appeared positive at sample 6 (very low amount in perineal swab). At re-screening, she tested MRSA-negative. She started the follow up screening scheme at the beginning again and tested negative since then (sample no. 1-8).

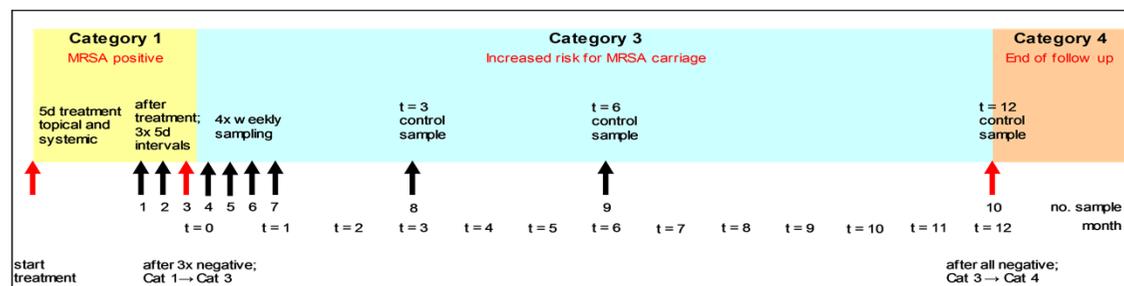


Figure 1. Time scheme for follow-up screening after eradication treatment (horse and HCW)

Repetitive transmission of MRSA between a horse and its owner was detected. An eradication protocol for the horse was composed and seems to be successful so far. To our knowledge, this is the first report on successful decolonization of an individual horse