

IMPROVED BUT VARIABLE PERFORMANCE IN ENGLISH RENAL UNITS: METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS BACTERAEMIA INCIDENCE AMONGST PATIENTS RECEIVING RENAL REPLACEMENT THERAPY: A JOINT REPORT FROM THE UK RENAL REGISTRY AND THE HEALTH PROTECTION AGENCY

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INTRODUCTION AND AIMS: It has been reported that ~8% of all episodes of Methicillin Resistant *Staphylococcus aureus* (MRSA) bacteraemia in the UK occur in patients with established renal failure (ERF) receiving Renal Replacement Therapy (RRT) [UK Renal Registry 8th Annual Report 2005]. The use of catheters for access to the circulation for haemodialysis is associated with increased risk of bacteraemia, and an increased risk of bacteraemia may be a major contributor to the higher mortality associated with late presentation with ERF.

METHODS: Reporting of all MRSA bacteraemia (MRSAB) by acute NHS Trusts to the Health Protection Agency has been mandatory in England since 2001, enabling national surveillance. From April 2007, all renal centres in England provided additional data on patients with MRSAB using a secure web-based system. Data were recorded on modality of treatment, the type of vascular access and the use of venous catheters in the previous 28 days.

RESULTS: From April 2007 until March 2008 196 MRSAB were reported in patients receiving dialysis for established renal failure. Eight reports were repeat specimens of the same episode. 4448 MRSAB were reported in England over the same period, indicating that 4.2% of all cases occur in dialysis patients. Additional data from the renal centre were available in 92/188 (49%). All 92 were on haemodialysis at the time of the bacteraemia. Of those 65 (71%) were using venous catheters, the majority tunneled lines (n=55, 59.8%), and 2 other cases had used venous catheters in the previous 28 days. The relative risk of MRSAB is about 100 fold higher for a dialysis patient in comparison to the general population and 8 fold higher for a patient using a catheter in comparison to a fistula.

There was variation between renal centres in the rate of infection. The mean rate for all patients was 0.92 ±0.85 episodes/ 100 prevalent dialysis patients/year with a range of 0-3.28. Using just haemodialysis patients as the denominator the mean was 1.14 ±0.95 episodes/ 100 patients/year with a range of 0-3.93. In comparison with previous registry reports, the absolute numbers of reported MRSAB has fallen by approximately 62% from 2004.

CONCLUSIONS: These data demonstrate that dialysis patients are at increased risk of MRSAB, and that this is closely associated with the use of venous catheters. The rate of MRSAB is falling substantially within the prevalent dialysis population, but with variation in performance between centres.