AETIOLOGY AND RISK FACTORS
■ Staphylococcus aureus is a bacterium that lives harmlessly on the skin and in the nose of 30 per cent of the UK population.
■ If resistant to methicillin, a type of penicillin, it is termed methicillin-resistant Staphylococcus aureus, (MRSA), first detected in the 1960s. It is also resistant to other antibiotics.
■ Due to its resistance, treatment options may be reduced.
■ The risk factors for acquiring MRSA include previous admission to hospital, wounds and the presence of invasive devices such as central venous lines.
■ Patients in intensive care units and special baby care units have a higher risk of infection due to MRSA than those in medical or long-term wards.
■ Healthy people are unlikely to develop an infection caused by MRSA.

SIGNS AND SYMPTOMS
■ MRSA can establish itself on the skin without causing harm or signs of infection. This is termed colonisation.
■ MRSA can lead to infections that range from minor to life-threatening, such as septicaemia and pneumonia.

INVESTIGATIONS
■ Can be detected by taking swabs or other specimens from a patient suspected of having the infection.
■ Antibiotic sensitivity testing is carried out in a laboratory.

TREATMENT
■ The identification of MRSA in wounds or other sites does not mean the patient will require antibiotics.
■ When the patient is not exhibiting signs of infection, antibiotic treatment is not recommended.
■ Topically applied agents may be used for MRSA colonisation.
■ Antibiotics such as trimethoprim and vancomycin are available to treat infection caused by MRSA.

NURSING IMPLICATIONS
■ The main way of spreading MRSA is via the transiently colonised hands of health care workers.
■ Hand hygiene is vital after contact with contaminated equipment or a patient with MRSA.
■ Hand hygiene and protective clothing should be universally applied.
■ Nurses must know local policy for control of MRSA and source isolation.
■ MRSA persists in dust, so a clean environment is important.
■ National guidelines on controlling MRSA infections were revised in 1998.

RESEARCH AND DEVELOPMENT
Data on MRSA bacteraemia is being collated to promote the monitoring and prevention of health care-acquired infection.

REFERENCES

WEBSITES
MRSA bacteraemia rates in Scotland and England and information on health care-acquired infection can be seen at the Public Health Laboratory Service website: www.phls.org.uk
The Scottish Centre for Infection and Environmental Health (SCIEH): www.show.scot.nhs.uk/scieh

Bacterial cells becoming resistant to antibiotics: resistance is acquired from a donor cell’s plasmid, which has resistance (in red, upper left). A virus (in pink, bottom left) obtains a resistant gene and passes it to a bacterial cell that incorporates it into its plasmid.

What you need to know about... METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)