

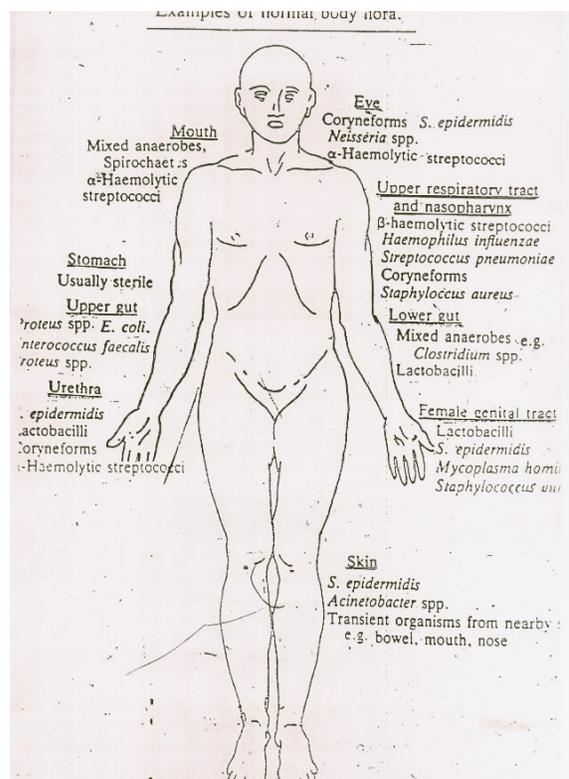
The Prevention and Control Measures of MRSA

Methicillin Resistant Staphylococcus aureus

- What is MRSA ?
- What is its mode of transmission?
- Can it affect health care workers and their family?
- How can I become colonized with MRSA?
- How can it be prevented from spreading?
- How can it be detected?
- What is the treatment for treatment and staff?
- What is the difference between colonization and infectivity?
- How and why does it cause outbreaks?
- What future implications does it entail?

Chronicle of major events in the emergence of MRSA

- 1959 Introduction of Methicillin into clinical practices.
- 1961 Detection of MRSA in clinical specimens.
- 1968-1970 MRSA causing severe hospital outbreaks in Europe and USA.
- 1968 Vancomycin introduced into MRSA therapy.
- 1975 Combined methicillin and gentamicin resistance.
- 1980 Emergence of vancomycin resistance.



Mode of Transmission: Endogenous

- Long duration of different types of antibiotics.
- Over abuse of antibiotics in the community (OTC and by G.P.s).
- Generalized poor condition.
- Prolonged hospitalisation.
- Patients can also be nasal carriage.
- Long duration of peripheral and central lines.

Mode of Transmission: Exogenous

- Lack of hand washing by healthcare workers (Transient carriage).
- Lack of good hospital hygiene on ward level.
- Over crowding with systemic breakdown of aseptic technique and hand washing.

How is MRSA Spread?

- Hands are the main carriers of MRSA. Through direct contact with patients, healthcare workers can get MRSA on their hands and then pass on the germs to other patients.
- MRSA is not usually spread through air.

Risks Factors

- Being over age of 65.
- Treatment with multiple antibiotics.
- Severe illness or disability.
- Prolonged or repeated hospital stays.

Proper Hand washing helps stop the spread of MRSA

- Remember to wash:
 - After contact with each patient
 - Before leaving the room
 - Before putting on and after removing gloves
- Also, always follow universal precautions to prevent contact with body fluids

Colonization of staff and patients

- **Patients :**

Full screening when infectivity occurs (Nasal,Groin, and wounds when present).

- **Staff :**

Full screening when an increased incidence of MRSA infectivity occurs on ward level. **A symptomatic status**

Treatment for Infectivity and Colonization

- **Infectivity** : Antibiotics which are sensitive to the MRSA cultured in the Laboratory. (App. Duration 10 days).
- **Colonization** : No antibiotics needed but just antimicrobials ointment and antiseptics baths (App. Duration 7 days)

Clinical signs Infectivity

- **Sputum**: Greenish and thick viscosity
- **Wound**: Cellulites and pus formation
- **Urine**: Yellow and Cloudy
- **Blood**: high Temperature and poor condition

How do Staphylococci become resistant to antibiotics?

Be Alert for any signs of Infection

- What to look for. Signs of MRSA infection are the same as those other infections.
- **These include:**
- Discharge from wound.
- Raised Temperature
- Raised white blood cell count
- Inflammation

Nursing patients with MRSA

- **Wear Personal Protective equipment.**
 - 1) Gloves
 - 2) Apron
- **Rules for Safe housekeeping.**
 - 1) Disposal of waste in appropriate containers.
 - 2) Clean all horizontal surfaces since Gram positive Bacteria like dusty, dry environment.
 - 3) Wash and disinfect all equipment after each use.

Some Questions and Answers

- Should MRSA patients be isolated?
- If I am a carrier of MRSA, can I continue working?
- Can nursing and residential homes refuse patients because they have MRSA?
- Is MRSA more contagious than other staphylococcus?
- Should patients with MRSA have surgery and outpatients appointment postponed?

Risk Factors for MRSA Infection

- Surgery --Open wounds create an ideal entry site for MRSA.
- Invasive Devices or procedures:
 - Intravenous Catheters
 - Urinary catheters
 - Tracheotomies
 - Surgical drains
- ITU patients and Surgical patients are the **HIGH RISK TARGETS FOR MRSA**

WHAT are the behaviors?

- Hand washing
- Use of barriers or isolation procedures
- Antibiotic prescribing
- Patient care procedures
- Equipment handling procedures
- Procedures to protect worker safety

Hand hygiene

Reasons for noncompliance

- Knowledge: lack of scientific information; wearing gloves
- Beliefs: interference with HCW- patient relationship
- Attitudes: too busy

- Cues: lack of role model
- Reinforcements: skin irritation
- Self efficacy: lack of time; patient needs take priority

Organization

- Inaccessible supplies
- Staffing
- Lack of institutional priority
- Lack of administrative sanctions or rewards