Introduction/Background/Summary

Globally, detection and eradication of Methicillin Resistant Staphylococcus aureus (MRSA) in hospitalized patients is one of the leading priorities in hospitals. Screening pregnant antenatal prior to elective cesarean section is being practiced in the UK and USA.

Aim/Objectives

The goal is to identify early colonized women so that decolonization treatment can be done aiming for permanent elimination of MRSA. Furthermore, it will decrease the possibility of transmission of MRSA from mother → baby and the risk for the mother to develop surgical site infections postoperatively. Possible outbreaks of MRSA may also be prevented by early detection, decolonization and isolation of the patient in the unit until rescreening shows negative results.

Methods

In January 2013, the Obstetric Department at Al Wakra Hospital has taken the initiative of MRSA screening of pregnant women scheduled for elective cesarean section. This was approved by the medical director as part of patient and staff safety initiatives. The test is done two weeks prior to admission for surgery to give ample time for decolonization in case the patient tested positive for MRSA.

It is carried out by nasal swab PCR testing done in the General Outpatient Department and processed in the AWH Microbiology department. The antenatal MRSA screening is being performed in the Obstetric and Gynecology Outpatient department at Al Wakra Hospital.

Results/Outcomes

Out of the 475 Cesarean Sections performed at Al Wakra Hospital, there were 191 were elective surgeries (40%). 88% of the elective surgeries are screened for MRSA.

In the screened group from January to November a total of 5 patients (3%) were MRSA positive. Decolonization has been done prior to the scheduled operation, isolation precautions are being done until the patient has three (3) negative re-screens as per MRSA policy. Although there were 5 cases of MRSA positive patients, none of them had MRSA transmitted to the neonates and none of them developed surgical site infections.

Discussion/Conclusion

Currently only Obstetric department at Al Wakra provides screening for MRSA.

Successful decolonization:
1. Will eliminate the risk of maternal morbidity.
2. Will eliminate the risk of the infant becoming colonized or infected with MRSA.
3. Reduce the risk of MRSA transmission within the hospital.

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Screening Guidelines for MRSA.

MRSA Screening amongst Elective Cesarean Section Patients, Al Wakra Hospital, 2013

Unscreened Elective Cases that Developed SSI, 2013

Cumulative Days without MRSA Outbreaks, Al Wakra Hospital, 2013

Early identification of MRSA carriage:

1. Important for infection control practitioners to put in infection control measures to prevent MRSA transmission in the hospital.
2. It minimizes the possibility of MRSA surgical site infection (SSI) postoperatively.
3. Staphylococcus aureus surgical site infections are associated with substantial morbidity among women who undergo cesarean delivery resulting:
   1. Increased postoperative length of stay.
   2. Increased risk of readmission.
   3. High medical cost.

Sustainability:

With the advent of MRSA cases in the community and the incidences of Surgical Site Infections, it is important to sustain this practice of MRSA screening.

Replication potential:

1. In future, it is planned to include emergency CS patients in MRSA screening at least as soon as possible after delivery.
2. Plans to screen patients undergoing gynecology surgery is under consideration.
3. Expansion of the screening program to all surgical specialties and care for the elderly across Al Wakra hospital.
4. Further expansion of MRSA across Hamada Medical Corporation

Lessons learned/Critical success factors

1. Early identification leading to timely decolonization prior to surgical operation, thereby decreasing possibility of surgical site infections. In the screened group none of the MRSA positive women developed SSI postoperatively.
2. There was no transmission of MRSA from mother to baby for all the MRSA positive women.

References

3. MRSA Screening Procedure for Elective Admissions. South Warwickshire General Hospitals. NHS Foundation Trust. UK
4. Screening Guidelines for MRSA. Royal Surrey County Hospital. NHS Foundation Trust. United Kingdom