Objectives

1. To assess demographic, clinical and molecular characteristics of MRSA infections in hospitalized children in southern Israel.

2. To determine the presence of the pediatric clone among all MRSA isolates.

Introduction

Pediatric community-acquired methicillin resistant Staphylococcus aureus (CA-MRSA) infections are emerging worldwide. High CA-MRSA carriage rates were previously described in healthy, bedridden children in Israel (Soroka University Medical Center, Beer-Sheva, Israel) (Zamir et al. 2010). Children living in southern Israel, mainly Bedouin children, typically suffer from a variety of skin and soft tissue infections due to an abundance of beta lactam antibiotics.

Materials & Methods

Study design

This is a retrospective, population-based study.

Patient population

Children ≤18 years of age admitted to the main hospital in the region, serving the entire population of southern Israel, divided into two distinct ethnic groups: 1) With leukemia, representing only ~5% of all births, and 2) Bedouin children. The pediatric CA-MRSA infections were described in young Bedouin children, typically causing skin and soft tissue infections (SSTI).

Methods

Soroka University Medical Center (SUMC) microbiology laboratory serves the entire population of southern Israel, mainly Bedouin and Jews. Bedouin children, mostly residing in ≥100,000-people cities, make up ~20% of the population, whereas Jewish children predominantly live in smaller cities and villages. The pediatric CA-MRSA clone was first noticed in southern Israel in 2015 (Zamir et al. 2016).

Overall, the pediatric clone infections were similar to those of other CA-MRSA. All isolates of the pediatric CA-MRSA were susceptible to TMP/SMX, ciprofloxacin, gentamicin, tetracycline, rifampicin and vancomycin; nonsusceptible to erythromycin and clindamycin. Inpatient MRSA clinical isolates from children ≤18 years old in 2016 were included.

Conclusions

The pediatric CA-MRSA clone, previously described in southern Israel, is emerging among hospitalized children, typically causing SSTI. Isolates are susceptible to a variety of beta lactam antibiotics.

References


Abstract

Introduction

Pediatric community-acquired methicillin-resistant Staphylococcus aureus (CA-MRSA) infections are emerging worldwide. High CA-MRSA carriage rates were previously described in healthy, bedridden children in Israel (Zamir et al. 2010). Children living in southern Israel, mainly Bedouin children, typically suffer from a variety of skin and soft tissue infections due to an abundance of beta lactam antibiotics.

Materials & Methods

Study design

This is a retrospective, population-based study.

Patient population

Children ≤18 years of age admitted to the main hospital in the region, serving the entire population of southern Israel, divided into two distinct ethnic groups: 1) With leukemia, representing only ~5% of all births, and 2) Bedouin children. The pediatric CA-MRSA infections were described in young Bedouin children, typically suffering from skin and soft tissue infections (SSTI).

Methods

Soroka University Medical Center (SUMC) microbiology laboratory serves the entire population of southern Israel, mainly Bedouin and Jews. Bedouin children, mostly residing in ≥100,000-people cities, make up ~20% of the population, whereas Jewish children predominantly live in smaller cities and villages. The pediatric CA-MRSA clone was first noticed in southern Israel in 2015 (Zamir et al. 2016).

Overall, the pediatric clone infections were similar to those of other CA-MRSA. All isolates of the pediatric CA-MRSA were susceptible to TMP/SMX, ciprofloxacin, gentamicin, tetracycline, rifampicin and vancomycin; nonsusceptible to erythromycin and clindamycin. Inpatient MRSA clinical isolates from children ≤18 years old in 2016 were included.

Conclusions

The pediatric CA-MRSA clone, previously described in southern Israel, is emerging among hospitalized children, typically suffering from SSTI. Isolates are susceptible to a variety of beta lactam antibiotics.

References