What is MRSA

Methicillin-resistant Staphylococcus aureus (MRSA) is a bacterium that causes a variety of different infections, including infections of the skin (cellulitis and skin abscess), blood (bacteremia), bone (osteomyelitis), joint (septic arthritis) among others. Most MRSA infections occur in people who've been in hospitals or other health care settings, such as nursing homes and dialysis centers. When it occurs in these settings, it's known as health care-associated MRSA (HA-MRSA). HA-MRSA infections usually are associated with invasive procedures or devices, such as surgeries, intravenous catheters or artificial joints. HA-MRSA can spread by health care workers touching people with unclean hands or people touching unclean surfaces.

Another type of MRSA infection occurs in the community-among healthy people. This form, community-associated MRSA (CA-MRSA), often begins as a painful skin boil. It's usually spread by skin-to-skin contact. At-risk populations include groups such as high school wrestlers, child care workers and people who live in crowded conditions. In fact, CA-MRSA infections have been reported in many athletes across the US- including college and high school athletes (Rihn, Michaels, and Harner 2005) as well as professional football players (Kazakova et al NEJM 2005). More recently, livestock-associated MRSA (LA-MRSA) strains have also become a point of epidemiological interest. (Witte et al. 2007; Wulf and Voss 2008; Wulf et al. 2012)

According to the Centers for Disease Control and Prevention (CDC), MRSA is among the most common causes of bacterial infections in the United States. As recently as 2017, an estimated 119,207 bloodstream infections with 19,832 associated deaths (MMWR 2019;68:9:214-219) occurred.

The CDC and Florida Department of Health summarize the risk factors for MRSA infection and transmission as the "five Cs" (Florida Department of Health 2016):

1. **C**rowding (prisons, military barracks, homeless shelters)

2. **C**ontact (frequent skin-to-skin) (athletic teams)

3. **C**ompromised skin (cuts, scrapes)

4. **C**ontaminated items and surfaces (locker rooms, gym facilities)

5. Lack of **C**leanliness

What steps can be taken to reduce the risk of getting a MRSA infection?

The CDC reports that risk of MRSA infection can be reduced by maintaining good hand and body hygiene, especially after exercising, participating in team sports, or visiting high-risk MRSA areas such as healthcare facilities. It is also advisable to keep any cuts,

scrapes, or open wounds clean and covered until they are healed. Sharing of personal items such as towels and razors should also be avoided (Abdelzaher et al. 2010).

In conclusion, MRSA can be acquired in a number of ways, and can cause a variety of infections. An Infectious Diseases Expert, who has extensive experience diagnosing and treating patients with MRSA infections, may be able to assist in both identifying causation, as well as determining whether or not the standard of care was met, in the diagnosis and management of a patient who had a MRSA infection.

Additional references:

1.Anderson, UptoDate, accessed 05/02/2023

2.www.cdc.gov

3.Mogen and Rice. Why We Should be concerned about MRSA. 2015 .http://edis.ifas.ufl.edu

4.https://www.mayoclinic.org/diseases-conditions/mrsa/symptoms-causes/syc-2037533 6