



Incidence of MRSA infections of the eye and adnexa increases



1. In the pre-antibiotic era, developing septicemia from an *S. aureus* wound infection could cause death. What was the mortality rate related to from these infections?
 - a. 10%
 - b. 20%
 - c. 40%
 - d. 80%
2. What is the primary mechanism by which resistant genes are transferred from one bacterium to another?
 - a. Conjugation
 - b. Transduction
 - c. Transformation
 - d. Natural selection
3. When methicillin was introduced in 1960, how soon after would resistance to methicillin be reported?
 - a. A year later
 - b. 5 years later
 - c. 10 years later
 - d. 6 months later
4. Which of the following is not considered a primary reason doctors overprescribe antibiotics?
 - a. Time pressure on physicians
 - b. Diagnostic uncertainty
 - c. Lack of understanding about antibiotic resistance
 - d. Patient demand
5. What percentage of antibiotics produced are used today in the agricultural industry?
 - a. 10%
 - b. 20%
 - c. 50%
 - d. 80%
6. The majority of antibiotics in the agricultural industry are used for:
 - a. Infected livestock
 - b. Infected workers or farmers
 - c. Contaminated produce
 - d. To promote growth and prevent infection
7. According to the CDC, which of the following drugs is least likely to be effective for a skin and soft tissue infection caused by CA-MRSA?
 - a. Clindamycin
 - b. Ciprofloxacin
 - c. Minocycline
 - d. Bactrim DS (sulfamethoxazole/trimethoprim, Roche)
8. Which of the following is not considered a risk factor for HA-MRSA?
 - a. Extended nursing home stay
 - b. Invasive port for ongoing chemo therapy
 - c. Eye exam at the optometrist's office
 - d. Kidney dialysis
9. CA-MRSA typically presents as a skin and soft tissue infection what percentage of the time?
 - a. 10%
 - b. 25%
 - c. 50%
 - d. 75%
10. According to data from Ocular Trust 3, to which antibiotic is ocular MRSA most susceptible?
 - a. Trimethoprim
 - b. Tobramycin
 - c. Erythromycin
 - d. Gatifloxacin
11. Howard Flory and Earnst Chain, as well as a team of scientists, were credited for the development of penicillin as an anti-infective agent for human use. What university is credited for their work?
 - a. Johns Hopkins University
 - b. Vanderbilt University
 - c. Oxford University
 - d. University of Kentucky
12. According to one survey, what percentage of patients admitted to discontinuing their course of antibiotics earlier than prescribed?
 - a. 10%
 - b. 20%
 - c. 50%
 - d. 75%
13. According to a CDC report issued in the *Journal of the American Medical Association*, in 1 year, there were reportedly more deaths related to MRSA than to AIDS. How many people were estimated to have died from MRSA in 2005?
 - a. 8,650
 - b. 16,000
 - c. 18,650
 - d. 22,000
14. Through natural selection, bacteria may develop one or more resistance mechanisms that protect them from antimicrobials. Which mechanism below best exemplifies the resistance mechanism for ciprofloxacin?
 - a. They may produce enzymes that render the antibiotic ineffective.
 - b. They can alter or eliminate the antibiotic target site so there is less affinity.
 - c. They can decrease antibiotic uptake or increase efflux of the drug.
 - d. They can develop bypass pathways around target sites.
15. Which of the following is not considered an example of external selection pressure for bacterial resistance?
 - a. Washing hands with Dove liquid soap for 30 seconds 5 times per day.
 - b. The 10-day treatment of a viral upper respiratory infection with oral ciprofloxacin.
 - c. Using Azasite (azithromycin 1% ophthalmic solution in DuraSite, Inspire) for prophylaxis around Avastin treatments.
 - d. The use of tetracycline in animal feed to promote growth in cattle.
16. Penicillin chemotherapy was first introduced in humans during wartime. Which war was it?
 - a. World War I
 - b. World War II
 - c. Korean War
 - d. Vietnam War
17. Which of the following is not part of a decolonization protocol in patients with MRSA?
 - a. Mupirocin 2% nasal ointment
 - b. 4% chlorhexidine body wash
 - c. Intravenous vancomycin for 7 days
 - d. Proper and frequent hand washing
18. According to a retrospective analysis out of Texas, of the 3,640 MRSA infections diagnosed over a 5-year period, what percentage of these infections involved the eye or ocular adnexa?
 - a. 23%
 - b. 47%
 - c. 82%
 - d. 1.3%
19. The spectrum of eye disease found with CA-MRSA can be varied. On a percentage basis, which of the following diagnoses are you less likely to see in your optometry practice?
 - a. Endophthalmitis
 - b. Keratitis
 - c. Preseptal cellulitis
 - d. Conjunctivitis
20. Primary care physicians will, one-fifth of the time, start patients on an antibiotic eye drop for a "red eye" before deciding to refer the patient to an eye care professional. According to one study, what percentage of the time was the antibiotic drop not necessary or inappropriate for the particular condition?
 - a. 10%
 - b. 25%
 - c. 50%
 - d. 90%

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