

Staphylococcus aureus

Gram Positive Cocci

Microbiology

β Hemolytic

Coagulase+, unlike other Staph

Catalase+: unlike Strep

Encapsulated

Nonmotile

Non-sporulating

Facultative anaerobe

Transmission: direct contact (esp. w/pus), fomites, nosocomial, instrumentation

Lab Diagnosis

MSA plate—salt tolerant

Mannitol+, unlike other Staph

Golden yellow colonies

Pathogenesis

Enzymes: hyaluronidase (break down connective tissue), β -lactamase (inactivate penicillin)

Toxins: enterotoxins (food poisoning), toxic shock syndrome toxin (superantigenic pyrogen causing shock)

Clinical Syndromes

Direct Organ Invasion

Necrotizing pneumonia

Osteomyelitis

Septic arthritis

Acute bacterial endocarditis (IV drug users)

Skin infxns

Impetigo, folliculitis, and mastitis

Bacteremia, sepsis

Toxin-Mediated

Gastroenteritis: Most common, rapid onset 1–5 hr, resolves in 24 hr. Common food sources: improperly refrigerated foods e.g. potato salad.

Scalded skin syndrome

Toxic shock syndrome