

	Biogenic osteomyelitis	Tuberculous osteomyelitis	Infectious Arthritis
Causes	<p><u>Bacteria</u> The most common One is Staphylococcus aureus</p> <ul style="list-style-type: none"> • <i>Escherichia coli</i> and group B streptococci ~ <u>neonates</u> • <i>Salmonella</i> ~ <u>sickle cell</u> • <i>E.coli</i>, <i>Klebsiella</i> and <i>Pseudomonas</i> ~ <u>genitourinary tract infections or IV drug abuse</u> • Mixed bacterial infections, including anaerobes ~ <u>surgery or open fractures</u> 	<p><i>Mycobacterium tuberculosis</i></p>	<ul style="list-style-type: none"> • <i>Haemophilus influenzae</i> ~ <u>children under age 2 years</u> • <i>S. aureus</i> ~ <u>older children and adults</u> • <i>Gonococcus</i> ~ <u>adolescence and young adulthood</u> • <i>Salmonella</i> ~ <u>sickle cell</u> • cross-reactive immune responses to systemic infections (e.g. Lyme arthritis caused by spirochete <i>Borrelia burgdorferi</i>)
Sites of involvement	<ul style="list-style-type: none"> • long bones of the extremities • most common sites are the distal femur and proximal tibia • Metaphysis 	<ul style="list-style-type: none"> • skeletal involvement <ul style="list-style-type: none"> ▪ thoracic and lumbar vertebrae followed by the knees and hips • patients with AIDS • Pott's disease 	<ul style="list-style-type: none"> • involves only a single joint • usually the knee-followed in order by hip, shoulder, elbow, wrist, and sternoclavicular joints • Joint aspiration is typically purulent • Culture allows identification of the causal agent.

Routes of infection	<ul style="list-style-type: none"> • Hematogenous spread, most common. • Extension from a contiguous site. • Direct implantation. 	<ul style="list-style-type: none"> • blood borne and originate from a focus of active visceral disease • Direct extension 	<ul style="list-style-type: none"> • Hematogenous • direct inoculation • contiguous spread from osteomyelitis or a soft tissue abscess • Iatrogenic • Traumatic
Clinical features	<ul style="list-style-type: none"> • Fever • Chills • Malaise • intense throbbing pain over the affected region. 	<ul style="list-style-type: none"> • Pain • Fever, low grade, cold abscess • weight loss • inguinal mass “ psoas abscess” 	<ul style="list-style-type: none"> • Sudden onset of pain • Redness, and swelling of the joint with restricted range of motion. • Fever, leukocytosis, and elevated erythrocyte sedimentation rate
Risk factors	<ul style="list-style-type: none"> • Children and young adults • Diabetes mellitus • Compromised immunity • Sickle-cell disease 	<p style="text-align: center;">—————</p>	<ul style="list-style-type: none"> • Any concurrent bacterial infection • Serious chronic illness • Alcoholics and elderly people • Diseases that depress the autoimmune system • I.V. drug abuse • recent articular trauma, joint surgery and intra-articular injections

Abscesses	<i>Brodie abscess</i>	<i>Psoas abscesses</i>	_____
Complications	<ul style="list-style-type: none"> • <i>Pathologic fracture</i> • <i>Secondary amyloidosis</i> • <i>Endocarditis</i> • <i>Sepsis</i> • <i>Squamous cell carcinoma if the infection creates a sinus tract.</i> • <i>Rarely sarcoma in the affected bone</i> 	<ul style="list-style-type: none"> • <i>Bone destruction.</i> • <i>Tuberculous arthritis.</i> • <i>Sinus tract formation</i> • <i>Amyloidosis</i> 	<ul style="list-style-type: none"> • <i>ankylosis and fatal septicemia</i> • <u><i>However, prompt antibiotic therapy and joint aspiration or drainage cures most patients.</i></u>

Done by: Malak Al-Sanie