

Brucella

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Clinical manifestations


- The incubation period is usually 2-4 weeks; occasionally, it may be as long as several months.
- Typically presents with insidious onset of fever, malaise, night sweats , (associated with a strong, peculiar, moldy odor), and arthralgias.
- The fever pattern is variable; it may be spiking and accompanied by rigors, or may be relapsing, mild, or protracted.
- Additional symptoms may include weight loss, arthralgia, low back pain, headache, dizziness, anorexia, dyspepsia, abdominal pain, cough, and depression .

Clinical manifestations

- Physical findings :
- variable and non specific; hepatomegaly splenomegaly, and/or lymphadenopathy may be observed.
- HIV infection = non HIV infection

Clinical manifestations

- Complications :
- More frequently in adults than in children
- One or more focal sites
- Ranges from 6 to 92 percent and is usually about 30
- Percent



• Signs and symptoms :	percentage
• Fever (symptom)	76
• Malaise	68
• Night sweats	72
• Arthralgia	80
• Hepatomegaly	50
• Splenomegaly	29

Clinical manifestations

• Laboratory findings	percentage
• Elevated alanine	
• Aminotransferase	33
• Anemia	27
• Leukopenia	9
• Leukocytosis	8
• Relative lymphocytosis	24
• Thrombocytopenia	12
• Pancytopenia	<1

Clinical manifestations

- Osteoarticular disease :
- The most common form of focal brucellosis; it occurs in up
- to 70 percent of patients with brucellosis .
- Forms include peripheral arthritis, sacroiliitis, and spondylitis. The sacroiliac (up to 80 percent of those with osteoarticular disease) and spinal joints (up to 54 percent) are the most commonly affected sites .
- Peripheral arthritis and sacroiliitis occur in the context of acute disease.
- Peripheral arthritis usually involves the knees, hips, and ankles .
- Prosthetic joints can also be affected.

Clinical manifestations

- Spondylitis is a serious complication of brucellosis
- More prevalent in older patients and patients with prolonged illness prior to treatment .
- The lumbar vertebrae are involved more frequently than the thoracic and cervical vertebrae, and associated paravertebral, epidural, and psoas abscesses have been described
- Spondylitis is frequently associated with residual damage following treatment.

Clinical manifestations

- Genitourinary involvement :
- The second most common form of focal brucellosis.
- Up to 8 percent of cases .
- In males, orchitis and/or epididymitis are the most common presentation; prostatitis and testicular abscess occur less commonly.
- In women, tubo-ovarian abscess has been described. Additional manifestations include cystitis, interstitial nephritis, glomerulonephritis, and renal abscess

Clinical manifestations

- Pregnant women has been associated with the risk of spontaneous abortion, intrauterine fetal death, premature delivery, and intrauterine infection
- with possible fetal death .
- In one study the obstetric complication rate was 14 percent;
- Spontaneous abortion was the most common complication (6 percent of cases)

Clinical manifestations

- Neurologic involvement :
- Up to 5 percent of cases .
- Include meningitis (acute or chronic), encephalitis, brain abscess, myelitis, radiculitis, and/or neuritis (with involvement of cranial or peripheral nerves)

Clinical manifestations

- Cardiovascular involvement occurs in up to 3 percent
Include endocarditis, myocarditis, pericarditis, endarteritis, thrombophlebitis, and/or mycotic aneurysm of the aorta or ventricles.
- Endocarditis is the most common cardiovascular complication (1 to 2 percent of cases) and is the main cause of death attributable to brucellosis

Clinical manifestations

- Pulmonary involvement occurs in up to 2 percent of cases .
- Bronchitis, interstitial pneumonitis, lobar pneumonia, lung nodules, pleural effusion, hilar lymphadenopathy, empyema, or abscesses may be observed.

Clinical manifestations

- Intra-abdominal manifestations are rare; these may include hepatic or splenic abscess, cholecystitis, pancreatitis, ileitis, colitis, and peritonitis.

Clinical manifestations

- Ocular involvement is rare; uveitis is the most common form.
- Other manifestations include keratoconjunctivitis, corneal ulcers, iridocyclitis, nummular keratitis,
- choroiditis, optic neuritis, papilledema, and endophthalmitis

Clinical manifestations


- Dermatologic manifestations occur in up to 10 percent of cases. Findings may
- include macular, maculopapular, scarlatiniform, papulonodular, and erythema
- nodosum-like eruptions, ulcerations, petechiae, purpura, granulomatous vasculitis,
- and abscesses

Clinical manifestations

- Chronic brucellosis refers to patients with clinical manifestations for more than one year after the diagnosis of brucellosis is established .
- Chronic brucellosis is characterized by localized infection (generally spondylitis, osteomyelitis, tissue abscess, or uveitis) in patients with objective evidence of infection (elevated antibody titers and/or recovery of brucellae from blood or tissues).

Relapse

- The rate of relapse following treatment is 5 to 15 percent. Relapse usually occurs within the first six months following completion of treatment, but may occur up to 12 months later .
- In a multivariate model for predicting relapse, independent predictors included temperature $\geq 38.3^{\circ}\text{C}$, duration of symptoms < 10 days prior to treatment, and positive blood cultures at baseline .
- In areas with ongoing exposure, differentiation between relapse and reinfection can be difficult

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- Causes of relapse :
 - An inadequate antibiotic regimen, inadequate duration of antibiotic therapy, lack of adherence, or localized foci of infection .
 - Relapse due to antibiotic resistance is rare.

Clinical manifestations

- Abdominal pain & peripheral arthritis more common in children than adults.

Clinical manifestations

- Acute or insidious
- Usually nonspecific
- Incubation P. 2-4 WK ,may be shorter with *B. melitensis*
- Fever > 75 %
- Arthralgia ,myalgia and back pain are the most common complaints
- Systemic symptoms like fatigue ,sweats,chills,anorexia,headache ,weight loss and malaise are reported in the majority of adults ,are less frequent in children

Clinical manifestations

- Other symptoms are abdominal pain , diarrhea ,rash ,vomiting, cough and pharyngitis.
- The most common P/E is hepatic and splenic enlargement about 50 %
- Arthralgia is common but arthritis in minority
- Arthritis typically monoarticular and most often in knee or hip in children and the sacroiliac joint in adolescent and adults.

Clinical manifestations

- A number of skin rash but not typical.
- Epididymo-orchitis is more common in adolescent and adults.
- In endemic areas an important cause of bacteremia in young children.
- Due to chronicity hepatic or splenic abscess may occurs
- Serious manifestations are include endocarditis, meningitis ,osteomyelitis and spondylitis.

Clinical manifestations

- Although headache , mental inattention and depression may be demonstrated I uncomplicated brucella ,invasion of the CNC 1-4 %.
- Neonatal and congenital infections due to transplacental , breast feeding and blood transfusion
- Congenital non specific sign and symptoms

Clinical manifestations

- Hematologic abnormalities are common , thrombocytopenia , leukopenia , anemia or pancytopenia
- Hemolytic complications can include microangiopathic hemolytic anemia , hemolytic anemia , thrombotic microangiopathy and autoimmune hemolytic anemia
- Elevated liver enzymes occurs in approximately half

Clinical manifestations

- Acute or insidious ,usually nonspecific 2-4 wks after inoculation.
- Classic triad of fever,arthralgia/arthritis and hepatosplenomegaly in most.
- Occasionally present as FUO.
- Abd.pain,headache,diarrhea,rash,night sweats, weakness/ fatigue, vomiting, cough and pharyngitis.
- Refuse to eat,lassitude,refuse to bear weight,and FTT.

Clinical manifestations

- Sacroiliac , hips, knee and ankle joint.
- CNS 1% .
- Neonatal and congenital infections.
- Transplacentally , milk and transfusion transmission.

