


An arthral syndrome

- An arthral syndrome is caused by the damage of anatomic structures of joints at different illnesses and pathological processes (up to 200 diseases and syndromes).
- An arthral syndrome can be or leading clinical presentation of disease or one of manifestation of illness (hampering diagnostics).
- From data of WHO every 7th habitant of planet suffers from joints pains.
- In age 40-70 disease of joints observed at 50% people and older 70 – at 90%.



□ Depending on character of damage of joints, activity of pathological process and stage of disease clinical manifestation are observed in different combinations unspecific and characterized:

- 1) by pains,**
- 2) by the local signs of inflammation (slight swelling, local hypertermia and hyperemia),**
- 3) by a dysfunction,**
- 4) by deformations.**

□ *Joints are movable connections of bones of skeleton with the presence of joint space between the joined bones, it execute simultaneously support and motive functions. The basic elements of joint are:*

- 1) arthral surfaces (ends, epiphysiss) of bones,
- 2) arthral bags,
- 3) arthral cavities.

- ✓ Ends of the joined bones are the hardcore of joint, maintain the large weight.
- ✓ The arthral surface of bone is covered by a hyaline (rarer fibred) arthral cartilage 0,2-0,5 millimetre thick.
- ✓ A cartilage is firmly related to the bone and performs the duty of shock absorber in supporting joints. A cartilage does not have restoration capabilities of bone, its damage is nonreversible process.

□ *Reasons of defect or loss of cartilage :*

- 1) mechanical abrasion (at an osteoarthritis);
- 2) erosiveness, as a result of inflammatory synovitis (pseudorheumatism and other rheumatic diseases).

□ *Arthral capsule:*

- 1) It is formed by connecting tissue.
- 2) It surrounds the joined ends of bones and on arthral surfaces passes to the periosteum.
- 3) It has thick outward fibred fibrinous membrane and internal thin synovial membrane that distinguishes synovial fluid in the cavity of joint.
- 4) Part of capsule: a) copulas (extraarticular and intra-articular) that strengthen a capsule and assist motion of joint on certain directions; b) muscles; B) tendons.

□ ***Arthral cavity:***

- 1) it has the appearance of crack;
- 2) it contains the small amount of synovia (transparent viscous liquid of rather yellow color is produced by the synovium).

□ ***The accessory apparatus of joint (along with ligaments) is situated between the arthral ends of bones or on the edge of joint, increases the area of contiguity of epiphysiss and plays a large role in mobility of joints:***

- 1) meniscuses,
- 2) disks,
- 3) arthral lip.

□ Principles of classification of joints:

- 1) by the number of articular surfaces;
- 2) by a form articular surfaces;
- 3) by function.

✓ *by the number of articular surfaces:*


- 1) simple joint has 2 articular surfaces, (interphalangeal joints);
- 2) compound joint has more than two joined surfaces, (elbow joint), motions can be accomplished separately;
- 3) complex joint contains intra-articular cartilage that divides a joint into 2 chambers (double-chamber joint).


□ *Basic types of motions in joints:*

- 1) motion about frontal axis is flexion and extension;
- 2) motion around of sagittal axis is adduction and abduction;
- 3) motion about vertical axis is rotation: pronation and supination.

□ *By types of coarticulations of bones:*

- 1) synarthrosis — immobile (fixed);
- 2) amphiarthrosis (semijoints) — partly movable;
- 3) diarthrosis (veritable joints) — movable. Most joints behave to the movable coarticulations.

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- **An arthrosis** is a chronic disease joints of degenerative-dystrophic character with destruction of arthral cartilage, capsule of joint and deformation of bone.
 - Arthroses are a group of diseases of joints having a different origin and similar mechanisms of development.
 - Development **of arthrosis** is begun with destruction of cartilage, often because of disturbance of circulation of blood, that results in the loss of elasticity, thinning, appearance of cracks, decrease of amount of synovia.

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- 1) pain appears at weight and calming down at peace,
 - 2) limitation of mobility and crunch are in a joint,
 - 3) there is tension of muscles in area of joint,
 - 4) reduction of joint space, periodic appearance of the slight swelling, formation of bone osteophytes on the edges of arthral surfaces and gradual development of deformation of joint.

□ Unlike arthritis, an arthrosis is disease of joints attended with destruction of cartilages and inflammation or arises up later or has inconstant character.

□ *It is distinguished:*

✓ A primary arthrosis is a result of disturbance of processes of cellregenerating of cartilage and strengthening of degeneration in cartilaginous tissue earlier a healthy joint without changes in an organism. **Reason can be the inherited disturbances:**

- 1) genetic disturbances of cartilaginous tissue with destruction;
- 2) congenital defects of locomotorium leading to injuries of cartilaginous tissues and appearance of arthrosis;
- 3) congenital female line deforming arthrosis of interphalangeal joints of upper extremities.

✓ **Secondary arthrosis** is result of damage and develops in the already staggered joint. **Damaging factors:**



- 1) Mechanical damages of joints** (traumas of joints, intra-articular breaks, quiescent static and dynamic loads, obesity, operative intervention).
- 2) Diseases of joints** (acute and chronic arthritises, synovitis, primary aseptic necrosis of bone tissue and other)
- 3) Metabolic diseases, disease of the endocrine system, deficiency of minerals.**
- 4) Autoimmune diseases** (gout, chondrocalcinosis, hemochromatosis, psoriasis, pseudorheumatism), **hormonal disturbances, deficiency of estrogens** result in changes in tissues of joints and their gradual destruction.
- 5) Vascular diseases** (atherosclerosis, varicose illness) and **hypodynamia** cause disturbances of circulation of blood and as a result dystrophic changes.



International Classification of Diseases (ICD) of WHO -10 distinguishes next types of arthrosiss :

- M15 Generalized arthrosis (primary and secondary).**
- M16 Coxarthrosis [arthrosis of thurl].**
- M17 Gonarthrosis [arthrosis of knee-joint].**
- M18 Arthrosis of the first carpometacarpal joint.**
- M19 Other arthrosises.**

- **Arthropathy** is secondary destruction of joints on a background of different etiology diseases with arthral syndrome nonrheumatic pathology. A background is allergic reactions, infections, disturbances of the endocrine system, chronic pathology of internalss, disturbance of metabolism.
- **Infectious arthropathies by ICD 10 are:**
- **M00 Pyogenous arthritis.**
- **M01* Direct infecting of joint at the infectious and parasitogenic diseases classified in other heading**
- **M02 Reactive arthropathies**
- **M03* Postinfectious and reactive arthropathies at the illnesses classified in other heading.**

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- **Inflammatory polyarthropathies include:**
 - **M05 Seropositive pseudorheumatism.**
 - **M06 Other pseudorheumatisms.**
 - **M07* psoriatic and enteropathic arthropathies (including illness of Cron, ulcerous colitis).**
 - **M10 Gout.**
 - **M11 Other crystalline arthropathies.**
 - **M12 Other specific arthropathies.**
 - **M13 Other arthritises.**
 - **M14* Arthropathy at other illnesses classified in other heading.**

□ *Arthritis is inflammation of joint having a traumatic, infectious or dystrophic origin, :*

- 1) pain (both at motion and at rest),
- 2) edema,
- 3) hyperemia,
- 4) sometimes is deformation up to complete immobility.

□ **Classification by character of damages:**

- 1) **inflammatory arthritis**
- 2) **degenerative arthritis.**

□ 1. **The inflammatory diseases of joints** (can cause all 5 classes of known causative agents: bacteria, viruses, fungi the simplest, intestinal worms).

✓ **The infectious inflammations of joints can be:**

- 1) nonspecific etiology (rheumatic polyarthrititis, rheumatism, rheumatoid polyarthrititis, reactive arthritises and other),
- 2) specific (tubercular, syphilitic, gonorrhoeal, brucellous, dysenteric and other).
- 3) Viral arthropathies are observed at viral hepatitis A, rubella, small-pox, chicken-pox, infectious mononucleosis and other
- 4) Candida polyarthritises

□ 2. **Degenerative-dystrophic damages of joints** : deforming osteoarthrosis, Bechterew's disease, osteochondropathies (innate Perthes' illness).

□ 3. **Metabolic damages of joints** : gout, pseudogout.



□ 4. Secondary arthropathies:


- 1) at disease of blood (haemophilia, leucosises and other),
- 2) at oncological proceses,
- 3) at the diseases of connecting tissue (collagenosess),
- 4) at endocrine diseases (diabetes mellitus, Cushing's syndrome),
- 5) at the diseases of skin (psoriasis),
- 6) at the diseases of liver (hepatitis),
- 7) vibratory illness, disturbance of exchange of vitamin C
- 8) psychical diseases.

□ 5. Traumatic arthritises.

□ 6. Combined forms.

□ *During realization of differential diagnosis of diseases with arthral syndrome it is necessary:*

- 1) to estimate his character - localization, number of the staggered joints, duration, extraarticular manifestation
- 2) to take anamnesis (analysis of risk, concomitant diseases factors, autoimmune diseases, trauma, infection),
- 3) to examine patient,
- 4) to take additional instrumental, laboratory investigation
- 5) to consult with other specialists (if necessary).



✓ *It is necessary to distinguish arthral pathology from the pain of extraarticular origin conditioned by the primary damage of soft tissues (muscular, tendon-ligamentary apparatus), skin, vessels, peripheral nerves, bone structures and other factors:*

- 1) bursitis,
- 2) tendovaginitis,
- 3) fibrositis,
- 4) myositis (myalgias),
- 5) syndrome of carpal channel,
- 6) fasciitis,
- 7) rheumatic myalgias,
- 8) inflammation of skin and soft tissue;
- 9) thrombophlebitis,
- 10) damage of bones (osteoporosis).

Research results	Differentiation of pain		
	periarticular	arthral	reflected
Questioning	Only certain motions are painful	All motions in joint are painful	Pain is unconnected with motion.
motions	Pain arises up at active, and in less degree, passive motions in certain directions (active are limited preferentially)	pain is same at passive and active motions, arises up at motion in different directions	Normal
Range of motion	Active motions can be limited by pain. Passive motions are full	Active and passive motions can be identically limited	Normal
Resistance	Pain at certain motions	No	No
Palpation	Pain around joint. Point or local sickliness at palpation. Limited slight swelling. Absence of local signs of inflammation.	Pain above the joint. Local signs of inflammation (swelling, hypertermia, hyperemia). Deformation. Blockade of joint, crepitation	Normal

□ *By duration of arthral syndrome is distinguished:*

- 1) acute (to 3 months),**
- 2) subacute (to 6 months),**
- 3) protracted (to 9 months),**
- 4) chronic (over 9 months).**

□ The chronic process has deformations of joints due to bone excrescences, destruction of arthral ends, subluxation.

- **Anamnestic data allow to specify possible connection with stress, body weight, recently carried diseases (urogenital infections, intestinal and epipharyngeal infections) and also to educe chronic infections (tonsillitis, pyelonephritis, sinuitiss), traumas, damages of skin (psoriasis), oncologic and autoimmune processes.**
- **The manifestations of arthral syndrome subdivide into:**
 - 1) **subjective** (pains and disturbance (limitation) of mobility);
 - 2) **objective** (hyperaemia above a joint, slight swelling of joint, deformation of joint, dysfunction of joint, limitation of motion.
- **At questioning the parameters of joint pains are found out: localization, character, duration, intensity, time of appearance.**

Differentiation of inflammatory and noninflammatory damages of joints

Sign	Inflammatory	noninflammatory
Morning stiffness	Protracted (more than 1 hour), provoked by long rest	Appears after short rest, lasts less 1 hour (20 min)
Pain	Disappears after motive activity and NSAID	Increases at physical activity
Signs of inflammation	General signs of inflammation. Increase of ESR and inflammatory markers	Pain is not accompanied by the local, general and laboratory signs of inflammation
Hypertermia	present	absent
Pain at active motions	present	absent

Sign	Inflammatory	noninflammatory
Slight swelling of soft tissues	present	absent
Synoviitis	Expressed	Possible
Bone crepitus, formation of osteophyts	absent	Expressed
Weakening of ligamentary apparatus	It is absent	Possible
Instability	It is absent	Possible

□ Features of arthral syndrome at RHEUMATOID ARTHRITIS:

- 1) Symmetric polyarthritis with the damage of joints of hands knee, radiocarpal, talocrural joints.
- 2) Mono- or oligoarthritis (more often knee-joint) with protracted, subacute and benign duration.
- 3) Duration is recurrent with development of fibrosis, bone ankylosis, atrophy of muscles, deformation of fingers, deviation of hand and tiptoes, formation of cyst in popliteal space.
- 4) Visceral manifestations with the presence of rheumatoid granulomas in all tissues include rheumatoid nodules, arteriitis, glomerulonephritis, pyelonephritis, myocarditis, pericarditis, endocarditis, hepatosplenomegaly, lymphadenopathy, pulmonary fibrosis, damage of the nervous system, eyes, blood system.
- 5) A rheumatoid factor can be seropositive and seronegative.

□ *For the diagnosis of RHEUMATOID ARTHRITIS presence of 7 from 11 criteria is necessary:*

- 1) Arthritis (with an edema and exudation) of 3 joints and more by duration more than 3 months the
- 2) Arthritis of joints of hand.
- 3) pain on movement or tenderness of even one joint.
- 4) Symmetric arthritis of small joints.
- 5) Morning stiffness (in joints and round it not less than 1 h).
- 6) Rheumatoid nodules. Fatty tissueic nodules above bone ledges, on extensor surfaces or round joints.
- 7) A rheumatoid factor in tittle 1/4 and higher).
- 8) Roentgenologic signs (erosive arthritis, osteoporosis).
- 9) Typical properties of synovia.
- 10) Typical histological changes of synovium.
- 11) Typical histology of rheumatoid nodules.

□ At infectious pathology the damage of locomotorium manifests by:

- 1) ossalgia,
- 2) arthritises,
- 3) osteoarthritis,
- 4) spondiloarthritis,
- 5) synovitis,
- 6) myalgia,
- 7) fibromyalgia,
- 8) osteomyelitis (rarely),
- 9) tendinitis,
- 10) bursitis,
- 11) fasciitis,
- 12) chondritis and other

□ Reactive arthritises at presence of infection out of joint.

- 1) Conditioned by the immunologically mediated reaction of joints.
- 2) Direct hit of microorganism in a joint is infectious arthritis.
- 3) It can appear at diseases of GIT and urinary.
- 4) The presence of active infectious inflammation is marked.
- 5) At persons having an antigen of histocompatibility of HLA- B 27.
- 6) Etiology: different.

□ Reiter's syndrome has next criteria:

- 1) Age to 40 years.
- 2) Acute beginning of polyarthritis (after epipharyngeal infection).
- 3) One-sided **polyarthritis** ("symptom of stair"). Typical damage is 1 and 5 fingers of hand, elbow, knee, talocrural joints, frequent forming of plaster "cast" fingers (as "sausages") and pseudogouty change of hallux.
- 4) Periostitis, bursitis, pains in heels (achillodynia), subheel spurs at men, forming of flat feet.
- 5) Night pains in a sacrum (sacroilitis one-sided).
- 6) Acute infection of urogenital way or intensifying of it at 1-1,5 month before arthral syndrome. Damage of urogenital tract at men: **urethritis** (1-2 days), prostatitis, balanitis; at women: cystitis, vaginitis, chronic disease of ovaries.
- 7) Preceding sexual contact or acute enteritis.
- 8) Transient **conjunctivitis**.

9. Visceral manifestations: lymphadenopathy (the increase of inguinal lymphonoduss is typical), myocarditis, pericarditis, aortitis (development of heart attack of myocardium is possible), neuritis, amyothrophia.
10. Damage of skin (palm's and sole ceratodermia).
11. Roentgenologic changes remind a deforming osteoarthrosis (with erosive-destructive changes) and tendoperiostitis.
12. Laboratory changes: aqute changes at the beginning of disease and at intensifying (leucocytosis, ESR, increase of Fibrinogenum, dysproteinemia, increase of circulatory immune complexes in blood).
13. Positive bacteriologicexaminations; DNA and ELISA diagnostics.
14. An arthral syndrome usually passes without trace during a few months, the relapses or chronic disease are possible.
15. Reiter's syndrome is associated with the presence of antigen In 27 systems of HLA.

□ **At infections with bacteriaemia** (pneumonia, infectious endocarditis, meningitis et al) on a background an immunodeficiency, microorganisms from the place of inflammation or its natural habitation moves to tissues, cavity of joint and quite often strike bone tissue.

□ **The etiologic factor of these purulent arthritises is:**


- 1) gram-positive cocci (staphylococci, streptococci),
- 2) gram-negative cocci (gonococcus, meningococcus),
- 3) other bacteria (collibacillus, salmonellas, hemophilus),
- 4) anaerobes.
- 5) infecting of joints is possible during intra-articular diagnostic and curative manipulations, intravenous use of drugs, prosthetic of joints.

✓ **purulent arthritis has next criteria:**

- 1) Monoarthritis of genicular, hip, talocrural, radiocarpal, ulnar joints, rarer – of small joints feet and hands with inflammation: pain in a joint, hyperemia, edema, limitation of motions, increase of temperature with a chill; neutrophilic leucocytosis and enhanceable ESR in CBC.
 - 2) Arthritises usually without trace and deformation. A chronic duration is possible at chlamydia infection.
 - 3) For etiologic diagnostics research of synovia with differentiation of leucocytes, bacteriologic examinations of synovia, blood, urine, excrement are used.
- **An arthral syndrome is one of typical manifestations at some infectious diseases (brucellosis, Lime disease, yersiniosis, pseudotuberculosis and other).**

□ Criteria of brucellosis arthritis :

- 1) Anamnestic pointing on a contact with a sick animal or use of unboiled milk. Professional character of disease is milkmaids, persons who tend cattle, workers of milk farms.
- 2) Latent period 3 weeks.
- 3) Fever is well carried by the patients.
- 4) Expressed hyperhidrosis.
- 5) Cellulitiss, fibrositis appears at fatty tissue of different areas of body.
- 6) Lymphadenopathy.
- 7) In the aqute stage of illness "volatile" pains mainly in large joints (hip, genicular, talocrural, humeral) and especially in a sacroiliac coarticulation (sacroilitis).

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- 8) At chronic brucellosis pain in joints is more permanent. Paraarthritides, synovitis, bursitis, osteoarthritis and spondylarthritis are marked.
 - 9) Erosions with osteophytes and calcification appear on bodies of vertebrae more often lumbar.
 - 10) Stiffness of patient presents, motions in joints are limited by pain.
 - 11) Purulent process is absent usually.
 - 12) For confirmation of diagnosis the bacteriologic examination of synovia, blood, marrow and serum research are possible.

□ **Criteria of damage of joints at Lyme disease :**



- 1) endemic disease transferrable by bites of tick,
- 2) It is caused by Borrelia.
- 3) General symptoms: fever, headache, stiffness in a neck.
- 4) Skin changes after the bite of tick : migrant erythema with bright center about 3 weeks.
- 5) Lymphadenopathy.
- 6) At the beginning of disease there are migrant arthralgias, osalgias and myalgias that is not accompanied by external changes of joints.
- 7) Damage of visceral organs : heart (disturbance of cardiac conductivity), nervous system (meningitis, neuritis), damage of cranial nerves (radicular syndrome).
- 8) The polyarthritis of mainly knee-joints (mono- or oligoarthritis) is characterized by the expressed inflammatory changes – synovitis, exudation in the cavity of joint, forming of cysts, edema.
- 9) The chronic damage of joints developing at the small number of patients is bound to immunogenotypic dependence. The third stage of disease manifests by episodic attacks of asymmetric arthritis of large joints especially genicular.
- 10) Bacteriologic examination of synovia and serum analysis of blood are positive.

□ *Criteria of yersiniosis arthritis:*

- 1) Yersiniosis has different clinical forms - intestinal, appendicitis, septic and other
- 2) Arthritises develop on a background of main manifestation.
- 3) Arthritises arise up from the 2nd week of illness, have infectious-allergic character; large joints (slight swelling, exudation, hyperemia) are damaged few months, pass without trace.
- 4) Appearance of the knotted erythema is possible.
- 5) A diagnosis is confirmed by serological methods.

□ Criteria of damage of joints at rubella:

- 1) Fever, general weakness, headache, typical skin rash on the first day of illness, increase of cervical and neck lymphonoduss.
- 2) Arthritises can develop after recovery or vaccination.
- 3) A process is mainly localized in the symmetric small joints of hand and wrist, accompanied by pain in the first-third fingers irradiated to elbow joint, lowering of skin sensitiveness, lymphadenitis; appearance in the cavity of joints of serosal exudation is possible.
- 4) Rarer the joints of lower limbs (joints feet, talocrural and genicular) are engaged in a process; symptomatic lasts no more than month ending with complete recovery. Extremely rarely process has chronic duration.

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- 5) Arthritis after vaccination is mild and more often with localized in knee-joint.
 - 6) There can be increase of ESR and low amount of leucocytes in CBC
 - 7) At immunological research a rheumatoid factor and increase of immunoprotein M can be present, also presence of specific antibodies in the serum of blood is determined.
 - 8) At research of synovia shows increase of viscosity, amount of leucocytes and presence of virus of rubella
 - 9) The virus of rubella can be separated from pharynx, blood, urine.
 - 10) Roentgenologic research does not expose bone changes.
 - 11) At ULTRASONIC of the joints shows edema of tissues and small increase of volume of intra-articular liquid.

□ **Criteria of damage of joints at meningococcal infection:**

- 1) At meningococcal infections(A39.8) meningococcal arthritis(M01.0*), postmeningococcal arthritis(M03.0*) present.
- 2) Background is expressed syndrome of intoxication, hemorrhagic star rash with necrosis and other manifestations of disease.
- 3) Synovitis or arthritises develop at the end of the first week of illness in 3-6% cases. More often – small joints of hands, feet, rarely large joints (talocrural and ulnar). Edema, hyperemia, limitation of motions with acute tenderness are marked; serosal inflammation can quickly pass to purulent. Duration of arthritises is benign, the function of joints is restored fully.
- 4) A diagnosis is confirmed by a bacteriological, microscopic and serum method.

□ *Criteria of damage of joints at viral hepatitis B:*

- 1) Arthritises in 10-25 % cases.
- 2) It starts in pre-icteric period.
- 3) It is characterized by acute symmetric damage with engaging in a process new joints, sometimes it has migrant character.
- 4) The mainly small joints of hands and knee-joints, morning stiffness and pains are marked.
- 5) Symptoms present during 1-3 weeks then pass independently without the damage of joints.
- 6) For patients with chronic viral hepatitis B arthritises can be most frequent extrahepatic manifestation.

□ *Criteria of damage of joints at chronic viral hepatitis C:*

- 1) Frequency – 23-35%.
- 2) As rheumatoid arthritis with involving of small joints, development of morning stiffness and exposure of rheumatoid factor.
- 3) As polyarthrititis with more expressed changes in joints and tissues.
- 4) Arthral syndrome depends from the degree of activity of hepatitis and genotype (1B).

□ **Criteria of damage of joints at epidemic parotitis:**

- 1) The rare manifestation in 1-3 weeks after disappearance of clinical symptomatology as a migrant polyarthrititis with the damage of mainly large joints.
- 2) Clinical manifestations of basic disease can be absent.
- 3) In 2 weeks complete recovery.
- 4) An epididymitis and orchitis develop at 20-30%.



□ **Criteria of damage of joints at enterovirus infection:**

- 1) Rarely arthritises of large and small joints passing without treatment.
- 2) Pleuritis, myalgias, rash, pharyngitis, myocarditis.
- 3) At form epidemic myalgia (epidemic pleurodynia) - headache and fever.
- 4) Pains in muscles are paroxysmal, spastic character and disappear between attacks.

□ **Criteria of damage of joints at HIV-infection:**

✓ Acute beginning, reattacks, absence of erosive-destructive process.


✓ ***There are next rheumatology syndromes:***

• **Damage of joints :**

- 1) Arthralgia in 25-40 % cases at any stage of disease.
- 2) Syndrome of Reuter at 0,5-3 % patients - (oligoarthritis and urethritis).
- 3) Psoriatic arthritis can have duration with development of erosive process.
- 4) Undifferentiated arthropathy.
- 5) Arthritis associated with HIV-infection.
- 6) Pain arthral syndrome.

• **Damage of muscles :**

- 1) Myalgias.
- 2) Myositis/dermatomyositis.
- 3) Myopathy.
- 4) Sjögren's syndrome associated with AIDS.

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- **Vasculitis.**
 - **Septic arthritises.**
 - **Osteomyelitis.**
 - **purulent myositis.**
 - **"Rheumatism of soft tissues"(synovitiss, bursitis).**
 - **Fibromialgia.**
 - **Aseptic necrosises.**
 - **Hypertrophic osteoarthropathy**

□ Criteria of tubercular arthritis :

- 1) It develops at hematogenic penetration from primary tubercular focus (usually lung).
- 2) Destructive monoarthritis of large joints (genicular, hip, talocrural).
- 3) Hyperemia in area of joint is absent, joint is hot by touch.
- 4) The protracted duration of arthritis is typical without a tendency to deformation.
- 5) Clinically exudation in joint, thickening of synovium and persistent duration.
- 6) CT is needed.
- 7) At not clear situations investigation of synovia with PCR.
- 8) At spondylitis a triad is typical: hump, water abscess above a pubertal ligament, damage of spinal cord.
- 9) It can have paraspecific character (tubercular rheumatism) and testify about active tubercular process (lungs, lymphonoduss, genitalia).



The End