ACUTE MONOARTHRITIS/OLIGO

Differential Diagnosis

1-Septic arthritis (bacterial) : most destructive, curable but usually diagnosis is delayed

2-Crytal induced arthritis

3-Reactive/ post infection arthritis

4-Rhumatic fever/arthritis

5-Juvinal arthritis

- SEPTIC ARTHRITIS -

PATHOLOGY

- Most destructive arthritis with increase morbidity and mortality

- Gonococcal is more common ,but IN KSA non gonococcal type is more (and the clinical presentation is different)

- Joint already diseased → hyperemia → with bacteremia → goes to joints arthritis

***extremes of age also get arthritis**

NONGONOCOCCAL BACTERIAL ARTHRITIS

(more sick than gonococcal !) :

- Bacterial infection: Mono arthritis, in community the most common organism is Staph Aureaus 60% – then B-hemolytic streptococci ,then gram –ve .

- In hospitals: Staph is the first then gm-ve anearobs, polymicrobial

- In drug abusers :staph epidermadis in central joint(common), gram–ve

Route of Infection

Heamatogenous spread, secondary to :

- Joint trauma

- Spread from adjacent infection

- Osteomylitis

Predisposing or Risk Factors

- Pre existing chronic joint disease (OA, RA, gout)

- Immunocompromised host or debilitating systemic disease (DM, CRF, SCP, malignancy)

Clinical Features

Variable : (healthy young adult, elderly, pre-existing joint disease , systemic illness)

Symptoms

- **Swelling & Pain (knee is the most common joint affected)**
- **Acute rheumatic fever start in one joint then migrate & limping .**

Signs

- **Swelling.**
- **Semi flexion position**
- **Warmth**
- **Effusion of the joint.**

Diagnosis

-Increase index of suspicion: when 1-2 joints involved

- Local and systemic examination

- Predisposing factors

CBC: ESR

Joint aspiration : The gold standard (deep joint, you need radiological guidance) ➔ turbulent fluid coz lots of cells and debris, change in color, consistency like water)

-Leukocytosis (In bacterial arthritis ↑ WBC > 100,000 , mostly neutrophils

a) Microscopy (gram stain, cell count and differential crystal, put are not always helpful)

b) Synovial cultures : (70-97%) +ve in:

- Pretreat with antibiotic 36%

- Synovial gram stain 50 %

-Blood culture

c) Culture of distant focus of infection

Joint X-ray : radiological evidence takes 7-10 days to appear

Types of Joint fluid

Normal joint fluid (plasma-straw-color, viscous)

Synovial fluid(normal) ‹ 200

Normal 200-2000

Non-Inflammatory (abnormal) › 2000 turbid , no viscosity

Treatment

1) The most imp thing in Rx >> cover gm+ve esp. staph

- IV antibiotics for 2 weeks(always start with it) while Oral Rx for 1 month .

- IV Cloxacillin(for staph.) + Gentamycin(to cover -ve)

OR

Ceftriaxone :for gram –ve

less For gram +ve but not drug of choice for staph (cloxacillin)

OR

Ceftriaxone + Cloxacillin

2) Drainage (Deep joint: arthrotomy) + analgesic

3) First immobilize joint (coz it painful, to ↓destruction, no weight bearing)

- With recovery, start passive mobilization (to prevent adhesion)

- Then active movement (weight bearing) till all signs resolve .

4) Obesity (reduce weight)

Gonococcal infection

- Gram –ve diplococci (N. gonorrhea)

- Usually it is localized infection doesn't spread ,only 1-3% cause Disseminated Gonococcal Infection (DGI).

- Usually after wound or 2-3 weeks after genitourinary infection .

Pathogenesis

Immune complex ➔arthritis , dermatitis, tenosynovitis

(fever – arthralgia- maculopapular rash)

((True arthritis (bacteria goes directly to joint)➔ asymmetrical monoarthritis, afebrile not sick patient))

Signs

- STD suspicion, skin lesion

- Blood culture usually negative

- Always take cervical swab, male urethral swab, throat swab & in Homosexual: rectal one.

- Lesion: scrape → swap

Treatment

-Penicillin G IV for 1-10 days and in case of resistance (traveled to resistance area like Philippine or Malasia give Ceftriaxone (esp. homosexual)

Brucellosis

- Acute(2 weeks) or chronic(mostly)

- B.miletensis is the most commonly causing arthritis.

- It causes :

- Arthritis occurs in both Mono- oligoarticular (hip joint most affected)

-Sacroilitis

-Spondylits(lumbar)

- Arthralgia and myalgia

Diagnosis

Active infection with brucellosis diagnosed by IgG, in chronic IgM(*opposite to normal)

Treatment

- streptomycin and tetracycline for 3-6 weeks ,but in case of arthritis, endocarditis or meningitis 3-6 months.

GOUT

- Crystal induced arthritis affect mostly the 1st metatarsophalengial joint due to increase in uric acid level from purine
- EthOH ingestion cause ↑uric acid
- In peripheral body parts, decrease in temp and with increase acidity , this increase uric acid precipitation
- Most cases are idiopathic underexcretion, overproduction occur in cases of cancer
- Renal f. drugs eg: Diuretic(thiazide) ,low dose aspirin cause gout due to underexcretion.
- It is more common in male (because estrogen is uricosuric)

Risk Factors

- **Hereditary**
- **Increase weight (when wt increase, uric acid produce. increase) : take years to present**

Diagnosis

- Chronic and spontaneous(if arthritis comes & goes many times, this is not bacteria)

- Negative birefringent crystals needle shaped (under polarized microscopy) in gout

- X-ray :nodules, history of stones

- Aspiration

Treatment

-NSAID'S: endomethacin is drug of choice, 2nd diclofenac , the earlier the treatment the better.

- Colchicines is good but take time.

***Avoid low doses of aspirin.**

-Recurrence: the same treatment

-Chronic: small dose of NSAID'S

- If complicated gout or with renal impairment : use Allopurinol (lower uric acid produce.), probencid (increase excretion)

Wherever you go, no matter what the weather,

always bring your own SUNSHINE

~GREEN-BLOOD GIRLS ~

~ COMMON QS ~

One of the following is a feature of idiopathic polymyocitis:

a) muscle biopsy is not important for diagnosis
b) elevated muscle enzymes do not correlate with the clinical progression
c) proximal muscle (shoulder and hip) is a common involvement

Duechene muscular dystrophy:

a) X-linked disease (T)
b)characterized by hypertrophy of shoulder muscle (F)
c)usually manifests in early childhood (T)
d)septicemia and respiratory infection is the common cause of death (T)

In septic arthritis :

1)the presentation is the same for all causative organisms (T)
2)the most common causative organism is Nisseria Gonorrea (T)
3)the best diagnosis test is joint aspiration (T)
4) you should wait for C/S result to start treatment (F)

The following statement about infective arthritis are true:

1)the onset is typically insidious (F)
2)the existing arthritis is a recognized predisposing factor (T)
3)small peripheral joints are involved more often than the large joints (F)
4)H.influenza in the is the commonest causative organism in adult (F)
5)joint aspiration should be avoided given the risk of septicemia (F)

In patient with suspected septic arthritis, which one of following is correct:

1)a negative gram-stain exclude the diagnosis
2) a synovial fluid white cell count of greater than 100,000/mm3 is suggestive of the diagnosis
3)streptococci are the most frequently cultured organism
4)the presence of crystals of calcium pyrophosphate exclude the diagnosis of septic arthritis
5)an elevated synovial fluid complete level is diagnosis of non-gonococcal septic arthritis

Myocyitis may be seen in the following , Except:

1)dermatomyocitis
2)SLE
3)scleroderma
4)rheumatoid arthritis
5)myalgia rheumatica

Important poor prognosis factors for septic arthritis:

1)anaerobes
2)positive synovial culture
3)synovial neutrophil count above 90,00/cmm
4) rheumatoid arthritis
5)prosthetic joint infection

The clinical feature of gout:

1)precipitation of an acute attack by allopurinol (F)
2)cellulites, tenosynovitis and bursitis (T)
3)the abrupt onset of sever joint pain and tenderness (T)
4)serum urate level fall during an acute attack (F)
5)loin pain and haematouria (F)

A 75 years old man present with painful lift ankle for 5days. Examination showed a red, tender lift ankle with moderate effusion. All the following are important differential diagnosis, Except:

1)rheumatic fever T
2)gout T
3)pseuodgout T
4)bacterial arthritis
5)trauma

Important determinants of prognosis of septic arthritis:

1-duration of symptoms before the start of effective treatment
2-sex of the pt (F)
3-adequacy of drainage of the joint (T)
4-the degree of leukocytosis in the blood (F)
5-the level of synovial glucose (F)