Acute Monoarthritis

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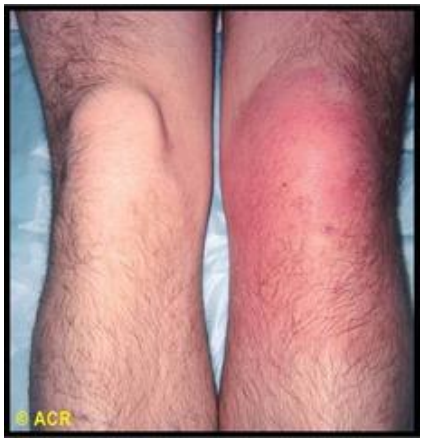
Causes of Acute Monoarthritis (Hot swollen joint)

- Septic arthritis
- Crystal arthritis
- Reactive arthritis
- Monarticular presentation of Polyarthritis
- Other causes e.g. Mechanical causes, haemarhtrosis…..etc

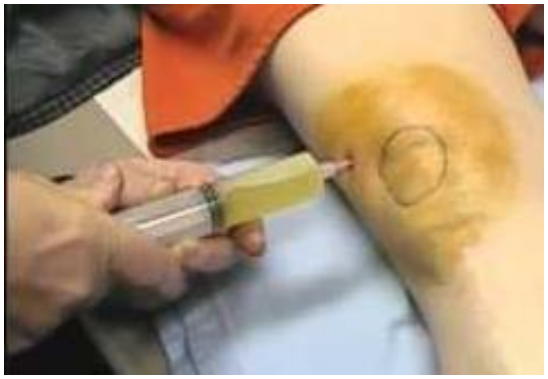
Septic arthritis (SA)



- Definition:
- Cause, Incidence, Risk factors:
- S&S: Short hx of hot, swollen, tender joint

with LOM= SA until proven otherwise.

- Treat as septic arthritis even in the absence of fever.
- Synovial fluid must be aspirated, Gram-stained and cultured prior to starting antibiotics (secondary care- if not available in primary care)



- **Warfarin does not C/I aspiration.**
- **Specimens must be sent fresh to the laboratory.**
- **Polarising microscopy should always be done.**
- **Negative Gram stain or culture does not exclude the dx of SA.**
- **Prosthetic joint should be referred to orthopedics.**

Other investigations

Blood tests

- Blood cultures should always be taken (secondary care)
- WCC, ESR and CRP (Infl markers: monitoring response to treatment).
- Serum urate is of no diagnostic value in acute gout or sepsis.
- U&E and LFT

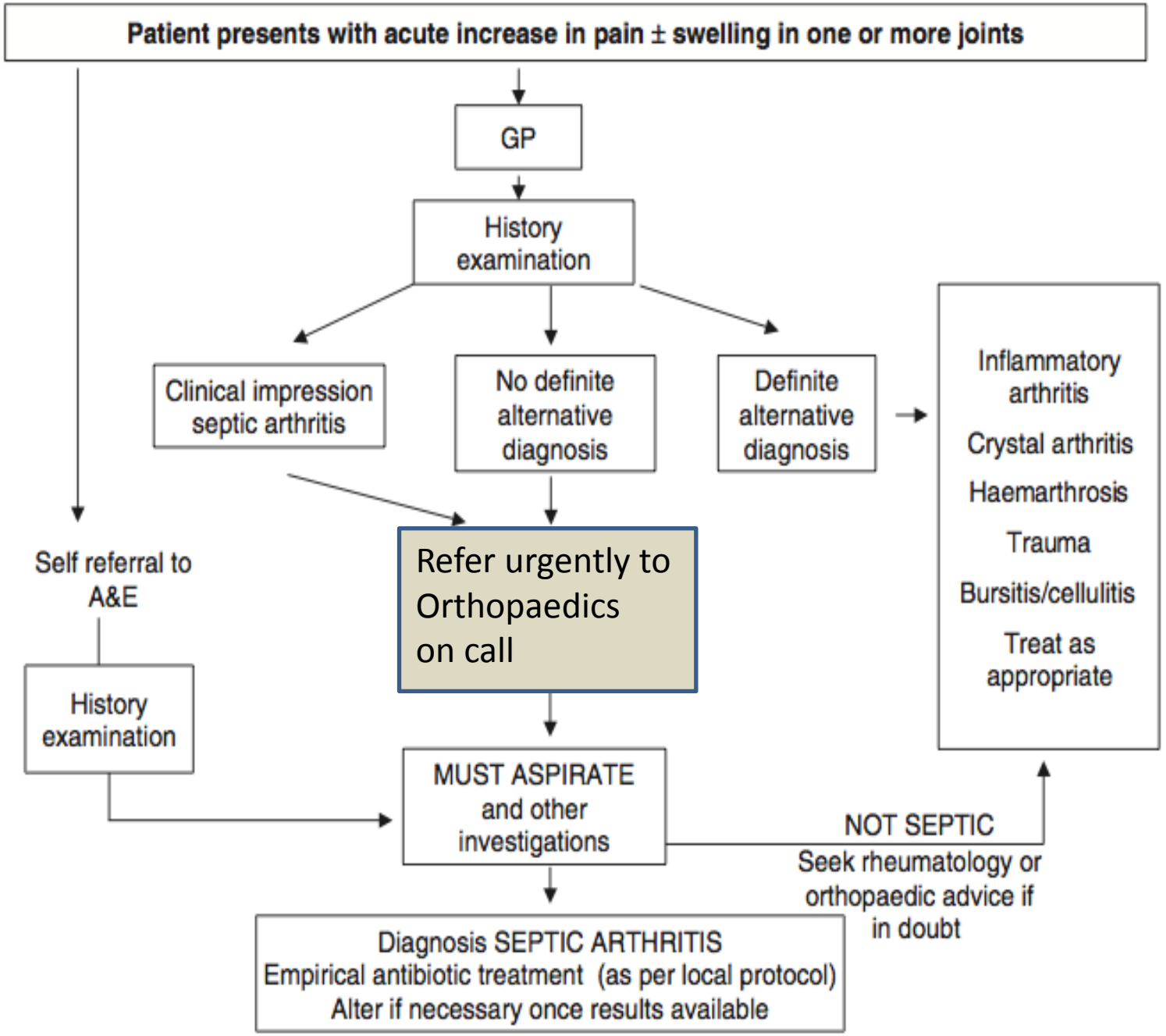
Imaging (Secondary Care)

- X-ray: no benefit in dx of SA. May show chondrocalcinosis. Should be performed as a baseline inv.
- MRI most sensitive test in detecting osteomyelitis.

Treatment of Septic Arthritis

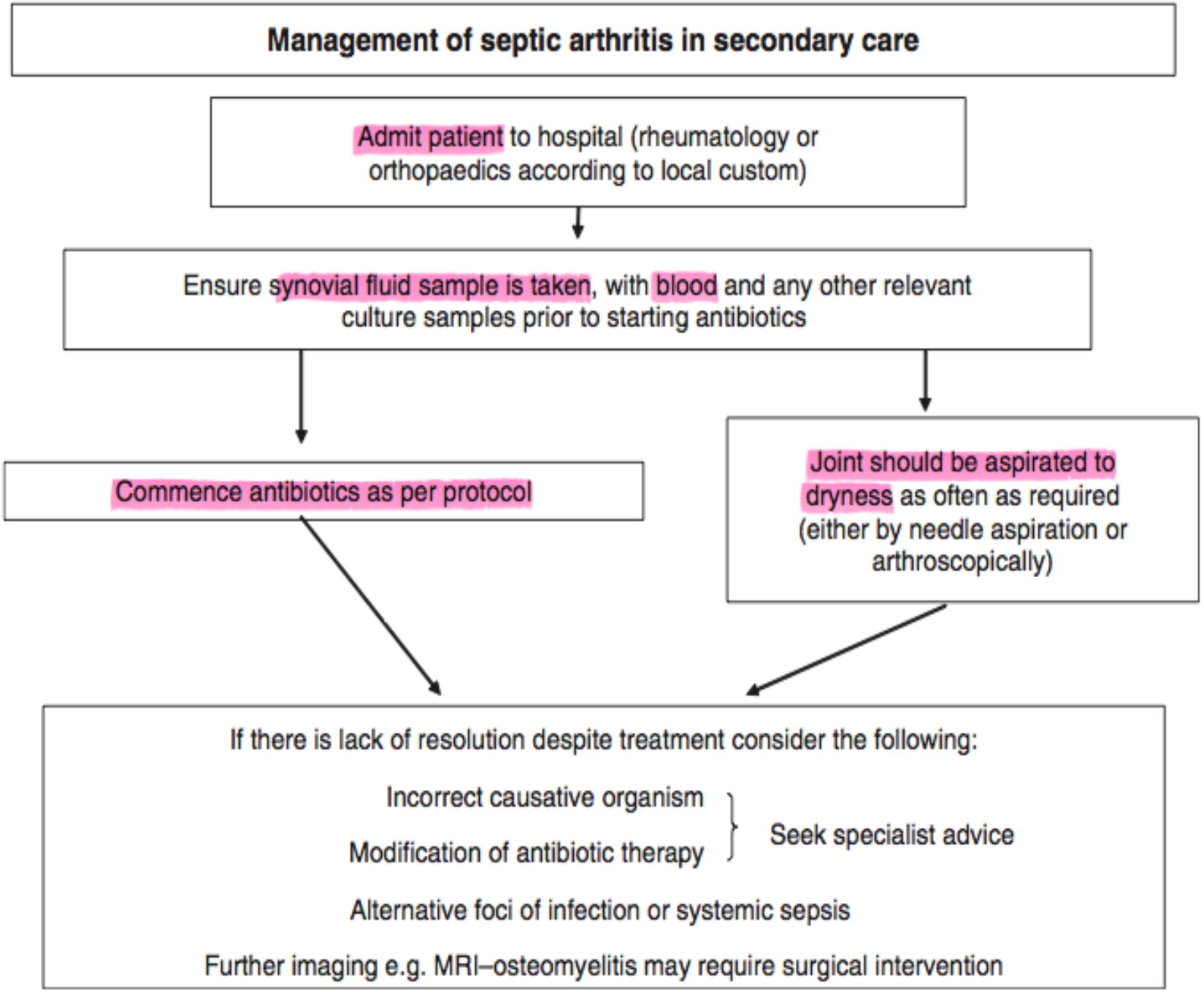
Antibiotics: conventionally, given IV 2 weeks then orally for 4 weeks.

Iv antibiotics may at times be continued in primary care .


Patient presents with acute increase in pain ± swelling in one or more joints
GP
History examination
Clinical impression septic arthritis
No definite alternative diagnosis
Definite alternative diagnosis
Inflammatory arthritis
Crystal arthritis
Haemarthrosis
Trauma
Bursitis/cellulitis
Treat as appropriate
Self referral to A&E
History examination
Refer urgently to Orthopaedics on call
MUST ASPIRATE and other investigations
NOT SEPTIC
Seek rheumatology or orthopaedic advice if in doubt
Diagnosis SEPTIC ARTHRITIS
Empirical antibiotic treatment (as per local protocol)
Alter if necessary once results available

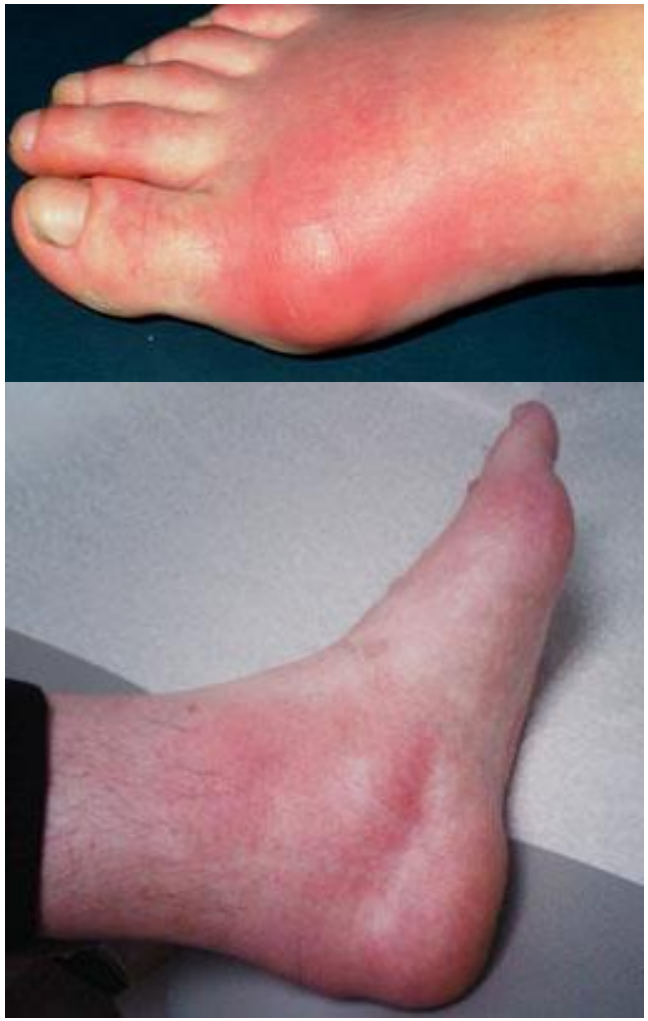
Useful points:

- **Commonest hot joint present in primary care: Great toe MTP (almost always gout and can be diagnosed on clinical grounds).**
- **If there is doubt about Septic arthritis, don't use IA steroids injection.**
- **If you aspirate cloudy fluid from a joint, send the sample with the patient to hospital and do not inject corticosteroid.**
- **Rheum patients:**
  - **No evidence to stop DMARD in patients with SA.**
  - **Patients on anti-TNF: current BSR recommends to withhold anti-TNF for 12 months, following SA.**
- **If you suspect Septic arthritis :**
  - **Patients should be admitted to hospital.**
  - **Refer patients to Orthopaedics urgently (especially those with Prosthetic joints).**
  - **Refer patients to Rheumatology urgently (Those on DMARDS or biological agents) .**


Management of septic arthritis in secondary care
Admit patient to hospital (rheumatology or orthopaedics according to local custom)
Ensure synovial fluid sample is taken, with blood and any other relevant culture samples prior to starting antibiotics
Commence antibiotics as per protocol
Joint should be aspirated to dryness as often as required (either by needle aspiration or arthroscopically)
If there is lack of resolution despite treatment consider the following:
Incorrect causative organism
Modification of antibiotic therapy
Seek specialist advice
Alternative foci of infection or systemic sepsis
Further imaging e.g. MRI–osteomyelitis may require surgical intervention

Acute Gout

- Definition:
- Risk factors:
- Precipitant of attack



Treatment of acute gout

- **NSAID** if not C/I
- Pt with risk of PU, bleed, add PPI

Colchicine effective but slower to work.
SE: diarrhea.

- Oral **Steroid**: when not tolerate or not respond to NSAIDs.
- IA steroid highly effective
- IV steroid: polyarticular

Exclude septic arthritis & suppress pain and inflammation

Treat as soon as possible

NSAID (including coxibs) ± PPI
or
Colchicine
or
Corticosteroid (i.a., oral, i.m., i.v.)

Review at 4–6 weeks

Assess lifestyle factors, blood pressure & perform serum urate, renal function & glucose in all patients

Further attacks (or risk factors +++)
Treat acute attack, when resolved add

Allopurinol* + prophylactic cover with low dose NSAID ± PPI or colchicine
(Risk of precipitating acute attacks for approx 12 months)

*Titrate allopurinol dose dependent on SUA, may require doses up to 900 mg/day

DO NOT STOP ALLOPURINOL DURING ACUTE ATTACKS

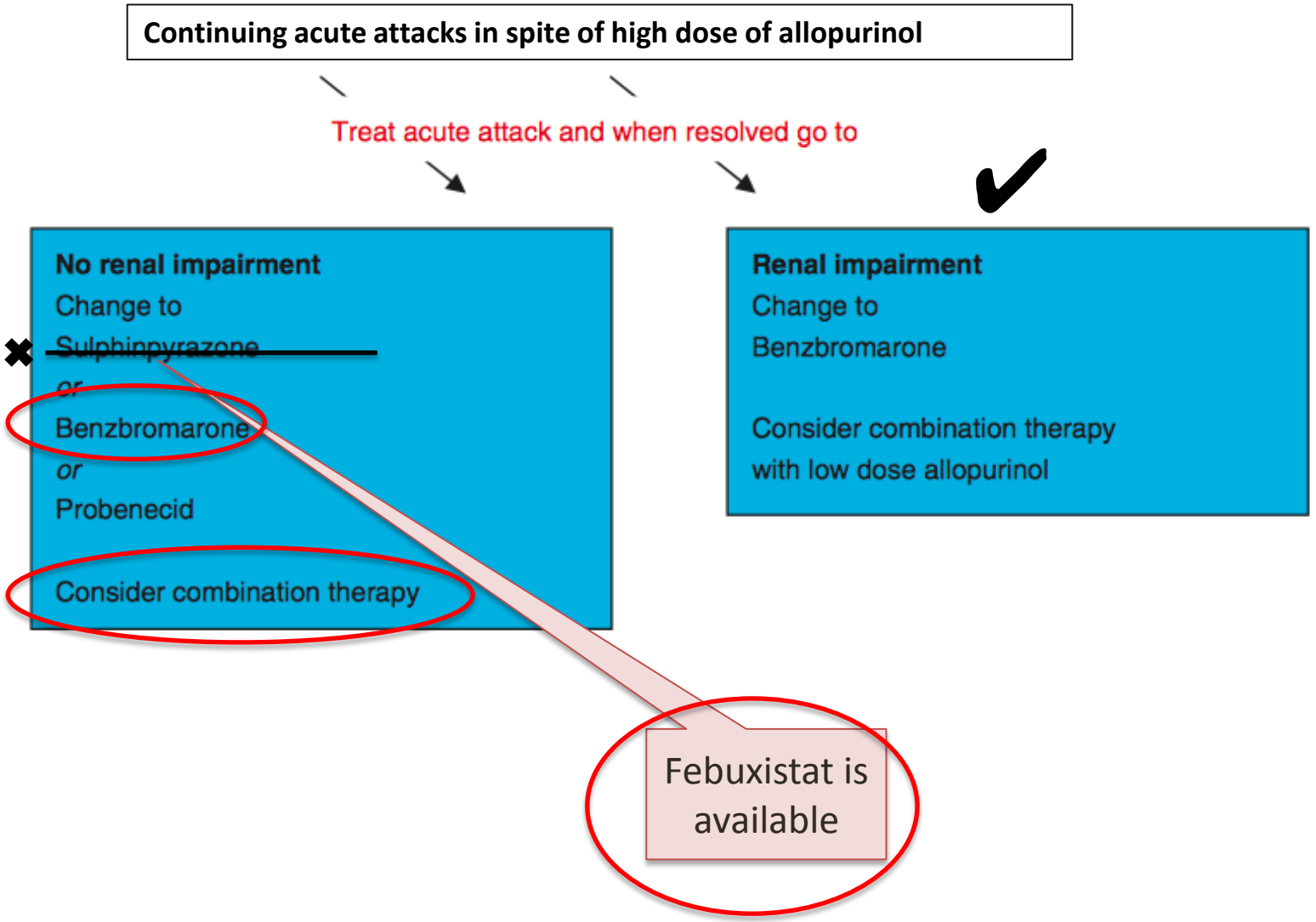
Aim: Plasma urate should be maintained < 300 mmol/l.

Resolution

All patients

- Optimize weight
- Increase exercise
- Modify diet
- Reduce alcohol intake
- Maintain fluid intake
- Treat underlying cardiovascular risk factors

Should be started if a 2nd attack, or further attacks occur within 1 yr, and should be delayed until 1–2 weeks after inflammation has settled.


Continuing acute attacks in spite of high dose of allopurinol
Treat acute attack and when resolved go to
No renal impairment
Change to
Sulphinpyrazone
or
Benzbromarone
or
Probenecid
Consider combination therapy
Renal impairment
Change to
Benzbromarone
Consider combination therapy
with low dose allopurinol
Febuxistat is available

Uric acid lowering drugs

- **Uricostatic agents:**
  - **Allopurinol**
  - **Febuxistat**
- **Uricosuric agents:**
  - **Benzbromarone**
- **Colchicine, NSAID and Coxib**
- **Uricolytic agents**

Non-pharmacological recommendations

- Overweight: dietary modification
- Skimmed milk, low fat yoghurt, soy beans and vegetable sources of protein should be encouraged.
- High purine foods and red meat should be restricted. Liver, kidneys, shellfish and yeast extracts should be avoided, and overall protein intake should be restricted.
- Patients with gout and a history of urolithiasis should be encouraged to drink >2l of water daily and avoid dehydration.
- Alcohol: <21 units/wk (men) and 14 units/wk (women), and at least 3 alcohol-free days per

Cases

Case 1: 75 Y male, overweight, admitted with IHD, HF, on diuretics. He developed painful ankle joint, while he was in hospital. He has been put on antibiotics with no response.

- Dx?
- Interventions?
  Aspiration: dry tab
  Medications: Colchicine: intolerance.
  2nd choice?? /good response/

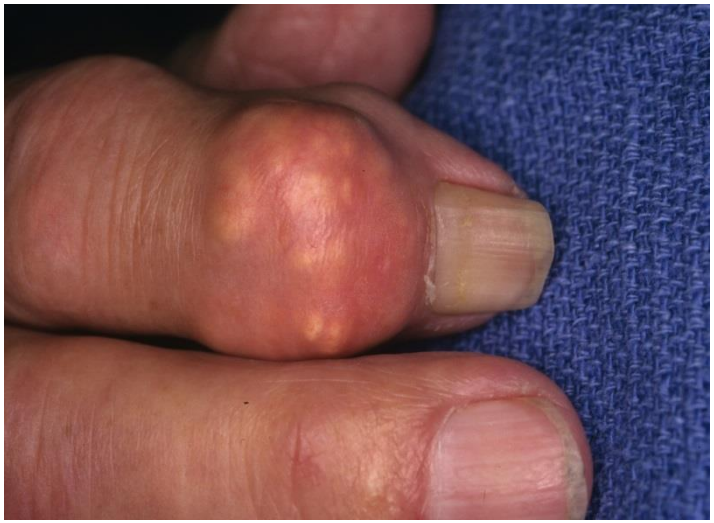
- A week latter another attack.
- Dx?
- Interventions?
  Aspiration: This time joint aspiration and steroid injection/ aspiration: MSU.
- Plan was to start Allopurinol.

Case 2: 80 Y male, referred from primary care, with pain in multiple joint. Further hx: gets attack of severe pain in ankle joints. PMH: HT on Furosemide. O/E nodular bony swelling across PIP and DIP. Multiple tophi in hands. No synovitis.

- Dx?
- Treatment?
- Dose that patient need referral?

Hand X-ray: erosive changes.

Blood: CRP 28, ESR 35, Urate



Case 3: 63 Y male, a known case of chronic tophaceous gout arthritis. Multiple joint synovitis. Uric acid >500. Hx of intolerance to Allopurinol.

- Acute Mx?
- Preventive measure/ alternative to allopurinol?
- Still high uric acid with attacks of gout. Mx?/ monitoring?
- Other medication with weak uricosuric effects

Thank you