TREATMENT

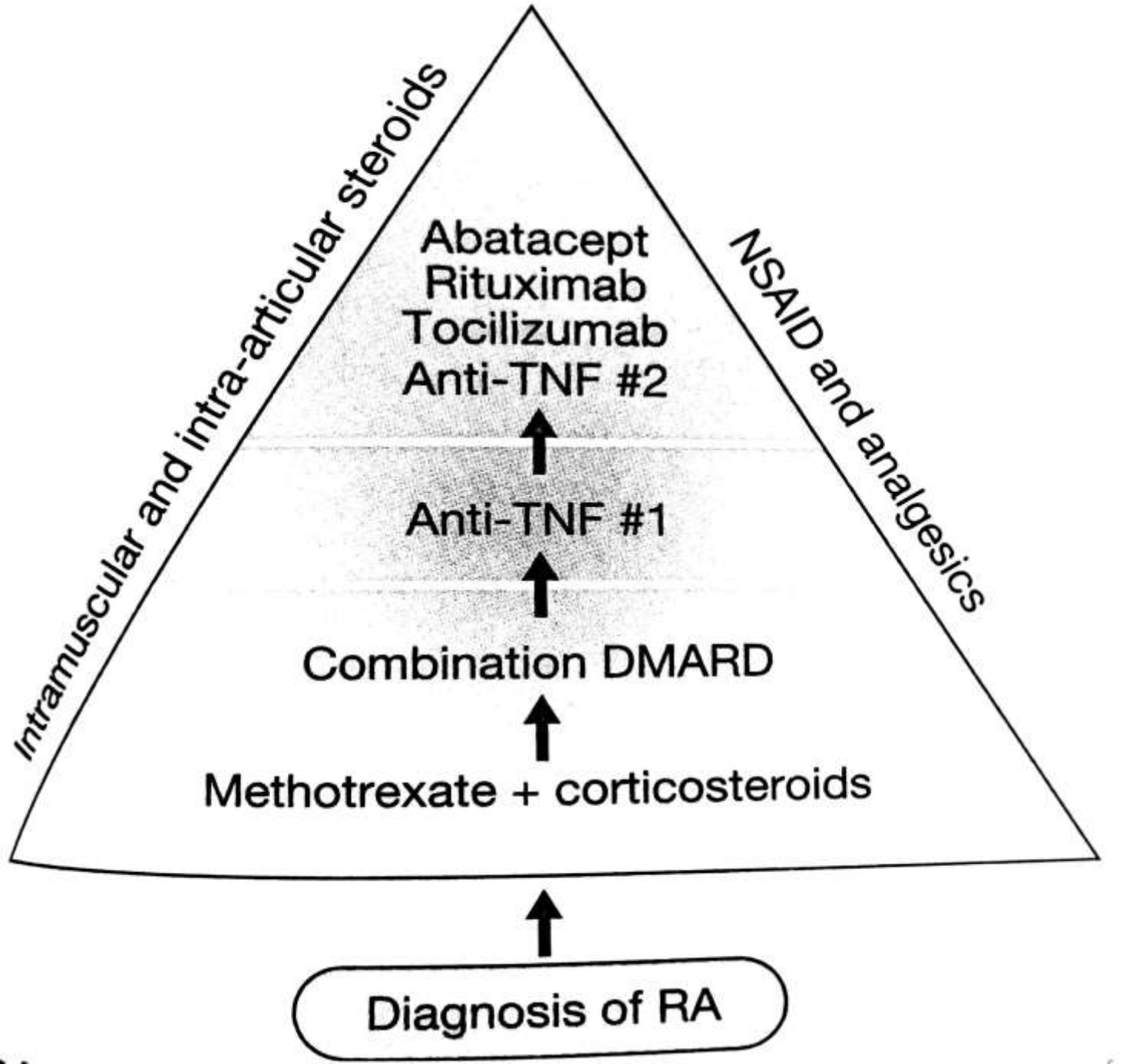
RHEUMATOID ARTHRITIS

GOALS OF MANAGEMENT

- Focused on relieving pain
- Preventing damage/disability
- Patient education about the disease
- Physical Therapy for stretching and range of motion exercises
- Treatment should be started early and should be individualized.

Treatment modalities for RA

- NSAIDS
- Steroids
- DMARDs
- Immunosuppressive therapy
- Biological therapies
- Surgery


Intramuscular and intra-articular steroids
NSAID and analgesics
Abatacept
Rituximab
Tocilizumab
Anti-TNF #2
Anti-TNF #1
Combination DMARD
Methotrexate + corticosteroids
Diagnosis of RA

DMARDS

- **Methotrexate**

Anchor DMARD in RA.

Oral dose of 7.5 – 10mg weekly, increased in 2.5mg increments every 2-4 weeks until benefit occurs or toxicity is limiting.

Benefit starts in 1-2 months. Must be given for atleast 6 months before ruling ineffective.

A/E: Nausea, vomiting, malaise, rarely pneumonitis

Folic acid 5 mg/week reduces toxicity.

- **Sulfasalazine** : Commonly used alone or in combination with other DMARDs. Starting dose of 500mg gradually upto maintenance dose of 2-4g/day. Warn patient about possible orange staining of urine and contact lenses.
- Other commonly used DMARDs include **Hydroxychloroquine, Leflunomide.**
- **Gold, Penicillamine and Ciclosporin A** are also less commonly used.
- Gold(sodium aurothiomalate):given i.m , dose: 50mg after initial test dose of 10mg.First weekly for 6months then fortnightly and then monthly.

Corticosteroids

- They have disease modifying action.
- Primary role is induction of remission in patients with early RA.
- Strategy : Prednisolone 60mg daily and reduce and stop over 3 months as DMARDS start to take effect.
- Other strategy is low dose prednisolone 5-10mg daily for 6-24 months and intramuscular injection of methylprednisolone or triamcinolone every 6-8 weeks.
- Intraarticular:one or two problem joints with persistent synovitis.
- A/E: Osteoporosis(DEXA scan is done)

BIOLOGICS IN RA

- Cytokines such as TNF-α ,IL-1,IL-10 etc. are key mediators of immune function in RA and have been major targets of therapeutic manipulations in RA.
- Various biologicals approved in RA are:-

1) Anti TNF agents : Infliximab Etanercept Adalimumab
2) IL-1 receptor antagonist : Anakinra
3) IL-6 receptor antagonist : Tocilizumab
4) Anti CD20 antibody : Rituximab
5) T cell costimulatory inhibitor : Abatacept

OSTEOARTHRITIS

OA – Disease Management

- OA is a condition which progresses slowly over a period of many years and cannot be cured
- Treatment is directed at decreasing the symptoms of the condition, and slowing the progress of the condition

- Functional treatment goals:
  - Limit pain
  - Increase range of motion
  - Increase muscle strength

Management/Treatment of OA

- Goals
  - Educate patient about disease and management
  - Improve function
  - Control pain
  - Alter disease process and its consequences

Non Pharmacologic Management of OA

- Patient education
- Self-management programs
- Weight loss
- PT/OT
- Muscle strengthening

Pharmacologic Management

- Analgesics and anti-inflammatory drugs : Paracetamol, Opiates (in sever pain)
- Topical Agents : Capsaicin
- Corticosteroid injections : Intra-articular
- Chondroitin sulphate and glucosamine suphate are useful in treatment of knee OA.
- Hyaluronan injections : Intra-articular weekly injections for 3-5weeks give pain relief.

ANKYLOSING SPONDYLITIS

- AIMS: Relieve pain and stiffness, maintain a maximal range of mobility, avoid development of deformity.
- CORNERSTONE OF MANAGEMENT: Education and physical activity.

TREATMENT MODALITIES

- DRUG THERAPY
- PHYSICAL THERAPY
- SURGERY

DRUG THERAPY : MAINSTAY

- IT IS TARGETED :

a) GIVING SYMPTOMATIC RELIEF TO THE PATIENT.

b) TO PRODUCE IMMUNOSUPPRESION.

c) SLOW DOWN THE DISEASE PROGRESS.

DRUG THERAPY

- ✓ TO RELIEVE PAIN AND INFLAMMATION :

NSAIDs :

Ibuprofen, Phenylbutazone, Indomethacin,

Diclofenac, Naproxen, Celecoxib.

- ✓ DMARDs such as methotrexate, sulfasalazine are useful in peripheral arthritis but no effect on axial disease.
- ✓ Corticosteroids are used to reduce the immune response and producing immunosuppression

Anti TNF therapy with

- Etanercept

  Dose: 50 mg SC per week as two 25 mg injections administered on same day or 3 to 4 days apart

- Infliximab

  Dose: 5 mg/kg IV at week 0, 2, and 6 and every 6 to 8 weeks thereafter

Should be considered in patients inadequately controlled on standard therapy with a BASDAI score greater than 4.0 and spinal pain score more than 4.0.

Anti TNF frequently improve symptoms but do not prevent akylosis of alter natural history of disease.

PHYSICAL THERAPY

- Daily back extension exercises.
- Morning warm up routine.
- Punctuate prolonged periods of inactivity with regular breaks.
- Swimming is the ideal exercise.

SURGERY

- Total hip arthroplasty

SYSTEMIC LUPUS ERYTHEMATOSUS

TREATMENT GOALS

- Educate the patient about nature of illness.
- Control symptoms
- Prevent organ damage.

Patient should be advised to avoid sun and UV light exposure and employ sun blocks.

DRUG THERAPY

- MILD TO MODERATE DISEASE

- Analgesics : NSAID , hydroxychloroquine (200-400 mg daily)
- Corticosteroids : Prednisolone 5 – 20mg/day
- Immunosuppressant : Methotrexate, Azathioprim, Mycophenolate mofetil

Increased doses of corticosteroids may be required for flares in activity or complications like pleurisy or pericarditis.

- Monoclonal antibody Belimumab has shown effectiveness in patients with active SLE

LIFE THREATENING DISEASE

- Pulse methylprednisolone (10mg/kg IV), with cyclophosphamide (15 mg/kg IV), repeated at 2-3 weekly intervals for six cycles
- Mycophenolate mofetil can be used successfully with high dose steroids for renal involvement.

MAINTENANCE THERAPY

- Oral Prednisolone 40 – 60 mg daily on cessation of pulse therapy, gradually reducing to reach 10 – 15 mg/day by 3 months.
- Azathioprine (2-2.5mg/kg/day), Methotrexate (10-25 mg/week) or MMF (2-3 g/day).

GOUT

- Oral NSAIDs for pain relief.
- Local ice packs for symptomatic relief.
- Oral colchicine 0.5 mg twice or thrice daily.
- Allopurinol, a xanthine oxidase inhibitor to bring down uric acid levels. Started with 100mg (or 50mg in elderly) daily, increased by 100mg (or 50mg) every 4 weeks till target uric acid level achieved.
- Febuxostat in patients who fail to respond adequately to allopurinol.

- Uricosuric drugs like probenecid or sulfinpyrazone.
- Pegloticase is a biological treatment for treatment of tophaceous gout resistant to standard therapy. Administered as IV infusion every 2 weeks for 6 months.

In addition to drugs, predisposing factors should be corrected, patients should be asked to lose weigh, reduce alcohol intake especially beer. Thiazide diuretics should be stopped and substituted by ACE inhibitors. Avoid large amounts of seafood and offal.