

STUDY MORNING ON RHEUMATOID ARTHRITIS

Abstracts

The following are abstracts of papers presented at a study morning organised by the Malta Association of Occupational Therapists in collaboration with the Professional Body of Occupational Therapists on 21.01.95.

RHEUMATOID ARTHRITIS

Systemic disease, most commonly presenting as a symmetrical polyarthritis. Commonest inflammatory arthropathy, occurring in about 2% of adults, F 2-3 XM. About 80% have a positive test for rheumatoid factor.

Etiology

Not known; genetic, immunological factors operate.

Pathology

Synovial hypertrophy, forming granulation tissue (pannus) which erodes cartilage and bone. Synovial lining of joints, bursae and tendon sheaths may be affected.

Clinical features

Onset is typically insidious, comprising systemic features and joint pain, swelling and morning stiffness. Other modes of onset include:

- acute synovitis
- polymyalgic
- palindromic

- monoarthritis

Rheumatoid arthritis (RA) becomes a symmetrical polyarthritis affecting mainly the small joints of the hands (MCPs, PIPs with sparing of the DIPs), wrists, knees and feet.

Hands and Wrists (70-85%).

Initial features are pain and swelling of the MCPs and PIPs, with inability to make a fist. Later, wrist involvement produces volar subluxation of the hand, and ulnar deviation of the fingers. Complications may include extensor tendon rupture. Inflammation within the carpal tunnel may give rise to carpal tunnel syndrome. Other late finger deformities include swan neck and Boutonniere deformities.

Feet and Ankles (70%).

MTP synovitis may produce the "daylight" sign and tenderness on squeezing the forefoot. Later, subluxation may occur producing clawing of the toes. Subtalar joint involvement may produce valgus deformity of the foot.

Knees (70%).

Synovitis with effusion, Baker's cyst (which can rupture and mimic deep venous thrombosis), quadriceps wasting and lateral instability may be seen.

Cervical Spine (35%).

The only part of the spine to be involved in RA; may produce atlanto-axial subluxation, subaxial subluxation (step - ladder deformity). Important to establish presence prior to anaesthesia/intubation.

TMJ involvement; cricoarytenoids - less often involved. although almost any synovial joint may be affected.

Extra-Articular features

- a. Systemic upset (malaise, lethargy, depression, weight loss).
- b. Rheumatoid nodules - more often in severe, active, seropositive disease. Mostly over extensor surfaces of the forearm, tendon sheaths.
- c. Eyes - sicca symptoms, episcleritis, scleritis, scleromalacia.
- d. Cardiovascular system - pericarditis with/without effusion (often asymptomatic).
- e. Respiratory system - pleural effusions, nodules, pulmonary fibrosis.
- f. Nervous system - myelopathy, neuropathy, mononeuritis multiplex (vasculitis), entrapment neuropathies (most often CTS).
- g. Haematological - anaemia, thrombocytosis; Felty's syndrome - neutropenia and splenomegaly.
- h. Vasculitis - mostly in severe disease.

Investigations

- a. Raised ESR.
- b. Raised CRP.
- c. Anaemia is common - normochronic anaemia of "chronic disease", hypochronic microcytic (often drug induced). WBC, platelet abnormalities (*see above*).
- d. Rheumatoid factor positive in 80% + of RA patients.
- e. ANA (positive in about 15%).
- f. Inflammatory synovial fluid.
- g. X-Ray changes - soft tissue swelling; periarticular osteoporosis; erosions; deformities.

Complications

- a. Amyloidosis.
- b. Septic arthritis.

THE PHARMACEUTICAL NEEDS OF RHEUMATOID ARTHRITIS PATIENTS.

The pharmaceutical needs of rheumatoid arthritis include:

1. Optimisation of the patient's therapy.
2. Minimisation of side effects and
3. Individualisation of patient care.

1. Optimisation of therapy

Aims:

- ◆ To reduce pain and stiffness.
- ◆ To improve functional ability.
- ◆ To prevent deformity.

The pharmacological therapy in the management of RA involves an orderly progression beginning with simple interventions and progressing over months or years to more potent drugs.

First-Line Drugs: Non-steroidal anti-inflammatory drugs (NSAIDs) which provide symptomatic relief.

Second-Line Drugs: Disease modifying and slow-acting drugs, e.g. gold, penicillamine, sulphasalazine, hydroxychloroquine. These are used if an adequate trial of first-line drug therapy has failed to relieve symptoms satisfactorily.

Third-Line Drugs: Systemic treatment with cyclophosphamide, chlorambucil, azathioprine, corticosteroids and methotrexate. These can exert a second-line effort in patients with RA. However, these drugs are considered third-line therapy because they can give rise to late toxicity (e.g. the likelihood of developing malignancy, particularly non-Hodgkin lymphoma).

The choice of agent is based on efficacy, toxicity and monitoring requirements.

2. Minimisation of side-effects (of NSAIDS)

Side-Effects	i.m. Gold	Oral Gold	Penicillamine	Sulphasalazine
Mucocutaneous events	withhold gold look for alternative causes	as for i.m. gold	as for i.m. gold	discontinue look for alternative causes
Loss of taste	-	-	hold dose taste will return	-
Nausea and vomiting	-	seldom a problem	decrease or hold dose	adjust dose
Diarrhoea	rare	reduce dose	-	reduce dose temporarily
Fall in WBC to <4000*10 ⁶ /L	withhold gold verify WBC	as for i.m gold	unusual	discontinue drug
Fall in platelet count	withhold gold	as for i.m gold	withhold drug	discontinue drug
Proteinurea trace	no action necessary	as for i.m gold	as for i.m gold	as for i.m gold
Abnormal LFTs	withhold therapy	as for i.m gold	as for i.m. gold	as for i.m. gold
Unusual side- effects	nitritoid reaction gold-lung pulmonary fibrosis	alopecia pulmonary fibrosis	mammary hyperplasia myasthenia SLE	fall in sperm count

3. Individualisation of Patient Care

This involves the tailoring of pharmaceutical care delivered to meet the individual patient's needs.

In order to achieve this one must:

- i. take a drug history
- ii. ensure accessibility to drugs
- iii. do patient counselling and education

i. Patient's drug history

- a. Previous drug therapy: names, doses, efficacy and side-effects experienced by the patient.
- b. Other therapy or medical conditions: this is important due to drug interactions and some conditions which may be precipitated by RA therapy such as NSAIDS that cause fluid retention which may precipitate hypertension and Congestive Heart Failure.
- c. Over the counter (OTC) drugs or those obtained from other sources such as family and friends: Besides the reasons given in b. above, this may be important since the OTCs the patient may be using could pinpoint side-effects experienced by the patient e.g. laxative use could be related to constipation secondary to codeine-containing analgesics, or to Aluminium-containing antacids, in turn related to gastro-intestinal problems due to NSAIDS.
- d. How and when current therapy is taken: useful to assess compliance and outcome of therapy.
- e. Other information: understanding of treatment, ability to obtain/self-administer therapy and availability of support, all of which can have an impact on compliance.

ii Accessibility to drug therapy

- a. Problems of how to actually obtain medicines from the pharmacy e.g. if patient is housebound.

b. Difficulties to self-administer treatment due to reduced manual dexterity. These could be related to -

- formulations, e.g. difficulty to pour syrups
 - use of devices e.g. inhalers
- closures of containers e.g. Snap-On caps, screw-top caps, child-resistant 'Clic-Loc' closures.

One must:

- * Consider each patient individually
- * Enlist the help of carers and other members of the health-care team (e.g. OT's, home-visitor) to ensure accessibility to drugs
- * Offer the patient a choice of products and containers.

iii. Patient counselling and education

Many patients use their medication inappropriately due to poor understanding of **How, When and Why** to take drugs especially if drug therapy has been changed several times, is causing side-effects or the patient is on multiple therapy.

Evidence shows that counselling improves patient satisfaction, understanding and compliance.

POINTS TO REMEMBER WHEN COUNSELLING:

- a. Good communication skills are needed while avoiding medical jargon.
- b. Recruiting the help of carers as it is often them who collect medicines from the pharmacy and who dispense them to the patient.
- c. Patients living alone or with impaired vision, hearing or dexterity are more at risk of drug-related problems (e.g. non-compliance).
- d. Advantage of additional written information in the appropriate choice of language and format.

POINTS TO BE COVERED:

- a. Rationale of therapy
- b. Difference between 'as required' (prn) and 'regular' therapy
- c. Differences in onset of action of RA therapy
- d. Side-effects
- e. Use of OTCs or drugs other than those prescribed.
- f. Timing of medication in relation to:
 - symptoms
 - food intake
- g. Other information related to the patient's drug therapy.

**JUVENILE
RHEUMATOID ARTHRITIS (JRA)
- A Case Study
presented by
Nathalie Buhagiar, Sr. O.T.**

1

Therapy for the child with JRA covers three main areas:

1. Monitoring and minimising the effect of the disease process, especially disfigurement on the child's developing self-concept and social skills.
2. Promoting competent self management in the physical and social environment.
3. Providing training skills for future vocational and recreational skills.

The *case study* was that of Amy, a girl suffering from Seronegative Polyarticular Juvenile Chronic Arthritis who presented with a generalised stiffness of both upper limbs affecting mostly her hands and fingers.

Assessment included:

1. History
2. Child's response to testing.
3. Upper extremity joint status.
4. Occupational Role Performance.
5. Sensory Motor Screening.
6. Orthosis.
7. Adaptive Equipment.
8. Home Environment.
9. School Environment.

Goals included amongst others, establishing a good relationship with the child, protection of hands during play, achieving adequate functioning at home and at school, increasing independence in age appropriate activities and assisting patient and family in compliance to therapy.

Therapeutic activities included:

- a. Fine Motor and constructive abilities.
- b. Gross Motor coordination and strength.
- c. Imaginative play.

In *conclusion*, occupational therapy in JRA aims to help the child function within the family framework and society by motivating and actively reinforcing the child as well as by home programmes that can be comprehended well by both child and surrounding family members.

Bibliography

Occupational Therapy with Children, Clancy and Clark.