

Review Article - Comorbidities in Rheumatoid Arthritis

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Abstract

The aim of the review is detection, prevention and management of comorbidities. Rheumatoid Arthritis patients, besides arthritis complaints also have comorbid conditions. The aim of this review is to consider associated comorbidities and discuss their management in RA patients.

Keywords: Arthritis; Rheumatoid arthritis; Synovial; Osteoporosis; Healthcare

Rheumatoid Arthritis (RA) and Comorbid Conditions

Rheumatoid Arthritis (RA) is a chronic progressive disease [1]. It's a most common autoimmune disorder associated with disability. In RA, synovial tissue is targeted by the immune system and the joint becomes red, warm, swollen and inflamed and causes pain, if left treated joint loses its shape and alignment causing permanent disability. Mostly RA is diagnosed in age >40 year and in women [2-5].

Most of the RA patients are associated of comorbid conditions. Comorbid conditions are defined as all secondary diseases other than the primary disease. Broadly there are 2 classes of comorbid conditions-those arising due to disease pathology and secondly those due to treatment drugs. Most common organs affected are eye, heart, lung and bones. Psychological disorders are also common in RA [6-8].

Comorbid conditions are well defined as multiple chronic conditions. Of important consideration are Depression, Asthma, CVD Events (MI, Stroke), Solid Malignancies, COPD, Infections, Osteoporosis [9] (Figure 1).

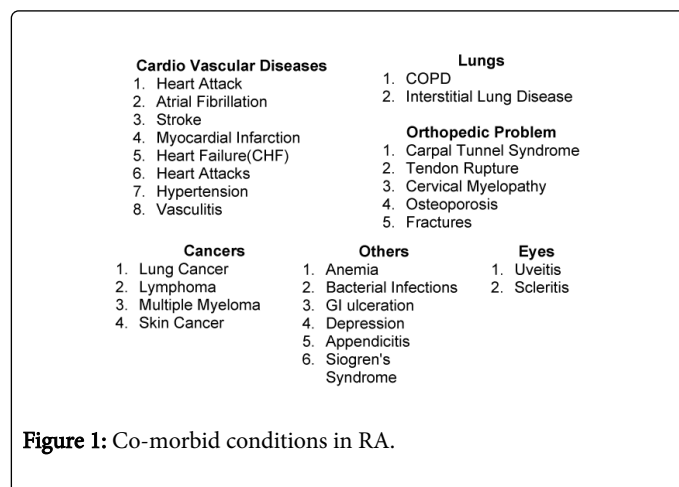


Figure 1: Co-morbid conditions in RA.

Comorbid abnormalities can be identified by detecting abnormalities in vital signs, such as elevated blood pressure, laboratory

test abnormalities, hyperglycemia, hyperlipidemia [10-12]. Systematic measurement of vital signs and laboratory testing both help in detecting comorbid conditions. Reverse pyramid approach of aggressive treatment has significantly improved prognosis in RA patients [13]. Close monitoring and regular adjustments of drug doses with the target of low DAS has significantly helped in improving outcomes in RA patients. Comorbidities should be screened and treated to improve quality of life in RA patients. Comorbidities cause functional impairment hence their active treatment should be a part of management plan of RA patients [14]. Possible causes of comorbidities in RA are DMARDS, smoking and chronic inflammation. EULAR recommendations include, all RA patients should be vaccinated annually with Influenza and every 5 years with pneumococcal vaccine and should also be evaluated for CVD risk annually [15]. Red flags that warrant CVD evaluation are RA disease duration of >10 years, presence of RF, presence of extra articular manifestations. Comorbid conditions should be evaluated and risk factors should be screened and active implementation should be done in daily clinical practice [16,17].

Coexisting risk for cardiovascular diseases (Hypertension, Diabetes, Dyslipidemia, Sudden death), risk factors for infections, vaccination status, risk factors for cancers like family history of cancers, skin cancers, IBD should be screened [18,19].

For cardiovascular diseases all risk factors should be evaluated annually. Antithrombotic drug should be given to all patients with thrombotic cardiovascular event [20]. Raised Blood Pressure >140/90, Raised blood sugar levels, Raised cholesterol levels are CVD risk factors of consideration and their management should be included in the treatment plan. Physical inactivity is considered as a main cause for hypertension, hyperglycaemia and dyslipidaemia, hence patients should be encouraged to join self-training programs to keep the joints healthy and simultaneously reverse cardiovascular risk factors. DMARDs, TNF i, CS, NSAIDS also increase comorbidities [21-24]. Hence judicious choice of treating drugs should be made by the Rheumatologists.

Optimal Monitoring Criteria [25]

For screening of infections (HBV/HCV)-annual dental exam is recommended, Patients should be updated on vaccination status for influenza, pneumococcus.

For cancer screening, DRE/PSA measurements should be performed for age group 50-75 years.

PSA<1 ng/ml=EVERY 3 YEARS EVALUATION

PSA 1-4 ng/ml=ANNUAL EVALUATION

PSA>4 ng/ml= MONITORED OPTIMALLY

- Breast cancer, Women 50-74 year, screening within 2 years of study visit,
 - Uterine cancer, screening within 3 years of study visit
 - Colon cancer, screening with FOBT AND colonoscopy, within 2 years before study visit.
 - Lung cancer, CXR after diagnosis of RA
1. Osteoporosis, DEXA scan should be done after onset of RA, vitamin D supplementation at the time of the study visit.
 2. Risk factors for cardiovascular diseases should be screened.
 3. Smoking, family history, hypertension, hypercholesterolemia, diabetes.
 4. Risk factors for cancer should be screened-family history of prostatic cancer, breast cancer, colon cancer, IBD, skin cancer should be part of evaluation.

Management of comorbidities

Cardiovascular diseases

Annual evaluation of blood pressure, total cholesterol, LDL, HDL, Blood glucose, serum creatinine should be done [26].

Antithrombotic drugs should be prescribed to patients with MI, stroke (Prophylactic Antithrombotic drug treatment [27].

Treatment of hypertension, hyperglycemia, hypercholesterol, dyslipidemia should be part of the plan [28].

Infectious diseases

Annual dental exam,

Annual vaccination for influenza,

Vaccination for pneumococcus every 5 years [29].

Cancers

Optimal screening for malignancies.

Osteoporosis

DEXA SCAN

VITAMIN D supplementation.

PCP's should assess multiple comorbidities and consider their management in RA treatment plan. Systematic evaluation of comorbidities in RA patients can significantly improve their outcomes. In daily practice, detection, management and prevention of comorbidities should be actively implemented [30,31].

Comorbid conditions, pain and disability significantly causes depression amongst RA patients hence depression should be screened and patients should be counselled appropriately.

Summary

Rheumatologists should consider periodic assessment of comorbidities while deciding management plan for RA patients. A collaborative approach between rheumatologist and PCP is warranted. This approach will reduce the prevalence of comorbidities among RA patients. Comorbidities in RA can be improved by early detection and management. A multidisciplinary team approach is encouraged to improve quality of life in RA patients. Management should be patient oriented rather than joint centered and should be a team work of all health care providers and specialist together.

Key Notes

- Optimal management of comorbidities should be considered by PCP.
- Cardiovascular risk factors should be aggressively screened in RA patients as compared to the general population.
- Traditional risk factors should be screened and managed to reduce CVD risk in RA patients.
- More severe RA disease has more severe CVD outcomes and hence RF, DAS scores can be used to assess CV mortality.
- RA patients with Traditional cardiovascular risk factors cautious use of NSAIDs and corticosteroids should be done
- Early aggressive treatment with MTX, TNFi can reduce the risk of CVE in RA patients.
- Smoking cessation should be encouraged.
- RA patients should be encouraged for physical activity, reduce their weight and BMI. Healthy BMI should be encouraged.
- Infections should be actively screened and RA patients should be updated in their vaccinations.
- Cancer screening should be done.
- Assess risk of osteoporosis and fractures.
- RA patients should be screened for depression.

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