



Gout and Menopause

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Gout is a disorder of uric acid metabolism and represents a heterogeneous group of diseases that include (1).

- An elevated serum urate concentration
- Recurrent attacks of acute arthritis in which Monosodium Urate (MSU) crystals are seen in synovial fluid
- Aggregates of MSU crystals (tophi) are deposited in & around joints leading to deformity & crippling
- Renal disease involving glomerular, tubular, interstitial tissue & blood vessels
- Uric acid nephrolithiasis

Hyperuricemia (1)

- An elevated level of urate in the blood > 7mg/dl in males and >6.5mg/dl in females.

Gout is an important cause of arthritis and the prevalence is on the increase. The incidence of gout varies in population with an overall prevalence of less than 1 to 15.3% (2). The Bhigwan COPCORD survey demonstrated low prevalence of Gout (0.12%) in rural India (3). In another Indian study gout prevalence was 2% (4). In study from Jammu only two case of gout were reported (5)

Gout once called the “disease of kings,” is also seen in women, especially after menopause. The male female ratio changes as estrogen status changes (Table-1)

Table-1 Male : Female Ratio

Normally M:F ratio is - 7:1 to 9:1(6)
 Women before menopause- F < M
 In ages younger than 65- M:F- 4:1 ratio
 In the older age groups > 65- M:F-3:1 ratio (7)
 After 80 years of age-F > M (6, 8)

It is largely because estrogenic hormones have a mild uricosuric effect; therefore, gout is unusual in

premenopausal women. There is higher renal clearance of urate in women possibly due to their higher plasma estrogen levels and significantly lower tubular urate postsecretory reabsorption (9). The declining use of HRT may further increase the frequency of gout in women at an earlier age (10)

Differences do exist in Pathogenesis of Gout (Men Vs Women) (9, 11, 12)

- Renal under excretion of uric acid appears to be more severe in female than in male patients with gout.
- These differences are significant and independent of the effects of age, renal insufficiency, alcoholism, or previous diuretic intake.

Table-2 Triggering Factors-Acute Attack remain same for both men and women (1)

Alcohol ingestion
Dietary excess of purine
Hemorrhage
Acute medical illness
Infections
Exercise
Trauma
Surgery
Drugs : cyclosporine, furosemide, ethambutol, aspirin (Low dose), pyrazinamide, thiazides, nicotinic acids etc

Differences also exist in Clinical Features (Men Vs Women) (9,11-13).

- In women, polyarticular/tophaceous disease is often the first manifestation of gout.
- A preceding recurrent mono-arthritis is found in joints other than the big toe.
- The duration of disease before tophi is shorter

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- The prevalence of tophi is higher and its localization is different in female than in male patients
- Tophi are usually indolent and show little surrounding inflammation.
- Gout in women has higher frequency of upper limb joint involvement in comparison to men
- The articular features of gout are usually similar

Definitive diagnosis is best established by (1).

- Aspiration of joint and identification of urate crystal
- The triad of acute monoarticular arthritis, hyperuricemia and dramatic response to colchicines
- Presence of 6 of the 12 clinical, laboratory and radiographic criteria by ACR15

Differences also exist in co-morbid conditions (11-13) (Men Vs Women)

Associated co-morbidities such as hypertension, ischemic heart diseases or chronic renal failure is frequent in women. This may be due to the fact that disturbance of the metabolism due to estrogen deficiency occurs during menopause leading to decrease in HDL and increase in LDL, promoting arteriosclerosis accompanied by an increase risk of myocardial infarction, angina, Hypertension and stroke. Renal underexcretion of uric acid appears to be more severe in female than in male patients with gout, which increases the possibility of co-morbid renal abnormalities in women with gout.

Treatment of Gout have the same goals as for any patient (14-16)

- Treat acute arthritic attack promptly
- Prevent recurrence of acute gouty arthritis
- Lower urate levels
- Prevent or reverse complications of the disease resulting from deposition of MSU crystal in joint, kidney, or other sites
- Prevent or reverse co-morbid conditions like obesity, Hypertension and triglyceridemia and renal complications

Pharmacologic management remains the mainstay of treatment. Acute attacks may be terminated with the use of nonsteroidal anti-inflammatory agents, colchicine or intra-articular injections of corticosteroids. Probenecid, sulfinpyrazone and allopurinol can be used to prevent recurrent attacks. New drugs such as rasburicase and febuxostat promise equal efficacy with a possibility of fewer adverse effects. Obesity, alcohol intake and certain foods and medications can contribute to hyperuricemia thus, they should be avoided.

The effect of exogenously administered oestrogens, produce a fall in plasma uric acid concentration through a uricosuric effect. There is no conclusive evidence available for the use of estrogen replacement for such cases; however it remains the potential area of research.

In conclusion an early identification, comprehensive care and treatment of comorbid conditions is important in management of gout in women during and after menopause to reduce the menace of dual problem.

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