

## Joint Pains in Perimenopause/ Menopause

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Life expectancy has increased over the time period and thus the proportion of elderly population is rapidly increasing in the developed as well as the developing world. Females live a longer life & are thus more prone to the onslaught of various chronic diseases including musculo-skeletal diseases. The prevalence of musculo-skeletal diseases is highest amongst the elderly and frequently causes disability, impairments, handicaps, job loss, dependency and great socioeconomic burden.

It is reported that the most common menopausal symptoms are somatic (65.9%), psychological (46.0%) & urogenital symptoms (30.5%), whereas musculoskeletal pain is reported in more than 50% of the women. Thus it is very important to address musculoskeletal issues of forty plus women. <sup>[1]</sup>

Presentation with joint pain in women is greatest between 45 and 55 years of age. Women are approximately twice as likely to have joint pain and stiffness around the time or after the menopause than their premenopausal counterparts when adjusted for age.

Prevalence of musculo-skeletal diseases is highest amongst the elderly and frequently causes, pain - 59%, disability-11%, impairments-5.6%, handicaps-5.6%, job loss-1.5%, dependency, great socioeconomic burden and affecting the quality of life and productivity. <sup>[2]</sup>

During the transition from peri-menopause to post-menopause, women largely suffer from various categories of musculo-skeletal diseases/pain, Nonspecific joint pains

arthralgia's and myalgia's; degenerative joint disease; and inflammatory joint pain/ diseases.

Presence of pain, swelling, erythema, warmth at the local site, morning stiffness for one hour raised inflammatory markers like ESR, CRP distinguish inflammatory from non-inflammatory (degenerative) joint diseases.

Further signs of degenerative or mechanical joint disease include the following: Bony overgrowth of the joints-osteophytes, DIP - Heberden nodes; PIP - Bouchard nodes, limited range of motion - intra-articular loose bodies, osteophyte formation, or subluxation; crepitus during active or passive range of motion; A palpable or audible grating sensation produced during motion; joint deformity. Different important causes of joint pains are menopause associated non-specific arthralgias (joint pains). Arthralgia's due to secondary causes (Vit D deficiency, hypothyroidism, anaemia, statins, liver and renal diseases, Infections like hepatitis B, C and HIV and some malignancies), Inflammatory arthritis like, rheumatoid arthritis, psoriatic arthritis, gout, pseudogout, polymyalgia rheumatica etc. Fibromyalgia, Degenerative diseases like osteoarthritis, regional pain syndromes: Neck pain, Adhesive capsulitis, Periarthritis and Low back are other causes of arthralgias/ pain during peri/menopause. Myalgia, tendonitis & bursitis are also common in this age group. <sup>[3-7]</sup>

**Clinical assessment of the menopausal patients with joint**

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pain by careful history is very essential and management of musculoskeletal diseases should start with proper and complete pain management, including accurate diagnosis. Various risk factors associated with musculoskeletal health which are modifiable need to be identified and corrected like - Alcohol Intake should be stopped, smoking should be ceased, low body mass index, low calcium intake need to be corrected by adequate calcium supplementation, Vitamin D Deficiency need to be treated adequately, insufficient Physical activity need to be corrected by increasing daily activity, frequent falls need to be prevented by muscle strengthening exercises and balance enhancing exercise, psychosocial & occupational factors also need to be addressed. Diagnostics test have case selective role only.

Non modifiable risk factors, like female gender, increasing age, family history, previous fracture, race or ethnicity, onset of menopause, prior hysterectomy, women beyond 5 years of menopause, with late menarche and those having early menopause, are all at higher risk of musculoskeletal disorders.

In general avoid stair climbing and prefer ramp or lift at the early age as 80% of women and men using stairs at early age have increase incidence of OA and non users and minimal users of stairs after 40 have 37% less incidence of OA and is followed by lag period of 7 years in comparison to early users. <sup>[8]</sup>

58% of women using high heels complain LBA, caused by increased lumbar lordosis. Wearing wide-heeled shoes have a 30% greater aggravation of OA. Walking with wide-heeled 22% Vs narrow-heeled shoes 26% chances of aggravation of OA. <sup>[8,9]</sup>

Prolonged squatting is a strong risk factor for tibiofemoral knee OA among elderly. Avoiding squatting can delay progression and reduce severity of OA among 14.4% elderly women. <sup>[10]</sup>

Indian Toilet Can aggravate pain and severity of OA Knee on continuous use. Western Toilet users have 23.3% less chance of acquiring OA with lag period of 5 years of OA in comparison to age matched counterparts using Indian toilet. <sup>[11]</sup>

lateral flexion and forward bending is associated with an increased risk of developing Low back pain. <sup>[12]</sup>

Bad posture may cause major scoliosis and may be related to pain intensity in patients with chronic low-back pain. 17% patient show improvement in LBA on maintaining naturally or assisted posture. <sup>[13]</sup>

Similarly physiotherapy plays very important role in such patients. Its goals are to reduce symptoms, improve function and minimize disability. It modifies their daily living and leisure (lifestyle) activities, use aids and equipment is lessened, decrease possibility of fall, decrease pain, improves muscle strength, social interaction improves, improves mental wellbeing, improves overall quality of life. <sup>[14]</sup>

Similarly, short-wave therapy is beneficial for relieving pain caused by knee osteoarthritis, low back ache, improve peri-arthritis and tendinopathy. <sup>[15-17]</sup>

Transcutaneous electrical nerve stimulation (TENS) therapy also is very popular approach that improves OA, improve peri-arthritis, improves LBA, improve neuropathic pain and regional /compartmental pain

USG used to treat deep tissue injuries by stimulating blood circulation and cell activity, with the aim of reducing pain and spasms, as well as speeding up healing.

The above description clearly indicates a great burden of musculo-skeletal disorders in women especially with their advancing age. Musculo-skeletal pain is more common in women and increases during and after menopause. Not all musculoskeletal pain is arthralgias and not all joint pain is arthritis. However, around the menopause women have increased prevalence of many degenerative and inflammatory diseases of joints. Thus, careful clinical assessment and appropriate investigations may be done in these patients to stratify them for the cause of arthralgias /Myalgias. Patient should be given tailored drug therapy and stress should also be given for exercise & balanced diet and regular follow up. All the peri/menopause patients may require Calcium and Vitamin D adequately and regularly for good bone and musculo-skeletal health. Women using HRT for some other cause

may get relief from musculo-skeletal pain in a few conditions of arthralgias but existing evidence does not recommend it as first line treatment for the same. Further, maintaining the healthy weight & effective management of Co morbidities will also go long way forward good musculo-skeletal health.

Thus, it is important to use a multi disciplinary approach for diagnosis & treatment of these disorders. Thrust should always be there for creating awareness, dissemination of preventive measures, early diagnosis and treatment with comprehensive care to prevent deformities, morbidity & mortality. Longevity of life with a healthy and better quality of life must be ensured in these patients

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#### Conflicts of Interest

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