ABSTRACT

Background

Mastalgia is a common breast disorder with highly variable prevalence estimates ranging from 41% to 79%. It is important to study its high prevalence and its potential to become benign to malignant.

The prevalence in young women is unknown, but it is more than 50% of women of reproductive age. Therefore, identifying and treating young women with mastalgia is of prime importance. To the best of our knowledge, there are no published studies on the prevalence of mastalgia with or without fibrocystic disease in young Indian women. Hence the present study was undertaken to estimate the prevalence of mastalgia among young Indian women.

Usage of drugs has shown to have several side effects. Yoga being one of the mind, body interventions have shown beneficial effects in reducing pain, stress and depression, thereby improving quality of life in many other conditions but there are no studies on yoga in Indian adults with mastalgia.

Objectives: (1) to look at the prevalence of mastalgia among nursing students,(2) to assess the benefits of integrated yoga in nursing students with mastalgia through an RCT.

Methods: The prevalence study was carried out on 748 young females between 18 to 29 years of age in residential nursing colleges of Bengaluru rural and Ramanagaram district, South India, by administering a specific breast history checklist prepared for the purpose.

For the interventional study, 80 young female nursing students from 2 residential nursing colleges of Bengaluru rural and Ramanagaram district, South India, who satisfied the selection criteria and consented to participate in the study were randomized into yoga or control groups( 40 each). yoga group practiced specific integrated yoga one hour in daily classes supervised by a post graduate yoga therapist, and the control( 6 days/week) in their hostel, for three months; control group practiced supervised walking for one hour daily for 3 months. They all continued the same practices on their own for the next three months with weekly follow up classes (one hour) and reporting through diary. All outcome measures were documented at 0, 3months and 6 months of the study. Data were analyzed using suitable statistical tests for significance of results on ‘R’ 3.1.0 software.
Results

The prevalence of mastalgia was 47.33% (354 out of 748), of which 88.70% (314) had cyclical mastalgia and 9.89% (35) had acyclic mastalgia. Students who had Low BMI had a higher risk for mastalgia as compared to those with normal BMI (RR of 1.063) or high BMI (RR = 1.685). Moderately stressed students were at higher (RR of 0.771) risk of mastalgia compared to those with low stress. Students with high stress levels were also at a higher risk (RR=0.787) as compared to those with low stress.

In the RCT, there was a significant reduction in weight and BMI from baseline to 3rd month with no further reduction in the 6th month. The pain scores on numerical Pain Analogue Scale (0-10), RM-ANOVA showed a significant reduction in mastalgia from the baseline to the end of 3 months (p<0.001). After 6 months follow up the time*group effect was also significant (p<0.001). Depression as measured by beck’s depression Inventory (BDI) showed significant differences between groups (p < 0.001, RM-ANOVA) with a better reduction in yoga (p<0.001 Post hoc paired sample t test) than the control group.

Quality of life as measured by WHOQOL-BREF also showed significant differences between groups (p<0.001) with better improvement in all domains of QoL in the yoga than the control group.

Premenstrual symptoms as secondary variables which showed a significant reduction in menstrual pain in the yoga group from 38 (100%) to 2 (5.26%) and also between group significance (p<0.0001) from the baseline to 3rd month. Menstrual cycle also got regularized in the yoga group from baseline 28 (73.68%) to 3rd month 38(100%) compared to control group.

Conclusion: The prevalence of mastalgia was 47.33% among 748 young females from 4 nursing colleges in India.

There was significantly better improvement in yoga than the control group in pain, depression, quality of life and other premenstrual symptoms at 3 and 6 months after the intervention. Pain due to mastalgia, depression scores, QOL improved significantly after yoga in nursing students with mastalgia. Yoga Therapy is an effective alternative therapy compared with physical activity may be recommended as a mind body intervention to alleviate mastalgia.

Keywords: Depression, Mastalgia, Nursing students, Quality of life, Yoga