

PREVALENCE OF CYCLIC MASTALGIA IN YOUNG COLLEGE GOING GIRLS

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Abstract-

Background: Cyclic mastalgia is defined as breast pain before the onset of the menstruation and subsides with the onset of the menstrual cycle. The symptoms of cyclic mastalgia can range from mild, moderate to severe. The pain can be experienced either unilaterally or bilaterally.

Objective The purpose of this study was to find the prevalence of cyclic mastalgia in young collage going girls with usage of following tools: NPRS, tenderness grading and sf 12 questionnaires for quality of life

Methods 51 girls were recruited for the study based on inclusion and exclusion criteria. The outcome measures used were numerical pain rating scale. Breasts were assessed for tenderness and graded accordingly .SF12 questionnaire was administered to the participants.

Results The result suggested that majority of women (57%) experienced cyclic mastalgia.

Conclusion The present cross-sectional study concluded that prevalence of cyclic mastalgia was 57%.

Key words- Cyclic mastalgia, premenstrual syndrome, Tenderness, quality of life

INTRODUCTION:

Cyclic mastalgia is defined as breast pain before the onset of the menstruation and subsides with the onset of the menstrual cycle. The symptoms of cyclic mastalgia can range from mild moderate to severe and are experienced few days before the menstrual cycle. The pain can be experienced either unilaterally or bilaterally and is mostly associated with the tenderness ^[1].

Women at the reproductive age experiences symptoms of cyclic mastalgia. It causes due to normal monthly changes in hormones. This pain can occur bilaterally. Treatment is not necessary to relieve pain it usually disappears at menopause.^[2] Cyclic mastalgia is a common problem that can be sufficiently severe to interfere with usual activities, and it has been associated with elevated mammography usage in young Women. Certain degree of anxiety causes because of cyclic mastalgia which leads to repeated investigation and some degree disturb a Woman's life style. More than half of the female population reported this during reproductive years ^[4]

[1] There are three categories of Cyclic Mastalgia, according to the Cardiff Mastalgia Clinic as follows(1)Cyclic mastalgia (associated with the menstrual cycle): The pain is typically experienced during the luteal phase of menstrual cycle and it is associated with the ovulatory phase of the menstrual cycle. The presentation of the symptoms can be different in individuals, and the quality of the pain is mostly reported to be as sharp, shooting, stabbing, heaviness, aching, and throbbing. The pain is accompanied by tenderness of the breasts to deep palpation.(2)Noncyclic mastalgia (not associated with the menstrual cycle): This pain is not dependent to the menstruation, and there is no specific pattern in which the condition presents. Pain is often well localized to a particular region of the breast but it is not felt all over the breasts. The pain is often felt over both sides, and quality of pain is reported to be heavy, aching, fearful, burning, pulling, stabbing, pinching and the breasts are tender on palpation (3)Chest wall pain: This pain is not associated with the menstrual cycle, and it has no specific pattern. It can be seen in all age groups and can occur at any time of the age. The pain is often unilateral as in rib pain, muscular pain, operative injury, or referred pain. ^[1]

Mastalgia can be associated with premenstrual syndrome, breast cancer, fibrocystic breast disease, psychological disturbance. This variation in the prevalence of cyclic mastalgia is independent on personal and social characteristics, but also is dependant to various determinant factors such as smoking, age, social, physical activities, and even psychological disturbance, that should be identified to proper management of this phenomenon in each population. Beside, because of its probable association with breast cancer, identified risk factor of cyclic mastalgia is necessary. ^[2]

The etiology of CM is not well known. There are many factors to expose breast pain in women reproductive lives. Some studies have shown that increase oestrogen level and decreased progesterone level are associated with mastalgia. It is evident from past studies that breast pain is associated with pregnancy, menopause, oral contraceptive pill, and HRT (hormonal replacement therapy).Some studies have shown hyper activeness of prolactin stimulation by TRH (thyrotropin releasinghormone), however others suggested elevated level of lipid metabolism is contributing factor for breast pain. Another study has shown that breast pain during the luteal phase of the menstrual period may be due to higher serum oestrogen to progesterone ratio. The exact etiology and mechanism of mastalgia are not well established, but according to few theories, cyclic mastalgia occurs due to the hormonal irregularities such as increased estrogen secretion from the ovaries, decreased levels of progesterone, and increased levels of prolactin. Structured Exercise Programme is effective in reducing pain, tenderness and improving Quality Of Life in adult females with cyclic mastalgia which includes Pectoral stretching, Retractor strengthening (wall push-ups), Trunk mobility exercises (trunk flexion, extension, rotation and lateral flexion) and Breathing exercises

Need for study

The realization of benign breast disorders may develop during adolescence but may not be diagnosed till adulthood. The prevalence of cyclic mastalgia is more than 50% in women of reproductive age. Clinical follow up studies have reported varied risk ratios of benign breast diseases developing into breast cancer. Therefore, prime importance is to identifying and treating young women with mastalgia. To the best of our knowledge, there is dearth of literature in the field of cyclic mastalgia and its effects on women

Aim of the study

The present study was undertaken to estimate the prevalence of cyclic mastalgia among young collage going girls in pune city

Methodology

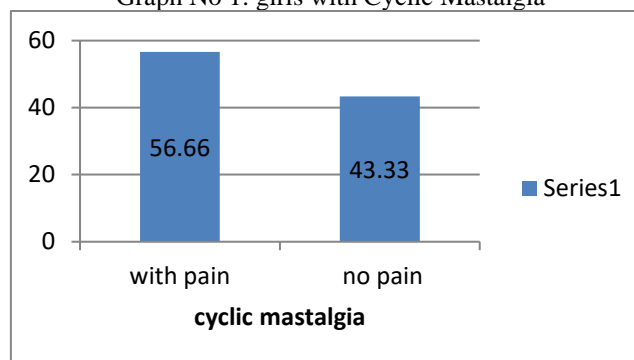
The study design was an cross sectional study design. The target population was females aged 18-30 years. The sample size for the present study was 90. The sampling design used was random sampling and sampling technique was convenience sampling. Female participants with the following were included in the study : (1)Age between 18-30 year,(2)Nulliparous females,(3)Willing to participate in the study . Females excluded from the study were (1)Pain arising from the chest wall, (2) Individuals on hormonal therapy , (3) On medications for mastalgia , (4) Breast feeding . Outcome measures for this study was NPRS, tenderness and quality of life score (sf12 questionnaire)

Approval for the study was obtained from ethical committee of Tilak Maharashtra Vidyapeeth’s College of physiotherapy, Pune. Participants were recruited based on the inclusion and exclusion criteria. A written informed consent was obtained from the study participant .90 girls were screened for the study but 51 girls were recruited for this present study. Demographic data included age when attend menarche, menstruation cycle’s regularity, weight, height, and body mass index (BMI). The numerical pain rating scale (NPRS) was administered to the participate to determine the intensity of the breast pain and was explained to them in their vernacular languages, and NPRS score was recorded. Breasts were assessed for tenderness and graded accordingly. The participants were explained the grades in their local language and in term mild, moderate, severe according to grade specification SF12questionnaire was administered to the participants, and score were recorded

RESULT AND STATISTICAL ANALYSIS

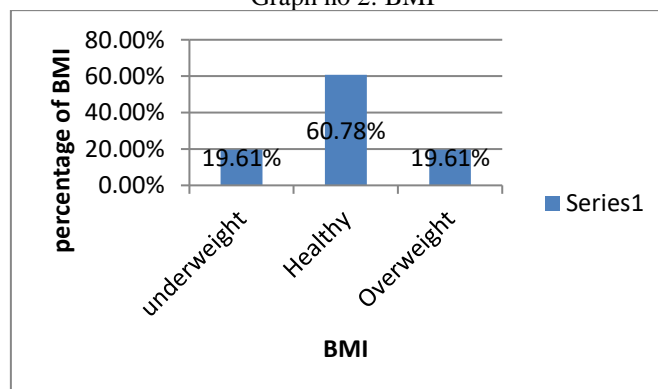
A total of ninety girls agreed to participate in this present study but out of 90 only 51 girls had breast pain during menstruation, so this present study was recruited on those 51 girls.

Graph No 1: girls with Cyclic Mastalgia



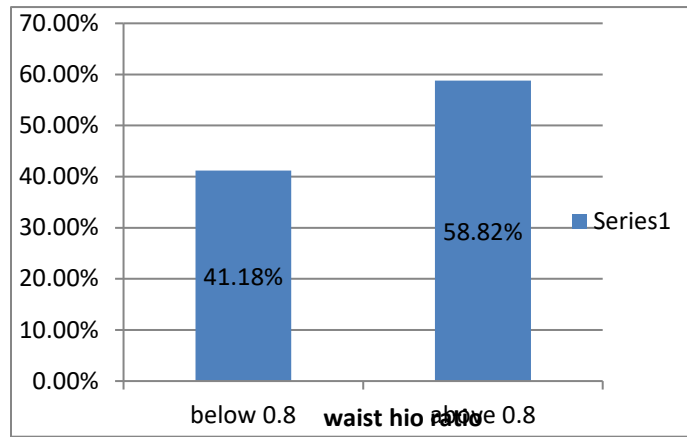
The presence of cyclic mastalgia was reported 56.66% of studied women

Graph no 2: BMI



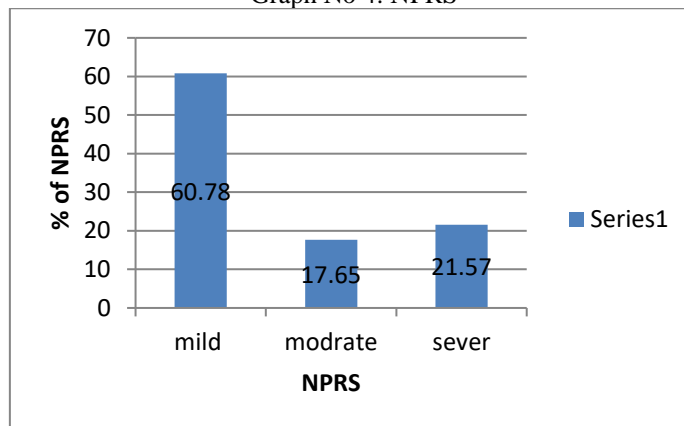
Correlation between BMI and NPRS is significant

Graph NO 3: Waist Hip Ratio



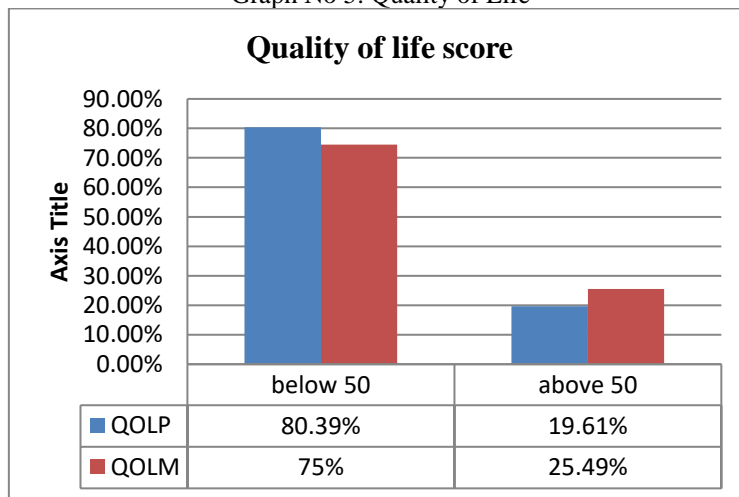
Study found significant correlation between waist hip ratio and tenderness

Graph No 4: NPRS

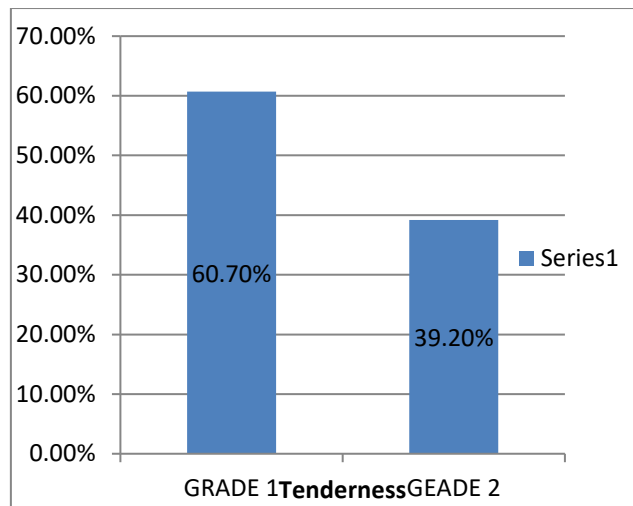


There was significant correlation between NPRS and Quality of life

Graph No 5: Quality of Life

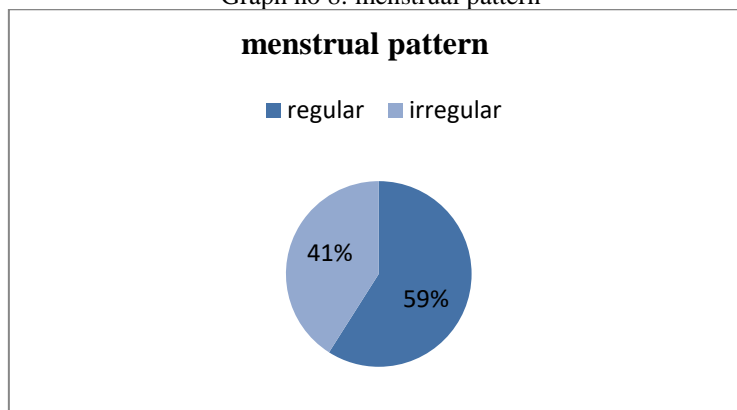


Graph No 7: Tenderness



Tenderness shows positive correlation with BMI and waist hip ratio

Graph no 8: menstrual pattern



Discussion

The motive of this study was to find out prevalence of cyclic mastalgia in young collage going girls The present study estimates the Prevalence of cyclic mastalgia in young collage going girls, where 56.66% girls had CM and 43.33% had no pain during menstruation cycle.

Cyclic mastalgia is a common problem, sometimes severe enough to interfere with usual activities, and it is associated with high use of mammography among young women. This disorder merits further biopsychosocial investigation. Although mastalgia is common, the impact on everyday living should not be underestimated. Ader and Shriver [7] reported that 30% of premenstrual women suffered from cyclical mastalgia lasting for more than 5 days a month, which was of sufficient severity to interfere with sexual, physical, social and work-related activities. Cyclic breast pain occurs in both breasts, sometimes more one-sided than another. It is often felt more in the lateral aspect where there is more breast tissue. It may differ from month to month but always gets worse before a period and then lets up with menstruation [4]

In the present study, prevalence of mastalgia is higher (56.66%) as compared to study by Sukanya Raghunath showed that (47.33%) CM with sample size of 748 within the age range of 18-29 years, this is probably due to sedentary life style of our participants. In this study included assessment of pain score by using NPRS. The mean NPRS score was 4.31, in which, there were 31 girls with mild breast pain (60.78%), 9 girls with moderate pain (17.65) and 11 girls with severe breast pain (21.57%). More recently, Barros et al.studied on breast pain chart which was more effective in mild pain cases, it still helped over 50% of those women with severe pain mastalgia. Prospective daily recording of breast pain can be of great value to both the patient and doctor, providing reliable data on the severity and duration of symptoms. It also assists in deciding whether the pain is cyclical or not in equivocal cases. Scales such as the Cardiff Breast Pain Chart allow patients to accurately review their symptoms, many deciding that the pain is not of sufficient impairment to warrant side effects of possible treatment. After several months of such analysis, up to one fifth of patients will find spontaneous symptom relief. And this study showed 70.2% of success rate with reassurance. In this study body mass index were calculated, according to BMI calculation there were 10 girls of underweight (19.61%), 31 girls were healthy (60.78) and 10 girls were overweight (19.61%) In the present study, out of 51 girls there were 21 girls who had waist hip ratio under 0.8 (41.18%) and 30 girls who had ratio above 0.8 (58.82%). The QOL was also assessed in our study using SF-12 questionnaire, The QOL questionnaire consists of eight domains of physical fitness, in the present study, individual components such as physical functioning, physical health, emotional problems, energy/fatigue, emotional well-being, social functioning, pain scores, and general health were assessed and were found to be affected due to the cyclic mastalgia . There were 41 girls with below 50 quality of life physical score(80.39%) and 10 girls with above 50 quality of life physical score (19.61%),which shows 80.39% girls has physical condition ,girls had quality of life mental score less than 50 (74.51%) and 19 girls had score above 5 (25.49%),which shows 74.51% girls were in clinical depression. The breast tenderness were also assessed in this present study by

using grades in which 32 girls with mild tenderness (60.70%) and 19 girls with moderate tenderness (39.20%) In this present study out of 51 girls 21 with regular menstrual pattern (59%) and 21 with irregular menstrual pattern (41%)

Correlation between BMI and cyclic mastalgia was assessed in our study; the results showed statistically significant between BMI and cyclic mastalgia ($p = 0.001$). This can be positively correlated to a study conducted on young Indian females aged 18–29 years with complaints of cyclic mastalgia. Regarding BMI in our study, the mean BMI was (20.8 ± 3.71) ranged from (18-30), while Olfati et al. 2009 who study the relationship between BMI and mastalgia on 102 patients in Iran, stated that the mean BMI was (28.81 ± 3.22) and it concluded that patient with abnormal BMI had mastalgia than those with normal BMI. [8] This is probably due to having sedentary life style. Study also found positive correlation between waist hip ratio and tenderness. The present study assessed the pain score for breast by using NPRS which shows significant correlation between quality of life. Breast pain can be reduced according to study of sumruddhi barve the exercise intervention proved to be effective in decreasing pain as the literature suggests that when regular physical activity or exercises were performed, it enhances the return of blood to the heart and improves the blood circulation to the entire body. Another reason is that when exercises are performed, it helps in the release of prostaglandins into the body which in turn reduces or prevents pain and the associated discomfort.^[1]

The present study focussed on women in the age group of 18–29 years to determine the prevalence of mastalgia among young women population as there is a need to educate them and bring awareness about the importance of breast self-examination (BSE) because it maybe a risk factors for breast cancer, thus it enlightened the females regarding the importance of mastalgia Limitations of this study are that a study was conducted tenderness grades by using palpation method but girls were not comfortable to assess their breasts and sample size was less. Future studies on adolescent and young women can be planned for different ethnic groups. Assessment may include psychological scale to measure stress. The study created a database regarding the prevalence of cyclic mastalgia, and it maybe a risk factors for breast cancer, thus it enlightened the females regarding the importance of mastalgia

CONCLUSION

The present cross-sectional study concluded that out of 90 participants, 51 i.e. 57% females showed symptoms of cyclic mastalgia and 39 i.e. 43% did not show any symptoms of cyclic mastalgia. BMI and waist hip ratio were found significantly correlated ($P = 0.001$ and $P = 0.001$) with tenderness. Pain and quality of life is significantly correlated with each other.

CONFLICTS OF INTEREST

There are no conflicts of interest

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