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Original Research Article

Osteoporosis awareness among Indian women

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ABSTRACT

Background: Osteoporosis is a major public health problem globally. Despite being a common problem, majority of the women are unaware of it. Awareness varies widely according to the level of education. In present study we have tried to assess the awareness of female patients attending the hospital.

Methods: 100 female patients attending gynae OPD were asked to fill a simple questionnaire after taking informed consent. Age, parity, address, and level of education were noted. Data was analysed statistically by SPSS and level of significance was calculated by Chi square test.

Results: Majority of these women belonged to rural background (85%) and around 64% of the women were educated (primary schooling and beyond). About 46% of the women had some awareness regarding osteoporosis and its prevention. Majority (54%) were unaware. Level of awareness varied significantly with level of education ($p=0.006$). Urban dwellers were more aware about osteoporosis when compared to rural women ($p=0.004$).

Conclusions: Overall awareness about osteoporosis is low and here is a need to have community based awareness campaigns regarding osteoporosis. Educational programmes need to target on women coming from rural background and those with low education.

Keywords: Awareness, Indian women, Osteoporosis

INTRODUCTION

Osteoporosis is a major public health problem globally. It is defined as a skeletal disorder characterized by low bone strength, leading to an increased risk of fragility fractures.¹ Maximum bone loss occurs in women during perimenopause and menopause. As the prevalence of osteoporosis increases with age, it is estimated that up to 70% of women over the age 80 years have osteoporosis.² Young Asian women are more susceptible to have bone mineral loss when compared to their western counterparts. It is estimated that around half of osteoporosis cases will occur in Asia by 2050.³

Dietary deficiency of calcium and low vitamin D levels (secondary to low sun exposure, inadequate dietary vitamin D intake, lack of food fortification with vitamin D, pigmented skin, environmental pollution, and traditional dress code) are most important causes of osteoporosis. Around 80% of urban Indian population has low vitamin D levels.⁴ Other risk factors for osteoporosis include increasing age, female sex, Asian origin, low BMI, malnutrition, drugs like corticosteroids and chronic illness.

Preventive strategies include good diet, calcium and vitamin D supplementation and exercise. Calcium and vitamin D supplements appear to be effective in

preventing bone loss in women, particularly in postmenopausal and with low habitual Ca intake (<400mg/day).⁵⁻⁷ Despite being a common problem, majority of the women are unaware of it. Awareness varies widely according to the level of education. About 10-15% of urban population in India is aware of osteoporosis. Awareness is much lower in rural dwellers. One study reveals that most of the people get information about osteoporosis through the television and radio (55%) when compared to doctors (approximately 20%).⁸ In present study we have tried to assess the awareness of female patients attending the hospital.

METHODS

After taking the ethical clearance, around 100 female patients attending the gynae OPD were enrolled for the study. Informed consent was taken. A simple questionnaire was filled on the spot by the patients. The questions covered were about the risk factors (female sex, increasing age, calcium deficiency, poor sunlight exposure, sedentary life style) and preventive measures (dietary sources of calcium, exercise). Age, parity, address, and level of education were noted. Data was analysed statistically by SPSS and level of significance was calculated by Chi square test.

RESULTS

In this study, 100 female patients were enrolled. Majority of the women belonged to the age group of 25-35 years (40%). Majority of these women belonged to rural background (85%) and around 64% of the women were educated (primary schooling and beyond). Demographic data is presented in Table 1.

Table 1: Demographic data.

Parameters	n=100
Age	
<25	16
25-34 years	40
35-44 years	24
≥45 years	20
Parity	
P0	10
P1	16
≥P2	74
Education	
Educated	64
Uneducated	36
Residence	
Urban	15
Rural	85

About 46% of the women had some awareness regarding osteoporosis and its prevention. Majority (54%) were unaware. Level of awareness varied significantly with level of education ($p=0.006$). Urban dwellers were more

aware about osteoporosis when compared to rural women ($p=0.004$).

Table 2: Relationship between level of education and awareness of osteoporosis.

Parameters	Aware	Unaware
Educated	36	28
Uneducated	10	26
Total	46	54
$p=0.006$		

Table 3: Relationship between area of residence and awareness of osteoporosis.

Parameters	Aware	Unaware
Urban	12	3
Rural	34	51
Total	46	54
$p=0.004$		

DISCUSSION

In this study level of awareness on osteoporosis was low (46%). Rural women are more ignorant about the condition (40% were aware). Educated women have more awareness when compared to uneducated women (56.25% vs 27.78%). In a study on Turkish women, 60.8% had heard of and 44.9% had heard the correct definition for osteoporosis. Awareness of osteoporosis was high in younger and high educated women ($p<0.001$). Television was the main source of knowledge.⁹ Similar finding were reported by study on middle aged and elderly women in Singapore.¹⁰

Riaz et al also reported higher knowledge about osteoporosis in educated Pakistani women.¹¹ Another study also showed significantly lower awareness in women (aged 16-49 years) belonging to lower socioeconomic and less educated group. Women staying in urban areas had better knowledge about osteoporosis.¹² This was similar to present finding.

As the incidence of osteoporosis increases with age, there is a need to increase awareness among the women of reproductive age groups through community based educational programmes. These programmes must emphasize on risk factors and preventive measures of osteoporosis. This in long term may help in reducing the incidence of osteoporosis. Studies have shown considerable improvement in osteoporosis awareness post educational strategies.^{13,14} Healthcare workers must focus more on providing information to rural women.

CONCLUSION

Rural women have poor knowledge about osteoporosis. Level of education also influences the level of awareness. Knowing the characteristics of the women will help in

planning of community programmes. This in long term may help in reducing incidence of osteoporosis.

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