International Journal of Advanced Research and Development
ISSN: 2455-4030
Impact Factor: RJIF 5.24
www.advancedjournal.com
Volume 2; Issue 6; November 2017; Page No. 209-211

Socio-medical characteristics of osteoporosis among postmenopausal women in Kashmir

[1] Umera Baba, [2] Nilofer Khan, [3] Dr. Imtiyaz Ali
[1] Research Scholar, Institute of Home Science, University of Kashmir, Srinagar, Jammu and Kashmir, India
[2] Sr. Professor, Institute of Home Science, University of Kashmir, Srinagar, Jammu and Kashmir, India
[3] Ex-Professor/ Professor & Head of the Department, Community Medicine, SKIMS, Srinagar, Jammu and Kashmir, India

Abstract
The present study was undertaken to access socio-medical characteristics of osteoporosis status among postmenopausal women of Kashmir. The total number of 380 postmenopausal women above 45 years from randomly selected four districts i.e. Srinagar, Ganderbal, Anantnag and Kupwara were covered. A scientifically self-designed oral questionnaire as per requirement was used for collecting data in the present study. The study explored that postmenopausal osteoporosis is determined by various socio-medical factors and remains a disease mainly of women in 45-55 years age group, belonging to urban habitat, with illiterate background and poor economic status who have been married at young age and end up with high parity.

Keywords: postmenopausal, osteoporosis, socio-medical factors, parity

Introduction
Women's health has been a concern throughout the world for many decades. Since recent trends suggest an increase in their number and life expectancy, the focus of women's health researchers and health policy planners has also shifted towards Postmenopausal women. (Mishra, S.K. 2011) [5]. Modern medicine has significantly prolonged human life. All women will make transition to menopause if they live long enough. Menopause is the depletion of ovarian function followed by cessation of menstruation and is usually diagnosed when a woman who do not have menstrual period for 12 consecutive months without any other biological or physiological cause. (Nusrat. N, *et al.* 2008) [7]. Postmenopausal osteoporosis remains an important health complication in women. The first report of a link between ovarian hormone insufficiency and increased bone loss came in 1940, when studies by revealed that almost all of a cohort of patients with osteoporotic fractures were also postmenopausal and that women who had had their ovaries removed were disproportionately represented (Albright, F. 1940) [2]. Osteoporosis is a syndrome which is composed of a complex, diverse group of disorders with multifactorial causes attributable to variables of age, sex, race, heredity, and environment. Although there is considerable confusion about the exact definition of osteoporosis, a clinically appropriate meaning is that the loss of bone (or osteopenia) has progressed to the point that specific parts of the skeleton are so fragile that they have an enhanced susceptibility to, or the actual presence of, fractures (Kanis, J.A. 1990) [4]. The worldwide incidence of osteopenia and osteoporosis is increasing and so is true about Jammu and Kashmir. Studies have estimated that after the age of 60 years, there is an almost 100 % incidence of either osteopenia or osteoporosis. In the age-group of 40-65 years, the incidence of osteopenia has been reported to be 34 % and osteoporosis is 8% (Sami R, Haroon Q and Gupta S 2015) [18].

Methodology
The present study was carried out in four districts of Kashmir division i.e. Srinagar, Ganderbal, Anantnag and Kupwara selected randomly for the purpose. A total number of 380 postmenopausal women above the age of 45 years from the above mentioned districts of Kashmir were covered. Out of the total sample, Postmenopausal osteoporosis was labelled in women only when such women had confirmed osteoporosis (by symptomatology, X-Ray finding, BMD or from biochemical investigations) as per the relevant medical record. An oral questionnaire scientifically designed after a thorough and detailed study of the problem and related review of literature has been used for collecting data in the present study. The data thus collected was tabled, analysed and interpreted as per the needs of the study.

Results
Socio-medical characteristics
The study includes 380 cases, of which 162 (42.63%) fall in the age group of 45-50 years, 84 (22.10%) in the age group of 50-55 years, 68 (17.89%) in the age group of 55-60 years where as 66 (17.36%) were above 60 years of age. Almost 39.4% respondents were from rural area and the remaining 60.5% were from urban area. In terms of literacy, almost 87 (22.8%) cases were literate whereas 293 (77.1%) were illiterate. As far as the marital status of respondents is concerned, a total of 266 cases (70.0%) were married, 4 (1.05%) were unmarried, 8 (2.10%) were divorced and 102 (26.84%) were widows. The monthly income from all the sources of 240 respondents (63.15%) was below Rs 10,000 per month that of 95 respondents (25.0%) was between Rs 10,000-20,000 per month and of 45 respondents (11.8%) was above Rs 20,000 per month. Low socio economic status is probably the most powerful single contributor for making

menopause a worst stage. While income determines purchasing power of an individual that in turn determines life style and health status. Low socio-economic status is associated with vitamin D (25-OHD) insufficiency, higher values of PTH, and lower values of Bone Mineral Density (BMD) at the lumber spine and a higher prevalence of fragility fractures, both vertebral and non-vertebral. Both vitamin D insufficiency and elevated PTH were consistently related to poverty and osteoporotic fractures (Navarro. MC *et al*. 2013) [6].

Table 1: Distribution of respondents as per socio-medical characteristics

Variables	Number	Percentage
Age		
45-50	162	42.63
50-55	84	22.10
55-60	68	17.89
Above 60	66	17.36
Habitation(Residence)		
a) Rural	150	39.4
b) Urban	230	60.5
Educational Status		
Literate	87	22.8
Illiterate	293	77.1
Marital Status		
Married	266	70
Unmarried	4	1.05
Divorced	8	2.10
Widow	102	26.84
Income (Rs/month)		
a) below 10,000	240	63.15
b) 10,000-20,000	95	25
c) above 20,000	45	11.8

Age at marriage and number of children

While majority of the respondents i.e. 376 respondents were married, among which 181 (48.13%) were married below the age of 20 years where as 195 (51.86%) were married above the age of 20 years and the remaining 4 (1.05%) respondents were unmarried. Age at marriage is important factor which influences women's health as it determines reproductive span of women. Thus, besides reflecting on overall nutritional status it affects bone health of women that could become worse around menopause (Carda, S. N. 1998) [3]. In terms of number of children, majority i.e. 83 (21.84%) respondents had 1 or 2 children, 281 (73.94%) had more than 2 children and 16 (4.21%) had none. Each pregnancy in women adds stress on various reserves of nutrients in mother and unless replenished through diet and supplements quickly can affect various tissues and organs with bones being no exception. Mothers with history of high parity therefore remain always at risk of osteoporosis especially around menopause (Allali. F *et al*. 2007) [1].

Table 2: Distribution of respondents as per age at marriage and number of children

Variables	Number	Percentage
Age at Marriage		
Below 20's	181	48.13
Above 20's	195	51.86
No. of Children		
1and2	83	21.84
More than 2	281	73.94
None	16	4.21

Age at menopause and type of menopause

The average woman is postmenopausal for one third of her life, the incidence of certain conditions (e.g., coronary artery disease, diabetes, breast cancer, cervical cancer, and osteoporosis) increases after menopause (Syamala T S and Sivakami M 2005) [10]. The present study reveals that majority of the women i.e. 50.26% reporting postmenopausal osteoporosis were between the age of 40-45 years with a significant decrease in the percent number of women suffering Postmenopausal osteoporosis who had menopause at a later age i.e. 45-50 years (33.42%) or 50-55 years (16.31%). Menopause, whether natural or surgical is one of the established risk factors for osteoporosis. Surgical menopause however, differs from natural menopause owing to the abrupt cessation of estrogen cessation (United States Census Bureau. Population estimates -Sex by Age 2008). The present study reveals that the majority of women with natural menopause i.e. 308 (81.05%) suffered postmenopausal osteoporosis as compared to 72 (18.94%) women whose attained menopause artificially (uterus surgically removed). One could assume that artificially attained menopause is often taken care of by medicines (like hormone replacement therapy and nutritional supplements) to prevent its immediate impact and hence less chance of osteoporosis.

Table 3: Distribution of respondents as per age at menopause and type of menopause

Variables	Number	Percentage
Age at Menopause		
Below 45 yrs.	191	50.26
45 yrs. - 50 years	127	33.42
Above 50 years	62	16.31
Type of menopause		
Natural (Physiological)	308	81.05
Artificial (surgical Removal of Uterus)	72	18.94

Relevant medical history and access to health services

Family history is a strong genetic component to osteoporosis, suggesting that a positive family history for this disease may be an important clinical risk factor. The present study reveals that fewer women 48 (12.6%) reporting of having family history of osteoporosis, 6 (1.57%) had a family history of fractures, 29 (7.63%) had a previous history of fractures and 159 (41.84%) suffered from chronic disorders. According to Soroko.SB (1994) the effect of parental history of osteoporosis on BMD has a significant relation between

paternal (but not maternal) history and lumbar spine BMD in both sexes and a significant relation between maternal (but not paternal) history and hip BMD only in men. Majority of respondents i.e. 368 (98.8%) out of 380 cases had an easy access to health facilities. Expectedly having access to health facilities and basic investigations or advanced assessment of bone status like DXA bone scan ensures better treatment facilities to patients and therefore potential to reduce the burden of osteoporosis.

Table 4: Distribution of respondents as per relevant medical history and access to health services

Variables	Number	Percentage
Relevant Medical History in Osteoporosis		
Family history of osteoporosis	48	12.6
Family history of fractures	6	1.57
Previous history of fractures	29	7.63
Chronic Disorders	159	41.84
Access to health Facilities	368	96.8

Conclusion

Based on our present study findings from postmenopausal osteoporotic women of Kashmir division and subsequent analysis it can be inferred that Postmenopausal osteoporosis is determined by various socio-medical factors and remains a disease mainly of women in 45-55 years age group, belonging to urban habitat, with illiterate background and poor economic status who have been married at young age and end up with high parity. The present status of the studied population highlights need of further in depth study.

References

1. Allali F, Maaroufi H, Aichaoui SE[a], Khazani H, Saoud B, Benyahya B, Abouqal R, Hassouni NH. Influence of parity on bone mineral density and peripheral fracture risk in Moroccan postmenopausal women Maturitas. 2007; 57(4):392-398.
2. Albright F, Bloomberg F, Smith PH. Postmenopausal Osteoporosis, Transactions of the Associationof American Physicians, 1940; 55:298-305.
3. Carda SN, Bilge SA, Öztürk TN, Oya G, Ece O, Hamiyet B. The menopausal age, related factors and climacteric symptoms in Turkish women. Maturitas. 1998; 30(1):37-40.
4. Kanis JA. Editorial: Osteoporosis and Osteopenia. Journal of Bone Mineral Research. 1990; 5(3):209-211
5. Mishra SK. Menopausal transition and postmenopausal health problems: a review on its bio-cultural perspectives. Health. 2011; 3(4):233-237.
6. Navarro MDC, Saavedra P, Jódar E, Gómez de Tejada M, Mirallave A, Sosa M. Osteoporosis and metabolic syndrome according to socio- economic status, contribution of PTH, vitamin D and body weight: The Canarian Osteoporosis Poverty Study COPS. Clinical endocrinology. 2013; 78(5):681-686.
7. Nusrat N, Nishat Z, Gulfareen H, Aftab M, Asia N. Knowledge, attitude and experience on menopause. Journal of Ayub Medical College Abbottabad, 2008; 20(1).
8. Sami R, Haroon Q, Gupta S. Prevalence of Osteopenia and Osteoporosis in female Kashmiri population above 40 years of Age. Journal of Dental and Medical Sciences. 2015; 14(8):32-34
9. Soroko SB, Barrett-Connor E, Edelstein SL, Kritz-Silverstein D. Family history of osteoporosis and bone mineral density at the axial skeleton: The rancho bernardo study J Bone Miner Res, 1994; 9:761-769.
10. Syamala TS, Sivakami M. Menopause: an emerging issue in India. Economic and political weekly, 2005, 4923-4930.
11. United States Census Bureau. Population estimates Sex by Age 2008. http://factfinder2.census.gov. http:// factfinder2.census.gov.