

Original Article

Early Menopause with Poor Nutrition and Tobacco Chuttas Smoking: A Prospective Study in North Coastal Andhra Pradesh

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Abstract

Background: Aging in women and their quality of life is an important issue in India. Menopause is one of the major turning point in a women's life. Several studies have been conducted on the factors influencing early natural menopause. However, there is a minimal information on the effect of chuttas smoking and poor nutrition. Thus, a concrete study has been conducted in the department of Gynaecology and Orthopaedics of King George Hospital and Gosha Mahal Women's Hospital in Visakhapatnam, Andhra Pradesh. **Materials and Methods:** A prospective study among 400 women aged 36-58 years, who had reached their menopause was conducted. A case sheet for tracing out the clinical symptoms, signs and physical findings was designed. Examination findings of these women were written into the designed case sheets. The study was supported by few Gynaecologists and Clinicians. A distributed methodology of approach has been adopted into the study where women subjects from different regions of North Coastal Andhra Pradesh were taken. Factors like religion, occupation were also taken into account but the emphasis was laid on the Nutritional status and Chuttas smoking. **Results:** Median age of menopause was observed to be 48 years. 44% of women attained menopause around 46-49 years. The minimum age was observed to be 38 years. A P value of <0.01 was considered as statistically significant. Around 50% of women were moderately nourished and attained menopause later than ill-nourished women (20%) who had earlier menopause and it was statistically significant as $P < 0.01$. 15% of the women patients are chuttas smokers and 75 % of these women attained early menopause. It is striking to observe that maximum age of menopause among the smokers is 42 years when compared with non-smokers whose maximum age of menopause is 52 years. **Conclusions:** It is clearly evident that Poor nutritional status and Chuttas smoking play a significant role in attainment of early natural menopause. The association between early onset of menopause in relation to poor nutrition and chuttas smoking indicates the need for establishment of counselling centres and health education by the Government.

Keywords: Menopause, Tobacco Chuttas, Nutrition, Smoking.

Introduction

Menopause is the point in time when there is a permanent cessation of menstruation because of loss of ovarian activity. It takes 12 months of amenorrhoea to confirm that menopause has set in. Menopause usually ceases between ages of 50 and 52 years.

In recent years, menopause has become an important issue.^[1] It normally occurs between 45 to 52 years of age and one of the major turning points in a women's life. Approaching menopause involves a process of change and every woman experiences this transition in unique and individual ways. Some women interpret menopause as being a normal stage that will eventually pass by itself without any medical intervention. However, some women dread reaching menopause. They feel it as an affliction, ailment that will make them unattractive, lonely, helpless and useless. They may mourn for the loss of their fertility and youth. Many women discover that menopause gives them new lease of life physically, emotionally, sexually and spiritually. Some are enthusiastic about becoming free of their concerns about pregnancy and menstruation. Tobacco Chuttas smoking is one of the

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factors accelerating the process of human senescence. Smoking can contribute to early menopause due to its anti-estrogen effects. Few studies [2-6] have indicated that long-term or regular smokers are likely to experience menopause sooner than the average age of occurrence. Doctors have long suspected a link between cigarettes and fertility problems with studies from various countries revealing that women who smoke are almost 30 per cent less fertile than non-smokers, and three times more likely to take longer than a year to get pregnant.

Smokers also routinely go through menopause two to three years earlier. Several studies have been conducted on the factors influencing early natural menopause namely psychological distress, hot flushes etc. However, there is a minimal information on the effect of chuttas smoking and poor nutrition. Thus a prospective study has been conducted with an objective to study the effect of poor nutrition and chuttas smoking in the attainment of early menopause.

Materials and Methods

After obtaining the approval from the management committee of Andhra Medical College, a prospective study was done among 420 women aged 36- 58 years attending outpatient departments of the Gynaecology and Orthopaedics of King George Hospital and Gosha Mahal Women's Hospital in Visakhapatnam during the period January 2014 to June 2014. Among these 420 women, 400 women were taken for study whose last menstrual period was one year back. Women who had their LMP (Last Menstrual Period) less than one year ago were excluded from the study. There were 16 women who had undergone hysterectomy for varied reasons. A case sheet for tracing out the clinical symptoms, signs and physical findings was designed. Examination findings of these women were written into the designed case sheets. After taking complete history, general physical examination and systematic examination, vital data like weight, B.P, pulse, respiratory rate and temperature were recorded. Gynaecological examination was performed. [13] The study was supported by few Gynaecologists and Clinicians. The subjects used for study are from diverse backgrounds in terms of region, religion, age, occupation, economic status and habits.

Nutritional status of these women subjects was categorized under ill-nourished, moderately nourished and well nourished. Clinical evaluation of nutritional status was done by the patient's body mass index and head to foot examination for specific vitamin and mineral deficiencies. As a part of the study, the subjects under consideration were

ic vitamin and mineral deficiencies. As a part of the study, the subjects under consideration were divided into groups based on their age. The data was analysed and P value of <0.01 was considered as statistically significant.

Results

Women subjects under consideration were divided into five groups based on their age and is as shown in Fig.1. Median age at menopause was observed to be 48 years. Around 44% of women attained menopause between 46-49 years. The minimum age was observed to be 38 years. This can be called as premature menopause. The median distribution of age at menopause is shown in the Fig.2. It was observed that women with better

Fig 1. Distribution of Patients based on age

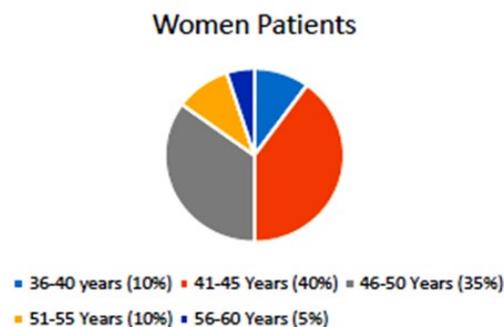
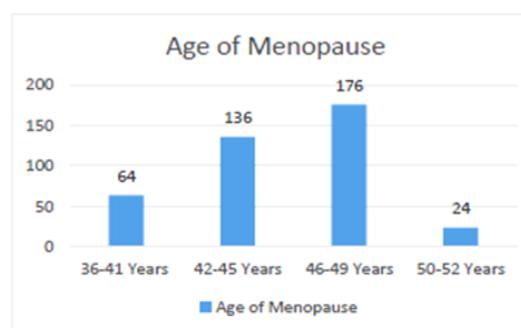


Fig 2. Median Age of Menopause



nutrition attained menopause at latter age when compared to women with poor nutrition who attained earlier menopause as shown in the Table 1. Around 200 (50%) women were moderately nourished and attained menopause later than ill-nourished women 80 (20%) who had earlier menopause and the difference was statistically significant ($P < 0.01$). The mean age of menopause was 48 years among women who had never smoked Chuttas. Among 400 women, 60 (15%) of

the women are Chuttas smokers and 45 (75 %) of these women attained early menopause as shown in Table 2.

Table 1. Nutritional Status of women according to age who have attained Menopause (n=400)

Status of Nutrition	Age	% of Women
Ill - Nourished	38-44	20
Moderate	45-48	50
Well Nourished	49-52	30

Table 2. Age of women Smokers who have attained Menopause (n= 60)

Age at Menopause (Years)	% of Women
36	45
37	04
38	04
39	01
40	02
42	04

The studied women are around the age group of 36-42 years. It is striking to observe that maximum age of attainment of menopause among the women smokers is 42 years when compared with non-smokers whose maximum age of attainment of menopause is 52 years. Apart from these results, other factors like religion, occupation and age of menarche were also analysed but was not as statistically significant ($P > 0.05$) when compared to association to poor nutrition status and Chuttas smoking.

Discussion

Most studies on menopause, especially those from western countries, have reported a higher prevalence of physical and psychological symptoms around the time of menopause.^[10,11] Most of the literature on menopause is dominated by details of physiological and endocrine changes.^[12,14] However there is growing interest in the external factors influencing the attainment of early natural menopause. The study aimed at studying two of these external factors namely nutritional status and tobacco chuttas smoking that are highly prevalent in the coastal areas of Andhra Pradesh.

Effect of Poor Nutrition: In the study, it was observed that a higher prevalence of low socioeconomic status and illiterate women exists in North Coastal Andhra Pradesh. It is evident that well-nourished women had menopause around 51 and 52 years of age. Ill-nourished women had earlier menopause about 40-42 years. It was observed that women neglected to eat proper and balanced diet. Skin, hair, nails, mucus membranes and neurological system were examined and number of nutritional deficiencies were observed. Hollowing of temporal muscles, wasting of upper arm and thigh muscles, unhealthy hair were some of the signs found in the subjects under consideration.^[7] In some women, peripheral edema and spooning of nails were found. Many women, particularly rural people do not bother about eating food on time and have irregular food habits. Another factor is non-availability of general stores in their vicinity. Some women fast for every 2-3 days in a week in relation to spiritual beliefs. Also there is a problem of food insufficiency in joint families. Many women attending for agricultural work suffer from arthralgia and myalgia. They often take non-steroidal anti-inflammatory drugs because they are easily available at cheaper prices. Hence, they suffer from gastritis and anorexia.

Effect of Chuttas Smoking: The results of the study confirm and support the view that Chuttas smoking play a key role in attainment of early natural menopause. Tobacco smoking are of various forms among which Chuttas is one. They are usually made at home. Chuttas smoking is wide spread in the Coastal areas of Andhra Pradesh. Another significant way of smoking namely 'Reverse chuttas smoking' is practiced extensively by women in the rural areas of Srikakulam and Visakhapatnam districts of Andhra Pradesh. Smoking has a detrimental effect on reproductive.^[9] capabilities and also menopause. It results in premature menopause. In our study, chuttas smokers had significantly earlier menopause than women who had never smoked. Also, the mean age at menopause declined with increasing number of chuttas smoked, although the trend was not significant. A possible mechanism for an earlier natural menopause among smokers has been proposed by Mattison and Thorgeirsson.^[8] who found that benzo pyrene, a polycyclic aromatic hydrocarbon which is a component of chuttas smoke, destroys primordial oocytes in the ovaries of mice. Natural menopause occurs when the ovaries are depleted of oocytes. If this is the mechanism in women, one might expect an earlier menopause among women who have smoked chuttas.

Conclusions

It is evident that chuttas smoking and poor nutrition are very important factors causing early menopause. The association between early onset of menopause in relation to poor nutrition and chuttas smoking indicate the need for establishment of counselling centres and health education by the Government. The Government must ensure strict prohibition of chuttas smoking and should take the initiative to provide sufficient quality of food through ration depots to the poor families. The awareness about the consequences of poor nutrition and chuttas smoking must be spread through voluntary organizations.

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References

1. World Health Organization, Research on the menopause in the 1990's: Report of a WHO Scientific Group. World Health Tech Rep Ser 1996;866:1-107.
2. Lindquist O, Bengtsson C: Menopausal age in relation to smoking. Acta Med Scand 1979, 205:73-77.
3. Bailey A, Robinson D, Vessey M: Smoking and age of natural menopause. Lancet 1977, 2:722.
4. Bernhard P: The effects of smoking in women and mothers. Munch Med Wochenschr 1962, 104: 1826-31.
5. Jick H, Porter J, Morrison AS: Relation between smoking and age of natural menopause. Lancet 1977, 1:1354-55.
6. Daniell HW: Smoking, obesity and the menopause. Lancet 1978, 2:373.
7. Kenemans P. Menopause, HRT and menopausal symptoms (1999). J Epidemiol Biostat, 4: 141- 46. PMID: 10695956.
8. Mattison DR, Thorgeirsson SS: Smoking and industrial pollution, and their effects on menopause and ovarian cancer. Lancet 1978, 1:187-188.
9. Parry BL. Reproductive factors affecting the course of affective illness in women. Psychiatr Clin North Am 1989; 12:207-20.
10. Porter M, Penney GC, Russell E, Templeton A. A population based survey of women's experience of the menopause. Br J Obstet Gynaecol 1996; 103:1025-28.
11. Stadberg E, Mattsson L. Milsom I. The prevalence and severity of climacteric symptoms and the use of different treatment regimens in a Swedish population. Acta Obstet Gynecol Scand 1997; 76:442- 48.
12. Guyton A C. Textbook of medical physiology. 11th ed. Philadelphia: Elsevier Saunders; 2006.
13. Padubiri VG and Daftary SN eds, 11th ed. Shaw's text book of gynaecology. Hawkins and Bourne, 1994.
14. Best, Charles H., and Taylor, Norman B. The physiological basis of medical practice, 3rd edition. Baltimore: The Williams and Wilkins Company, 1943.

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Conflict of interest: The author claim to have no conflict of interests in the context of this work.