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A Case Study Report on Ashti Kshaya WSR to Postmenopausal Osteoporosis

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ABSTRACT

Osteoporosis being the most common metabolic bone disease in humans, bone health is an important aspect of composite health. According to the 1993 International consensus, osteoporosis is defined as a systemic skeletal disease characterized by low bone mass and microarchitectural deterioration of bone tissue, with a consequent increase in bone fragility and susceptibility to fracture[1]. Overall, osteoporosis is three times more common in women than in men, because women have a lower peak bone mass, which is compounded by the hormonal changes that occur at the time of menopause [2]. It is a silent disease until fractures occur, which causes important secondary health problems and even death[3]. Due to similarity in the signs and symptoms, we can correlate this disease with Asthigata vata and its treatment can be planned according to it. Here is the case study of 50 years old female patient, diagnosed as postmenopausal osteoporosis. Patient admitted in Panchakarma ward of R P Karadi Hospital, Ilkal. The Panchakarma procedures like Abhyanga, Swedana,Basti Chikitsa and Shamana Aushadis are given. At the end of the treatment marked improvements were seen in the patient, like Sr. Calcium and reduction in Alkaline phophatase levels. Also the symptoms of the disease reduced significantly.

***Keywords**: Asthikshaya,Basti ,Osteoporosis*

INTRODUCTION

'*Ayurveda'*, explains human body as a congenial homeostasis of Dosha, Dhatu and Mala. The function of dhatus is *dharana o*f the *sharira.* Among all the dhatus, Asthi dhatu is blessed with the function of *sharira dharana.* It gives shape to the body and protects the vital organs [1]. In classics of *Ayurveda* direct reference of *Rajo-nivruttijanya Asthi kshaya* is not available but in *Sushruta Samhita Dallhana* commentary, he comments that after *Rajo-nivrutti, Dhatukshaya*[1] will occur. *Dhatukshaya* further leads to *Vata Prakopa* which in turn will result in *Asthikshaya*. *Vagbhata* also explains the similar concept under *Ashraya-Ashrayi Bhaava.*Menopause is the time of cessation of ovarian function resulting in permanent amenorrhoea [2]. One year after attaining menopause the period of life is called post-menopausal period.

Osteoporosis is a silent underlying condition which often remains asymptomatic until a fracture occurs [3]. The actual prevalence of Osteoporosis remains unknown because of its asymptomatic nature. In india it has been presumed that 35% of postmenopasal women are at risk of developing Osteoporosis [4]. Bone re-absorption increases by 90% after menopause, whereas bone formation also increases but only by 45%, as assessed by markers of bone formation. This difference favours greater bone re-absorption, which leads to accelerated bone loss during the first 8- 10 years after menopause .The high Bone Turn over markers may

predict the risk of sustaining osteoporotic fractures in postmenopausal women independent of BMD. In Indian women, calcium, vitamin D, and bisphosphonates are the commonest first-line therapies used in osteoporosis. The use of other drugs such as hormone replacement therapy, estrogen agonists, calcitonin, parathyroid hormone, and denosumab is decided as per the affordability and availability of treatment options. Health Initiative (WHI) study in 2001 that published data on 6 years of treatment with hormone therapy that showed an increase in heart attacks and breast cancer [5]**.** In *Ayurveda* we have a very effective *Panchakarma treatments* for postmenopausal osteoporosis which can be done without any complications. Line of treatment mentioned for *asthi dhatu pradoshaja vyadhis* are usage of *tiktaka ksheera ghrita basti* along with *swayonidravya* usage. *Basti* is said to be *pradhana* and *ardha chikitsa* for *vatavyadhi.*

CASE REPORT

Materials and Methods

A 50 years old female, residing in Ilkal visited *Panchakarma* OPD of R P Karadi Hospital Ilkal, with chief complaints of *Sandhishula, Bala kshaya, Mamsakshaya, Aswapna, Parvanam beda, Atimanda chesta, Sandhi shaithilya* since 8 months. Before 8 months patient was apparently healthy, later she had gradual appearance of above-mentioned symptoms and these symptoms lead to difficulty in doing her routine activities. She consulted Orthopaedic Doctor and her BMD T score was less than -2.5 and diagnosed as postmenopausal Osteoporosis.

She was kept on steroidal therapy for 3 months but she did not have relief. After this patient came to R P Karadi Hospital for further management. Patient was admitted in the *Panchakarma* IPD ward of Hospital, for better treatment.

- History of Past Illness: No clinical case of Hypertension, Diabetes or Hypothyroidism.
- On Examinations of vitals are Temperature -98.90 F, Pulse rate – 80/min, Respiratory rate-20/min, Heart rate- 80/min, Blood pressure- 130/80 mmhg.
- *Rogi Pariksha*:- Patients is having *VataKapha Prakriti*, predominantly *VataKapha Dosha* vitiation is there with involvement of *Asthi Mamsa Meda Dhatu Dusti*, moderate *Agnibala* with slight coated tounge and *Avara (*poor) *Vyayama Shakti*.
- Systemic Examination: While examining respiratory system the shape and size of chest are normal, Air entry bilaterally equal- clear no Crepitations. While examining Cardiovascular System S1 S2 heard, No murmur and abnormal sound heard. While examining Central Nervous System Patient was conscious, well oriented, memory was good.

SUBJECTIVE CRITERIA

Table 1. Shool (Pain)

No Pain	0
Mild pain after exaggerated by movement and subside by rest	1
Moderate degree of pain, not relieved by rest but not disturbing sleep or other routine activities	2
Severe degree of pain, disturbing sleep and other routine activities	3
Severe degree of pain, disturbing. Sleep and other routine activities and relived by analgesic	4

Table 2. Shrama

	Grade
No feeling of looseness / weakness in joints	**0**
Mild feeling of looseness/ weakness in joints. Patient can stand / walk independently without difficulty	**1**
Moderate feeling of looseness/weakness in joints. Patient can stand / walk independently with difficulty	**2**
Severe feeling of looseness/weakness in joints Patient can stand /walk only with support	**3**
Severe feeling of looseness /weakness in joints. Patient unable to stand / walk even with support	**4**

Table 3. *Sandhi Shaithliya*: Weakness/Looseness of Joints

	Grade
No tiredness	0
Tiredness with excessive exertion	1
Tiredness with moderate exertion	2
Tiredness with mild excessive exertion	3
Tiredness with no exertion	4

OBJECTIVE CRITERIA

BMD Value (T Score): Osteoporosis: T Score less than or equal to -2.5
Serum Calcium
Alkaline phosphatase

Table 4. Treatment Protocol

Aama Pachana.	*Hinguvachadi Vati Matra*: 5g twice a day with warm water before food. *(Till Nirama Laxana*)
Purva Karma	*Sarvanga abhyanga* with *Murchita Tila Taila* followed by *bashpa Swedana.*
Basti	*Matra Basti* with *Guduchi Ghrita* for 10days
Paschat Karma	*Samsarjana Krama*
Shamana yogas	Cap Bonton 1 cap BD for one month

Table 5. Observations before and after Treatment

Grades	**Before treatment**	**After treatment**
Shoola (Pain)	**3**	**2**
shrama (tiredness)	**2**	**1**
Sandhshaithliya/weakness/looseness of joints	**3**	**1**
BMD Value (T Score -2.8)	**-2.8**	Not yet done
Serum Calcium	7.8	8.3
Serum Alkaline phosphatase	150U/L	147U/L

DISCUSSION

Effect of *Guduchi ghrita* on *Asthi kshaya*

In the *chikitsa* of *Asthikshaya Acharyas* mentioned *tikta ghritayukta ksheera basti* .In this study *Guduchi ghrita matra basti* is given for 10 days and given good results in all

subjective and objective parameters.*Guduch*i is one of the reported medicinal plants in clinical *Ayurveda* texts for its anti-osteoporotic activity. Effect of ethanolic extract of *Guduchi* was tested on the proliferation, differentiation and mineralization of bone like matrix on human osteoblast like cells MG-63 and primary osteoblast cells isolated from femur of rats. Cell morphology studies clearly indicated the increase in the cell number and absence of adverse effect in cell morphology on treatment with extract. Ethanolic extract stimulated the proliferation of osteoblast [6].

According to Commentator *Arundatta* the substance that produces *Khratwa* (roughness) due to s*nigdha* (unctuous) and *shoshan (*drying) properties increases *asthi*, as *asthi* is also *khara* by nature. But no substance is available that has both *snigdh*a and *shoshan* properties. So *ghrita*(ghee) which is *snigdha* in natureis advised to be used with the substances which are *tikta* (Bitter) and possess *shoshan* (drying) property [7].

CONCLUSION

It was very encouraging to note that in the present case study, the patient was given *Guduchi ghrit matra basti* and patient was able to walk without any symptoms of pain, tenderness and other symptoms of *asthi kshaya.* .In this study there is reduction in alkaline phosphatase levels which is high in poastmenopausal women due to high bone turnover. However, more studies and investigations have to be done to note the changes in bone formation and resorption markers to the precise mechanism by which *tikta ghrita yukta basti* influences bone metabolism.

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