

Effect of Estrogen Replacement Therapy on Speed of Sound at Multiple Skeletal Sites

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Omnisense demonstrates its sensitivity to bone changes caused by treatment.

Introduction

It is well accepted that estrogen-progestin replacement therapy (HRT) or estrogen replacement therapy (ERT) are the primary prevention and treatment modalities for osteoporosis.

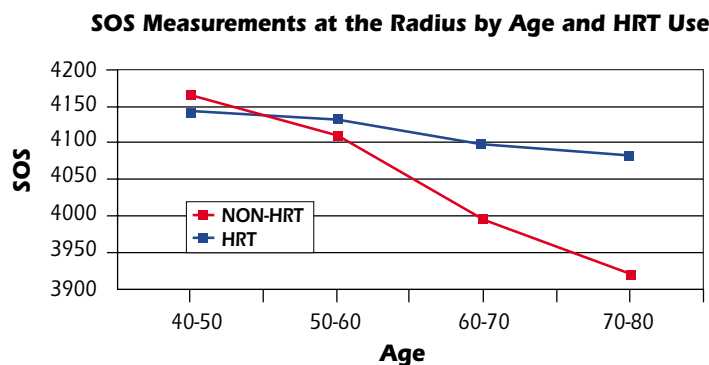
Study Design

This study was initiated to evaluate HRT or ERT effect at multiple skeletal sites using the multi-site QUS device Sunlight Omnisense™, in order to characterize the bone response to hormone replacement therapy on postmenopausal women. Two groups of subjects were recruited for the purpose of this study: a postmenopausal group known to have received ERT for more than one year and a matched group of women who did not receive ERT. The groups were matched by years since menopause. Measurements were performed at four sites, the distal 1/3 radius (RAD), the proximal phalanx (PLX), the fifth metatarsal (MTR) and the mid-shaft tibia (TIB).

Results

The following results were observed:

- Speed of sound (SOS) values were higher in the ERT user group at all measurement sites and in all age groups, when compared to the non-user group. For example, at the RAD, T-score average results observed were -0.55 +/- 1.30 for ERT users and -1.36 +/- 1.60 for non-users, respectively ($p < 0.0001$).
- SOS at all skeletal sites remained steady among the ERT user group.



Conclusion ►►

Omnisense SOS measurements at multiple skeletal sites demonstrate the protective effect of ERT on bone.