

### 13. Diseases of the Musculo Skeletal System and Connective Tissue

#### Reference

Hwang DS, Kim YS, Lee KS. Effects of Ultraviolet-B(UV-B) radiation on Calcium, Vitamin D3 and Cholesterol level in postmenopausal women. *Daehan-Hanbang-BuIngwa-Hakhoeji (Journal of Oriental Obstetrics and Gynecology)* 2004; 17(4): 166–73 (in Korean with English abstract).

#### 1. Objectives

To evaluate the effect of Ultraviolet-B (UV-B) on the prevention and course of osteoporosis.

#### 2. Design

Randomized controlled trial (RCT).

#### 3. Setting

One Oriental hospital (details not mentioned), Republic of Korea.

#### 4. Participants

Fifty menopausal women who had previously received treatment with steroids, parathyroid hormone, anticonvulsant medication, diuretics, and antacids (all of which could influence bone metabolism) but no treatment with postmenopausal hormone alternative remedies.

The patients were randomized to receive UV-B irradiation plus calcium and UV-B irradiation only. Healthcal (Dong Wha Pharma) was used as a calcium supplement (1500 mg per day).

#### 5. Intervention

Arm 1: Ultraviolet irradiation and calcium supplement in parallel (n=25).

Arm 2: Ultraviolet irradiation only (n=25).

Each participant was exposed to 20 minutes of ultraviolet irradiation once a day at the same time each day.

Three patients (1 in Arm 1, 2 in Arm 2) dropped out.

#### 6. Main outcome measures

Serum levels of calcium, vitamin D3, and total cholesterol.

#### 7. Main results

After 2 weeks of treatment, total cholesterol was significantly decreased, and calcium and vitamin D3 levels were significantly increased in both Arm 1 and Arm 2.

#### 8. Conclusions

Ultraviolet irradiation can help control osteoporosis.

#### 9. Safety assessment in the article

Not mentioned.

#### 10. Abstractor's comments

The application of ultraviolet irradiation was not described precisely. If the focal point of irradiation can be controlled, it might be possible to investigate differences between acupuncture points.

#### 11. Abstractor

Cho JH, 16 July 2010.