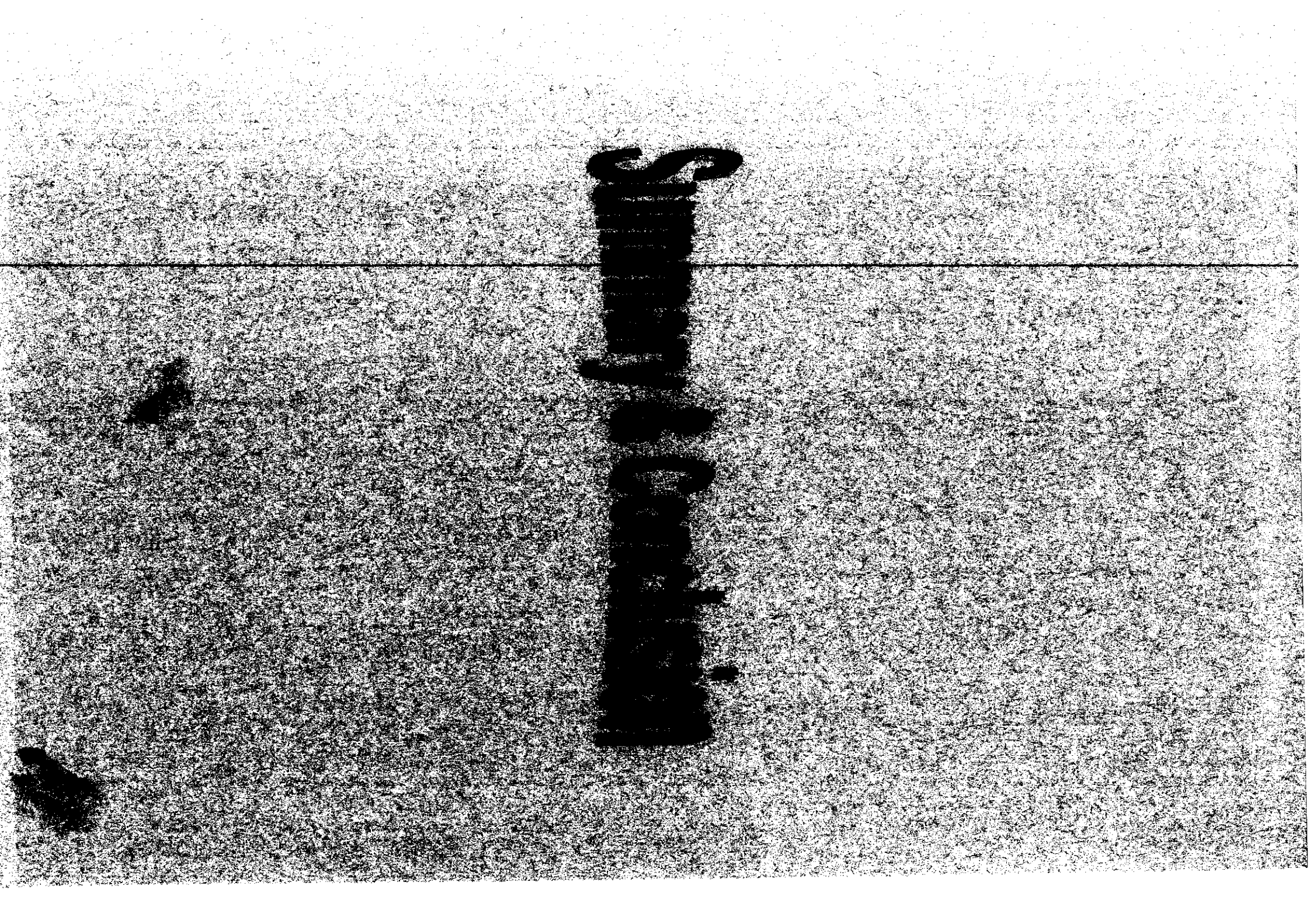

SUMMARY AND CONCLUSION

The present study was performed on 57 individuals categorized as follows:

Ten apparently healthy non symptomatizing postmenopasual women as a control group with their ages ranged from 50 to 60 years.

Fourteen postmenopausal women with fracture due to minmal or no trauma with their ages ranged from 52 to 80 years.

Twenty postmenopausal women suffering from generalized axial bony ache with their ages ranged from 51 to 80 years.

Thirteen postmenopausal womens with various medical diseases with their ages ranged from 49 to 70 years.

Blood samples were obtained from subjects and serum was separated for determination of serum (ICTP) and other routin investigations.

A twenty-four hours urine samples were collected for measurement of calcium in urine.

All the studied individuals were subjected to full history and clinical examination in addition to the following investigations: serum (ICTP), serum total protein, serum albumin, ALP, creatinine, serum calcium, urinary calcium and serum ionized calcium.

- In the control group the mean value ± SD of serum C. terminal telopeptide of type I collagen (ICTP) level was 4.6 ± 0.5 µg/L and the range was 3.6 ± 5.1 µg/L.
- Significantly elevated serum (ICTP) level was found in all patient groups.
- Significantly elevated serum ALP was reported in patient groups.
- Non significant difference in urinary calcium as a marker of bone turnover was detected between groups.

Conclusions :

In conclusion, the results of the present study in keeping with evidence from literature revealed that :

Biochemical markers of bone turnover allow clinicians to evaluate the risk of bone loss in postmenopausal women. The bone resorption markers were more sensitive than bone formation markers in evaluating this bone loss. Among the bone resorption markers, ICTP was the most sensitive marker when compared to other markers because it has many advantages over other markers, being :

1. Not affected by dietary collagen.
2. Strongly correlates with the number of bone lesions.
3. Serum sample allows easy means to follow up bone turnover.

- As other bone turnover markers, serum ICTP determination is also noninvasive, easy to repeat, shows large variation across the menopause, assesses overall bone turnover, identifies fast bone losers and allows early monitoring of therapy.