INTRODUCTION

Intermittent PTH (iPTH) has bone anabolic effect and reduces vertebral fractures risk in osteoporotic patients. Recently increased expression of Wnt10b by T cells during iPTH, and no increase during continuous PTH (cPTH), has been demonstrated in mice.

AIM

To evaluate if iPTH increases WNT10b expression in lymphoid cells in humans.

METHODS

Study of iPTH

- Osteoporotic women (40)
- Follow-up at 3, 6, 12 and 18 months
- Real Time PCR on whole nucleated blood cells
- Which is the lymphoid cell responsible for increase in WNT10b?

Study of cPTH

- Primary hyperparathyroidism (20)
- Follow up 1 month after surgery
- Real Time PCR on whole nucleated blood cells

RESULTS

iPTH increases WNT10b in T cells

Our results show a marked increase in WNT10b expression in lymphoid cells during treatment with iPTH, whereas calcium and vitamin D alone has no effect; the increase is maximum after 6 months of treatment. We show that iPTH increases WNT10b production mainly by T cells.

cPTH does not affect WNT10b expression

In patients affected by primary hyperparathyroidism there was no significant difference in baseline expression as respect to osteoporotic, non-treated patients and surgical intervention does not modify WNT10b expression, data not shown.

CONCLUSIONS

Our data suggest an effect of intermittent, but not continuous PTH on the expression of WNT10b by T cells, this could be one of the mechanisms trough which PTH treatment increases OB formation and function in humans.

REFERENCES