

## Letter to the Editor

# Prolactin and Breast Cancer

D.Y. WANG

Imperial Cancer Research Fund, P.O. Box 123, Lincoln's Inn Fields, London WC2A 3PX, U.K.

THE RECENT excellent article which appeared in this journal by L'Hermite and L'Hermite-Baleriaux [1] on prolactin and breast cancer as a result of their comments on our paper [2] raises a few points.

Firstly, may I respond to their assertion that we were unaware of the likely causes of the increase in prolactin after mastectomy. We did not miss this point but chose not to discuss it since we felt it was not germane in a paper dealing with survival rates. However, we have dealt with this topic fully in a review article [3] in which we describe the literature showing that the increase in serum pro-

lactin is associated with not only mastectomy but surgery in general [4-6] and that this effect has been known for some time.

I would also like to comment that the notion that the reduction in breast cancer risk associated with multiparity could be mediated by the permanent reduction in circulating prolactin levels has been suggested by ourselves and other groups [7-10] in addition to the more recent publication last year of Muscy *et al.* [11].

Finally, I think it would be appropriate to cite the recent *in vivo* results of Fentiman *et al.* [12] that support the *in vitro* results of Peyrat *et al.* [13], quoted by L'Hermite and L'Hermite-Baleriaux, that prolactin stimulates DNA synthesis of human breast tissue.

Accepted 5 September 1988.

## REFERENCES

1. L'Hermite M, L'Hermite-Baleriaux M. Prolactin and breast cancer. *Eur J Cancer Clin Oncol* 1988, **24**, 955-958.
2. Wang DY, Hampson S, Kwa HG *et al.* Serum prolactin levels in women with breast cancer and their relationship to survival. *Eur J Cancer Clin Oncol* 1986, **22**, 487-492.
3. Kwa HG, Bulbrook RD, Wang DY. An overall perspective on the role of prolactin in the breast. In: Nagasawa H, ed. *Prolactin and Lesions in Breast, Uterus and Prostate*. Boca Raton, CRC Press, 1988, 3-22.
4. Noel GL, Suh HK, Stone JG, Frantz AG. Human prolactin and growth hormone release during surgery and other conditions of stress. *J Clin Endocrinol Metab* 1972, **35**, 840-848.
5. Aldinger KA, Schultz PN, Blumenschein GR, Samaan NA. Thyroid stimulating hormone and prolactin levels in breast cancer. *Arch Intern Med* 1978, **138**, 1638-1641.
6. Herman J, Kalk WJ, De Moore NE, Levin J. Serum prolactin after chest wall surgery: elevated levels after mastectomy. *J Clin Endocrinol Metab* 1981, **52**, 148-151.
7. Kwa HG, Cleton F, Bulbrook RD, Wang DY, Hayward JL. Plasma prolactin levels and breast cancer: relation to parity, weight and height, and age at first birth. *Int J Cancer* 1981, **28**, 31-34.
8. Wang DY, Sturzaker HE, Kwa HG, Verhofstad F, Hayward JL, Bulbrook RD. Nyctohemeral changes in plasma prolactin levels and their relationship to breast cancer. *Int J Cancer* 1984, **33**, 629-632.
9. Bruning PF, Bonfrer JMG, Hart AAM, de Jong Bakker M, Kwa HG. Parity and age influence hormonal risk factors of breast cancer. *Prog Cancer Res Ther* 1984, **31**, 335-342.
10. Yu MC, Gerkins VR, Henderson BE, Brown JB, Pike MC. Elevated levels of prolactin in nulliparous women. *Br J Cancer* 1981, **43**, 826-831.
11. Muscy VC, Collins DC, Muscy PI, Martino-Saltzman D, Preedy JRK. Long-term effect of a first pregnancy on the secretion of prolactin. *N Engl J Med* 1987, **316**, 229-234.

12. Fentiman IS, Brame K, Chaudary MA, Camplejohn RS, Wang DY, Millis RR. Perioperative bromocriptine adjuvant treatment for operable breast cancer. *Lancet* 1988, **i**, 609–610.
13. Peyrat JP, Djiane J, Bonnetterre J *et al.* Stimulation of DNA synthesis by prolactin in human breast tumor explants. Relation to prolactin receptors. *Anticancer Res* 1984, **4**, 257–262.