

## Letter to the Editor

# Thyroid Function and Breast Cancer

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LEMAIRE AND BAUGNET-MAHIEU [1] recently reported that women with breast cancer have significantly higher amounts of thyroid hormones in their blood than non-cancer controls. These results are contrary to those of Thomas *et al.* [2] who found a lower serum thyroid function index (TFI) and free thyroxine (FT4) concentration. This latter abnormality persisted up to 12 months following mastectomy.

We have now measured serum total thyroxine (T4) and triiodothyronine resin uptake (T3 RU%) in patients before and after mastectomy using <sup>125</sup>RIA Quanta-Count kits (Biorad Laboratories, U.K.). Results are shown in Table 1 and Fig. 1. It is clear that thyroid function is depressed up to 12 months after operation. The argument that our results obtained pre-mastectomy are due to stress [1] must be discounted since these were significantly lower than in normal controls [2].

Differences in methodology are also unlikely as the same assay for FT4 was used by both sets of workers. Neither is this discrepancy likely because Belgian women are at a different risk to contracting breast cancer than their U.K. counterparts, as most European countries portray a similar incidence [3]. Recent results in our laboratory show higher thyroid function in normal Japanese women (at low risk) than in Hawaiian and Caucasian women who are up to 6 times more likely to contract the disease. On the basis of the Belgian data a reverse result would be expected.

Thyroid function of the patients studied by Lemaire and Baugnet-Mahieu was monitored 4 weeks after mastectomy. This indicates that some unknown variable in the post-operative treatment between patients would appear to exist at the University Hospital, Liège and those at Guy's Hospital, London.

Table 1.

T3RU%	Pre-op* : $\bar{x} = 29.89$ , S.D. $\pm 1.91$ , $n = 56$
"	Post-op** : $\bar{x} = 29.12$ , S.D. $\pm 1.60$ , $n = 56$
-	Paired 2-tail $t$ -test; $t = 3.99$ , $p < 0.001$

\* Blood collected 48 h before mastectomy

\*\* Blood collected 10 days following mastectomy.

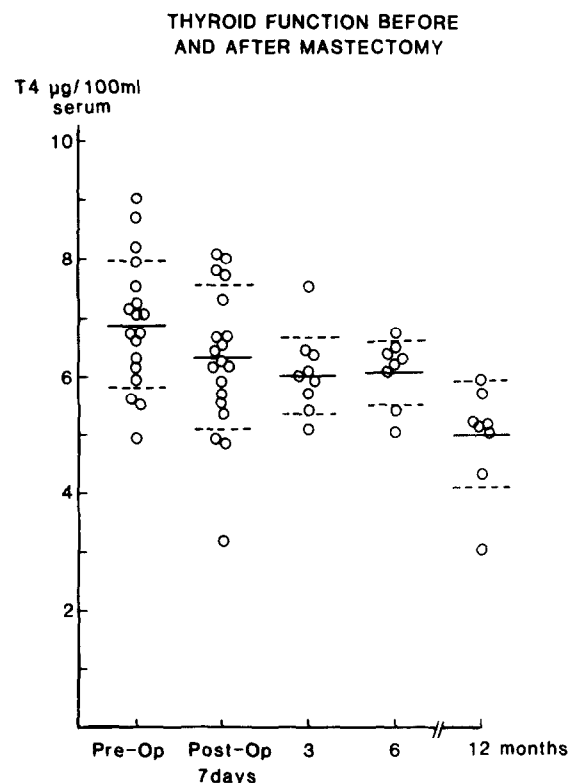


Fig. 1. T<sub>4</sub> pre-op,  $\bar{x}$  6.87  $\mu\text{g}/100 \text{ ml}$ , S.D.  $\pm 1.08$ ,  $n = 19$ . post-op (7 days),  $\bar{x}$  6.26,  $\pm 1.24$ ,  $n = 19$ ; 3 months, 6.01,  $\pm 0.65$ ,  $n = 9$ ; 6 months,  $\bar{x}$  6.07,  $\pm 0.53$ ,  $n = 8$ ; 12 months,  $\bar{x} = 4.97$ ,  $\pm 0.92$ ,  $n = 9$ . Paired  $t$ -test (2-tailed) pre-op  $v$  post-op (12 months);  $t = 7.38$ ,  $p < 0.0001$ .

## REFERENCES

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