

## EFFICACY OF PARATHYROIDECTOMY (PTX) IN THE CONTROL OF SECONDARY HYPERPARATHYROIDISM (SH) IN DIALYSIS

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Following the introduction, in the '95-'99 years, of injectable calcitriol a reduction of approximately 30% in the prevalence of PTX has been reported in dialysis patients (Kestenbaum, 2004); however a similar increment has been described in the most recent years, possibly due to the introduction, with the K-DOQI international guidelines, of more restrictive therapeutic ranges for serum levels of PTH (Foley, 2005). Moreover, available data in the literature testify the absence of uniformity as far as therapeutic results are concerned. We therefore judged useful to retrospectively evaluate the clinical efficacy of PTX by examining separately the short term results (more strictly pertinent to surgical therapy) and the long term clinical results (indicative of an accomplished optimal metabolic control). Surgical efficacy (=sharp reduction of PTH levels following parathyroid gland mass reduction) was checked after 1 month and 1 year with the following criteria: Persistence (P) = no significant PTH and Ca drop within 1 month of surgery; Recurrence (R) = PTH >200 pg/ml after 1 year of surgery; Hypoparathyroidism (H) = PTH <10 pg/ml; and Normofunction (N) = PTH in the range of 10-200 pg/ml. Long term clinical efficacy, evaluated after 3 and 5 years, was considered according to the presence of PTH values in the three different ranges indicated by the K-DOQI guidelines. We examined the data pertinent to 77 pts (age 54±12y, 38M 29F; 75 in dialysis since 6±4y and 2 transplanted) who underwent PTX from 1998 to 2004. Presurgery biochemical parameters were: PTH 1063±457 pg/ml, Calcium 9,1±0,9 mg/dl and Phosphate 1,4±1,2 mg/dl. PTX was Total in 36 pts, ST in 8 pts e Total + Autotransplantation in 33 pts. Number and percentages of cases in the different categories obtained are shown in the table (in brackets number of total PTX).

| Surgical efficacy | 1 month    |      | 1 year     |      |
|-------------------|------------|------|------------|------|
|                   | n          | %    | n          | %    |
| P / R             | 8 (3)/77   | 10,5 | 11 (5)/62  | 17,7 |
| H                 | 21 (17)/77 | 27,4 | 8 (4)/62   | 13,0 |
| N                 | 48 (16)/77 | 62,1 | 43 (16)/62 | 69,3 |

  

| K-DOQI PTH targets (pg/ml) | 3 years   |    | 5 years   |    |
|----------------------------|-----------|----|-----------|----|
|                            | n         | %  | n         | %  |
| >300                       | 6 (0)/34  | 18 | 8 (1)/22  | 36 |
| <150                       | 25 (9)/34 | 74 | 13 (3)/22 | 64 |
| 150-300                    | 3 (1)/34  | 9  | 0 (0)/22  | 0  |

Efficacy of surgery is evident within the first year in ~70% of the cases, with a 10% of P after one month evolving toward a 17% of R at one year. H, partly functional after one month, shows a tendency to reduction with time (from 27 to 13%). In the long term, the prevalence of cases with high PTH values shows a progressive increment (topping a 36% after 5 years), while cases with normal values are unacceptably low (9 and 0% respectively after 3 and 5 years). Even the prevalence of cases with low PTH values is quite high (74 and 64%), with a trivial role played by total PTX (only 9/25 and 3/13 were total PTX after 3 and 5 years respectively). In conclusion, PTX that is still necessary in many patients, shows the best results in the short term follow-up, while less satisfactory results are obtained in the long-term. Therefore a strict clinical surveillance is always warranted in these patients.