

以術中快速第三代 PTH 評估腎性副甲狀腺亢進之病人是否完整切除副甲狀腺

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Use intra-OP Quick 3rd generation PTH to evaluation successful complete para-thyroidectomy or not in renal hyper-parathyroidism patient

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Purpose:

Several criteria have been proposed to confirm the adequacy of parathyroid resection. The most widely accepted and readily used is the Miami criteria, and it mentioned that if $A \geq 50\%$ PTH level fall from either the highest pre-incision or pre-excision hormone level at 10 minutes after all hyper-secreting glands are excised denotes a successful operation in most patients

In fact, Miami criteria is simply useful for primary hyper-parathyroidism, but not with uremic hyper-parathyroidism. In current lab technique, 2nd generation assay represent the sum of (1-84) PTH level and (7-84) PTH level; 3rd generation assay represent (1-84) PTH level.

In this study, we will investigate the ratio of (1-84) PTH(active form)/(7-84) PTH (inactive form) in serum which will be taken from the patients with uremic hyperparathyroidism.

We try to accurately predict if we eradicating the parathyroid tissue totally for multiple parathyroid gland diseases or not.

Materials and Methods:

We calculate (7-84) PTH(inactive form) and (1-84) PTH(active form) half-life, and ratio between (7-84) PTH and (1-84) PTH.

We closely follow up post-OP PTH level change with 2nd and 3rd general assays. Since we remove all para-thyroid glands as 0 minutes, then collect PTH data with 2nd and 3rd generation assays every 5 minutes until to 45 minutes.

Results:

The uremic patients usually have a large amount of (7-84) PTH because of its long half-life. (7-84) PTH/(1-84) PTH + (7-84) PTH ration reach 80~90%

Also (7-84)PTH has a longer half life, about 70~80 minutes, than (1-84) PTH about 2 minutes.

During observing extent of (7-84) PTH and (1-84) PTH lowering, we see that (1-84) PTH level will reach a stable level about at 20~25 minutes, and the (1-84) PTH level almost < 40 . According to our experience, if (1-84) PTH level won't reach a stable level about at 20~25 minutes, or the (1-84) PTH level still > 40 , all case received re-operaiton at once and still residual para-thyroid glands can be found.

Conclusion:

By using intra-OP quick 2nd and 3rd assays, we can judge that if all para-thyroid glands were eradicated or not.