Reviewer's report

**Title:** Total parathyroidectomy with trace amounts of parathyroid tissue autotransplantation as the treatment of choice for secondary hyperparathyroidism: A Single-Center Experience

**Version:** 2  **Date:** 24 June 2013

**Reviewer:** Cornelia Dotzenrath

**Reviewer's report:**

Review

P.5, Line 2: patients and not cases
P.5, Line 3: in all patients? How do you verify this? As far as I understand you suggest that this is a matter of calcitriol stosstherapy, why?

P.5, L.12: I do not understand: P.4 you mentioned that this was a retrospective study. So, what the Ethic board had to prove? This was not a randomized trial. The decision about the operative procedure was strongly influenced by the nephrologist.

14 patients choose TPTX with AT. Were they listed for autotransplantation? As I understand 33 patients were not listed.

P.6, L.10, Why CT scan was performed in 2 patients?

P6 surgical procedure: it is not necessary to describe the operative procedure. But I expect the following details: How often intraoperative ultrasound was performed? How often thyroid nodules were discovered. How often gamma probe was performed, how often it was effective? I do not believe that in all 47 patients you find always one gland without nodular transformation.

What were your criteria for intraoperative PTH?

How do you estimate a weight of 30mg?

Why do you choose the sterno-cleido-mastoid muscle for transplantation. This is not the standard site.

P8 postoperative management. I miss the ionized calcium level, which is mandatory especially in patients on dialysis who show a low total calcium due to low albumin levels. Therefore, these patients can also be discharged with much lower total calcium levels when albumin corrected calcium or ionised calcium is measured. Which symptoms did the patients present? How many patients showed symptoms of hypocalcemia. Intravenous calcium substitution should be an exception and not a standard therapy.

What is the significance of 25-OH-Vit D3? I think it should be 1,25 OH-Vitamin D3.

What was the sensitivity of ultrasound, intraoperative ultrasound, Mibi-scan, gamma probe, PTH assay
Discussion:
P13. L1: which study is cited?
There is a more actual paper of Tominaga from 2010 with 2660 patients.
Why do you not perform transcervical thymectomy, which is also a standard therapy?
Sterno-cleido-mastoid muscle is not the standard site for autotransplantation in secondary hyperparathyroidism. The reason for choosing the brachio-radialis muscle is to be able to distinguish between a cervical recurrence and a graft depending recurrence, which is difficult for the sterno-cleido-mastoid transplant. We have extremely negative experiences with sterno-cleido-mastoid autotransplants: as hyperplastic autotransplants seem to spread all over the muscle a radical removal of the largest part of the muscle had to be performed in 4 patients. Graft dependant recurrences may develop even after 15 years. “ 42 months is a short observation period and therefore you cannot conclude that this is a safe procedure. It can happen that 50% of your patients have recurrent disease after 5 years.

Summary
1. The procedure described is well known but not used as standard procedure. So I do not understand the question posed by the author. Is this a comparative study or not? As I understand this is a retrospective study of 14 patients with sterno-cleido-mastoid autotransplants and without thymectomy. But this is not clearly indicated in the abstract.
2. According to the author it is a retrospective trial. But as the study was approved by the Ethic committee I would like to see the study design, which is not really clear for me.
3. How many patients in the transplant were listed for kidney transplantation?
4. ok
5. The discussion exists mainly in historical data. The discussion is not relevant
6. Limitations are not stated at all
7. ok
8. no
9. Many references are not really discussed in the text (1-10). Drakopoulos however is cited twice (15 and 27). There is a discrepancy between text and literature.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Needs some language corrections before being published
**Statistical review:** No, the manuscript does not need to be seen by a statistician.