Author’s response to reviews

Title: A Case of Focal Segmental Glomerulosclerosis in which Urinary Protein Improved after Surgical Treatment for Acromegaly

Authors:

Arina Yamasaki (arena07211084@gmail.com)
Daisuke Bito (gyncq463@ybb.ne.jp)
Erina Eto (etou-e@koseikan.jp)
Keiichiro Matsumoto (matsumoto-ke@koseikan.jp)
Megumi Nakamura (nakamura-m@koseikan.jp)
Junji Miyazaki (miyazakj@mac.com)
Kenichi Matsumoto (matsumoto-k@koseikan.jp)
Masanori Masuda (masuda-m@koseikan.jp)
Daisuke Mori (mori-d@koseikan.jp)
Toru Yoshimura (yoshimura-t@koseikan.jp)

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Thank you for your courteous comments. We have now revised several figures and sentences and responded to the comments of the reviewers, as shown below.

We added an arrow to the MRI scan (Figure 1).

In the present case, the pituitary adenoma showed GH secretion, so GH staining was performed, which we have now presented in Figure 2B. After surgery, the basal GH level decreased from 2.7→ to 0.37 ng/mL, and the IGF-Ⅰ level decreased from 496→ to 171 ng/mL.
Since the TSH level was 0.03 μIU/mL while the fT3 and fT4 levels were 3.12 pg/mL and 1.26 ng/mL, respectively (upper limit of normal range), we measured the antithyroglobulin antibody (TgAb) and thyrotropin receptor antibody (TRAb) in order to differentiate autoimmune thyroid disease.

We performed a TRH stimulation test not only to confirm the paradoxical reaction of GH but also to assess the TSH and prolactin reactions. Although TSH was suppressed, prolactin showed a normal reaction.

We measured the HbA1c level before and after the surgery, five times each. The patient's HbA1c level significantly improved from 6.32 % ± 0.1 % before the surgery to 6.08 % ± 0.1 % after the surgery (n = 5 at both points; p < 0.05).

Unfortunately, we were unable to conduct a renal biopsy because the patient did not wish to undergo the procedure. However, we measured the spot urine protein/creatinine ratio (g/gCr) before and after the surgery, five times each. The patient's spot urine protein/creatinine ratio significantly improved from 1.65 ± 0.71 g/gCr before the surgery to 0.93 ± 0.34 g/gCr after the surgery (n = 5 at both points; p < 0.05). We have now added Figure 3.

After trans-sphenoid surgery, the basal ACTH, cortisol, LH and FSH levels were in the normal range. The CRH loading test and LHRH loading test showed normal responses. The basal TSH level (0.02 μIU/mL) continued to be low, and TSH did not react to the TRH loading test. After surgery, the fT3 level was 3.22 pg/mL, and the fT4 level was 1.25 ng/mL. Based on these findings, we did not perform replacement therapy.

We revised our expression concerning the oral hypoglycemic agents as “oral anti-diabetes drugs”.

We revised the introduction.

The patient had no history of traveling abroad. There was nothing in his history to suggest a recent viral or other infective process including human immunodeficiency virus or acquired
immune deficiency state and no history of any trauma or injury. He had previously undergone surgery for the treatment of colon cancer at 61 years of age.

His mother and grandfather had a history of hypertension and diabetes mellitus, respectively. There was no history of endocrine disease in his family. There was no background or family history of cancer, hematologic or clotting disorders.

He worked as a clerk between the ages of 22 to 60 and there was no history of any previous exposure to asbestos, radiation exposure or other occupational hazards.

He underwent a renal biopsy at 58 years of age and was subsequently treated with losartan potassium 12.5 mg, amlodipine 5 mg and atorvastatin 10 mg. Since then, there have been no additions or changes in his medication.

He smoked 20 cigarettes a day between the ages of 20 and 25. He was a social drinker.

During hospitalization after the surgery, his cardiovascular examination findings were normal, lungs were clear to auscultation, and abdominal examination was unremarkable. The peculiar facial features found in acromegaly did not change. Neurological examination was completely unremarkable. No abnormal findings appeared after the surgery. His pulse rate was 74 beats/min with sinus rhythm. His blood pressure was 105/64 mmHg. His body temperature was 36.8 °C (celsius) at the last admission.

We measured the pulse rate, blood pressure and body temperature three times a day for three days, before and three months after the surgery.

The patient's pulse rate significantly decreased from 87.33 ± 6.62 beats/min before the surgery to 76.89 ± 3.81 beats/min after the surgery (n = 9 at both points; p <0.05).

The preoperative systolic blood pressure was 94.44 ± 8.55 mmHg, and the postoperative systolic blood pressure was 104.89 ± 7.12 mmHg, with no significant difference (n = 9 at both points; p = 0.22).

The preoperative diastolic blood pressure was 66.44 ± 6.40 mmHg, and the postoperative diastolic blood pressure was 67.56 ± 6.31 mmHg, with no significant difference (n = 9 at both points; p = 0.74).
The preoperative body temperature was 36.47 ± 0.19 °C, and the postoperative body temperature 36.6 ± 0.17 °C, with no significant difference (n = 9 at both points; p = 0.2).

We followed the patient every two months for eight months after the surgery in order to measure the spot urine protein/creatinine ratio and HbA1c level. The patient's spot urine protein/creatinine ratio significantly improved from 1.65 ± 0.71 g/gCr before the surgery to 0.93 ± 0.34 g/gCr after the surgery (n = 5 at both points; p < 0.05). The patient's HbA1c level significantly improved from 6.32 % ± 0.1 % before the surgery to 6.08 % ± 0.1 % after the surgery (n = 5 at both points; p < 0.05).