Significant Cutaneous Improvement within Two Months of Surgery

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A 38-year-old male had 4 years history of type 2 diabetes mellitus with no micro- or macrovascular complications. He was on 1,000 mg of Metformin twice daily. He had excessive sweating and progressive facial changes. Physical examination was notable for enlarged extremities with thick skin, deep nasolabial folds, and coarse facial features (Fig. 1a). His labs showed A1c of 7.2%, random growth hormone (GH) 11.9 mcg/L and insulin-like growth factor-1 (IGF-1) level 128.2 nmol/L (NR: 12.4–28.3). Pituitary MRI revealed a 1-cm adenoma. Within 2 months of surgery, he noted significant improvement in his facial appearance (Fig. 1b). Also, his glycemic control had improved and he was able to stop metformin within 6 months of surgery. Labs showed normal IGF-1 and GH, and his A1c dropped to 6.1%. Repeat pituitary MRI showed complete resection of the pituitary adenoma. At his last visit (4 years after surgery), his IGF-1 remained within normal range, and his HbA1c was 6.2% on diet control alone.

What is your diagnosis?

Fig. 1. Facial changes before (a) and after (b) successful adenoma resection.

Acromegaly is a rare disease with increased morbidity and mortality [1]. Chronic exposure to high levels of GH and IGF-1 leads to profound changes in many body systems, including the musculoskeletal and integumentary system [2]. Common skin features in acromegaly include facial wrinkles, deep nasolabial folds, thickening of skin, sweating, and large nose and lips [3]. Achieving disease control is associated with improvement of cutaneous, metabolic, respiratory, and cardiovascular manifestations of acromegaly in addition to reduction in mortality [4]. However, the time to which these changes occur, especially the cutaneous findings, is not well established. Our patient had a significant and prompt improvement of his facial features (Fig. 1b) within 2 months of surgery. Similarly, he achieved a remarkable glycemic control off metformin. This case highlights the amelioration of the cutaneous and metabolic complications of acromegaly shortly after achieving disease control.

Statement of Ethics

The patient gave a written informed consent to publish their case, including the images.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Keywords

Pituitary adeoma · Acromegaly · Surgery · Skin manifestations

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