CORRECTIVE RHINOPLASTY FOR ENLARGEMENT OF NOSE DUE TO ACROMEGALY

Case Report

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It must be extremely uncommon to be confronted with a young woman who complains that her nose has been growing during the past 3 years. This patient requested that her nose be made smaller by an operation. Further questioning revealed that her other facial features, and also her hands and feet, had been growing in size during this time. We assumed that the patient's complaint was due to acromegaly, and she was referred to the endocrinology out-patient clinic for investigation.

CASE REPORT

A 28-year-old woman presented with coarse facies and spade-like hands and feet. She had been suffering from headaches for the past 3 years, but no visual disturbances were reported. Her menstruation had become irregular during this period.

Laboratory Investigations

Plasma Human Growth Hormone (HGH) levels, assessed by radio-immuno assay, were considerably in excess of normal (10 mg/ml), as can be seen from Table I.

The Protein Bound Iodine (7.2 percent) was within normal limits.

The glucose tolerance test was significantly impaired.

TABLE I

<table>
<thead>
<tr>
<th>Time</th>
<th>Value</th>
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<tbody>
<tr>
<td>0</td>
<td>20 mg/ml</td>
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<tr>
<td>30 min</td>
<td>20 mg/ml</td>
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<tr>
<td>60 min</td>
<td>20 mg/ml</td>
</tr>
<tr>
<td>90 min</td>
<td>17.75 mg/ml</td>
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<tr>
<td>120 min</td>
<td>18.25 mg/ml</td>
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</table>

From the Departments of Plastic Surgery and Endocrinology of the Rambam University Hospital and the Aba Khoushy School of Medicine.

X-ray films of her skull showed enlargement of the sella turcica, and the posterior clinoid processes were thinned from pressure.

X-ray films of her hands and feet showed no bony changes.

A lateral X-ray view of the heel showed the distance between the skin and the calcaneus to be 30 mm, which is a finding indicative of acromegaly (normal is 20 to 22 mm).

The visual fields were normal.

Treatment

She was treated by cobalt radiation to the hypophysis (4000 rads given over a period of one month). Eighteen months after the conclusion of the radiation, the patient was considered to be a suitable candidate for a corrective rhinoplasty (Fig. 1, left). Meanwhile, she had noticed a definite reduction in the size of all her previously enlarged features. Her weight had dropped by 7 kg, her feet had become two sizes smaller, her wedding ring was loose on her finger (Fig. 2), and her headaches had disappeared.

At this time we did a corrective rhinoplasty under local anesthesia. The postoperative course was uneventful (Fig. 1, right).

DISCUSSION

Acromegaly is due to the post-pubertal production of excessive growth hormone by an acidophilic adenoma of the anterior lobe of the pituitary gland. The commonest age for acromegaly to develop is between the third and fifth decades. There does not appear to be any difference in the incidence of this growth between males and females. However, because women are more sensitive to their appearance they are more
distressed by coarsening facial features and tend to seek improvement through plastic surgery, as happened in this instance.

If the pituitary tumor is untreated the hands, feet, and facial features continue to enlarge. The anterior lobe of the pituitary also continues to expand, with erosion of the sella turcica. Pressure on the optic chiasma may lead to narrowing of the visual fields (e.g. a bitemporal hemianopia). Compression of non-tumorous pituitary tissue may also cause signs of other pituitary hormone deficiency. Signs of hypogonadism

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**Fig. 1.** (left) Acromegalic patient who had had cobalt radiation 18 months previously. The facial features are still coarse, although they did regress following the treatment. (right) After a corrective rhinoplasty.

**Fig. 2.** The shape of the spade-like hands remained after the radiation treatment for acromegaly.
may appear with decreased libido and with menstrual disturbances.4

The treatment for acromegaly may be external radiation, the introduction of radioactive material, cryosurgery, or surgical ablation of the adenoma. It would appear that surgical ablation is the most hazardous but offers the best prospects for cure.4

To our knowledge no similar case has appeared in the plastic surgical literature. However, to quote from Nelson and Thorn,4 “Because of permanent disfiguration which acromegaly produces, the progress of the disease must be watched closely, particularly in women, and earlier surgical intervention should be considered in an attempt to minimize the cosmetic complications. Although successful therapy will not reverse the bony changes, the decrease in hypertrophy of the skin and subcutaneous tissues may produce an important improvement in appearance.”

SUMMARY

We describe a case of acromegaly with nasal enlargement. After cobalt radiation to the pituitary and an observation period of 18 months, a corrective rhinoplasty was done with a good result.

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REFERENCES

PLANTAR LICHEN PLANUS—TREATMENT BY EXCISION AND SKIN GRAFTING

Case Report

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Lichen planus is a chronic skin disorder characterized by pruritic, papular, and violaceous lesions; it is most commonly found on the trunk, on the flexor creases of the upper extremities, and on the oral mucosa.1

An unusual variant of lichen planus is characterized by ulcerative bullae of the feet and toes, loss of the toenails, and cicatricial alopecia of the scalp.2-5 Our case is unusual in that the patient did not lose hair or nails, but did require skin grafting for plantar ulcerations.

CASE REPORT

A 21-year-old female was seen at the University of California Hospital in San Francisco in 1961 with lesions present on her oral mucosa, chest, palms, and soles; these were biopsied and diagnosed as lichen planus.

During the next 12 years she was treated with several long-term courses of corticosteroids, both locally and systemically. In addition, she received a single course of low-voltage radiation (Grenz ray) to both soles; she had systemic chloroquine on one occasion.

Unfortunately, none of these produced a lasting remission and she was hospitalized several times because of recurrence of her original complaints of inability to grasp or walk. She was also hospitalized for several serious complications of the steroid therapy—including severe osteoporosis with compression fractures of several lumbar and thoracic vertebrae, aseptic necrosis of the right femoral head, gastroesophageal reflux, and diabetes mellitus.

The patient was first seen on our plastic surgical service in June, 1973, at which time the lichen planus was confined to her palms and soles. She had difficulty in grasping and in holding objects; she had been unable to walk for more than one year. The soles of her feet were scarred and contracted, and her toes were misshapen and stiff (Fig. 1, left).

![Fig. 1](image1)

Fig. 1. (left) Preoperative view, showing plantar lichen planus and scarring on the soles of the feet. (right) The skin grafted soles, two weeks postoperatively.

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In July, 1973, almost the entire weight-bearing surface of both feet was excised; all of the affected areas were removed. The resulting defects were covered by thick split-skin grafts from her buttocks (donor areas which had never been involved in the lichen planus). Healing of the grafts and donor sites was excellent (Fig. 1, right). The patient remained in bed for 3 weeks.

To protect her toes and the skin grafts while walking, a form-fitting silicone rubber* boot was constructed for each foot. (Her feet were covered with petrolatum and the silicone rubber mix was poured over them to produce an exact negative mold of her feet in approximately 20 minutes. The mold was allowed to cure for 24 hours and was trimmed then to remove any sharp edges.) The boots were held in place by elastic bandages as walking was begun, 3 weeks postoperatively.

She was discharged from the hospital 6 weeks after grafting (Fig. 2), walking well in her form-fitting boots. At 2½ months postoperatively she began wearing conventional footwear without difficulty or injury to her skin grafts.

Four months after her hospitalization, an attempt was made to gradually reduce her steroid dosage from 40 mg of prednisone per day to 10 mg per day. Upon reaching the latter dose, a severe exacerbation of her palmar lesions developed—but the grafted areas on her feet remained free of lesions. Elevation of the prednisone levels to 40 mg per day controlled her palmar lesions.

She developed a small 0.5 cm traumatic ulcer of her right heel 6 months after the operation, but this healed quickly after we used conservative measures. She has had no recurrence of the plantar lichen planus and is now 1½ years after the operation.

**DISCUSSION**

In 1951, Morgan excised an area of lichen planus on the plantar surface and skin grafted the defect, in one patient. Subsequently, Cram et al. reported two more patients who had successful skin grafts after the affected skin was excised. Lendrum recently reported a successful result after excision and skin grafting.

* Dow Corning industrial grade silicone

Contrary to expectations, the grafted skin has not been affected by exacerbations of the lichen planus.

The split-skin grafts in all the reported cases, as well as in our own, were serviceable on weight-bearing surfaces.

In making the silicone boots, caution should be exercised when pouring the silicone from its container against newly healed skin grafts, fresh wounds, or otherwise traumatized epithelium. Most industrial grade silicones elute acetic acid which may be harmful to the skin. Therefore, we recommend covering the foot with a thin layer of petrolatum, Xeroform gauze, or Saran wrap when making the boot and then allowing the boot to “air cure” for 24 hours prior to use by the patient. Also, one should warn the patient that silicone rubber is occlusive and prolonged wearing of the boot may cause maceration of the skin. (The patient should wear thin, clean,
cotton stockings beneath the boots to minimize this risk.)

SUMMARY

Ulcerative bullous lichen planus of the plantar surfaces is a rare variant syndrome, which can result in the inability to walk. Thirteen cases have been reported, 4 successfully treated by excision and skin grafting. We add another case to the literature.

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REFERENCES