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Oral Rehabilitation in a patient with Acromegaly background

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ABSTRACT

Acromegaly is a rare endocrine disorder characterized by excessive secretion of growth hormone (GH), typically caused by a GH-secreting pituitary adenoma. Elevated GH levels result in an overproduction of insulin-like growth factor 1 (IGF-1), leading to distinct craniofacial and skeletal abnormalities. Clinical features often include coarse facial characteristics, frontal bossing, prognathism, malocclusion, thickened lips, enlarged hands and feet, and impaired glucose tolerance.
Dental management of patients with acromegaly poses unique challenges due to unpredictable craniofacial growth patterns, complicating long-term oral rehabilitation.

CASE PRESENTATION

A 73-year-old woman presented to the dental clinic with the chief complaint, "My teeth have shifted, and I want to smile and chew normally. I just need some help." She reported long-standing dissatisfaction with her smile and difficulty chewing, after numerous unsuccessful dental treatment attempts. This visit was her last resort in finding help. During the clinical examination, the following issues were observed: Class III malocclusion, deep overbite with collapsed posterior occlusion, multiple missing teeth, generalized tooth wear and displacement, restorations, excessive alveolar bone growth in both the maxilla and mandible, and significant palatal tori. The patient had been diagnosed with acromegaly at the age of 40 and had struggled to receive dental treatment due to the progressive nature of her condition and healthcare providers' reluctance to intervene.
Over time, she experienced tooth loss and worsening occlusal collapse, which exacerbated her functional limitations. The patient had a history of surgical resection of a pituitary adenoma 20 years prior. She is currently stable under endocrinologic care.

Fig 1. Pre-operative photos and radiograph.

TREATMENT APPROACH

Due to the complexity of her condition and financial constraints, the patient chose to use removable prostheses as a temporary solution while she saved for future fixed restorative treatment. In the first phase of her treatment, she underwent the removal of palatal tori and managed the procedure well. The second phase involved a full-mouth extraction and alveoplasty for both the maxilla and mandible, followed by the delivery of immediate complete dentures. These prostheses are designed to restore the occlusal vertical dimension, improve function, and help determine the ideal position for future definitive prosthetics. The patient understood that a second round of alveoloplasty and different sets of interim dentures may be necessary. Currently, she is wearing maxillary and mandibular interim complete dentures and is pleased with the results.

Fig 2. Post-operative photos and radiograph.

CLINICAL SIGNIFICANCE

This clinical case emphasizes the challenges of oral rehabilitation in patients with acromegaly disorder. A phased and flexible treatment plan that includes interim prostheses is essential for restoring both function and aesthetics. Interim prostheses are crucial in the treatment planning process and help patients adapt, especially when financial and physiological constraints postpone definitive therapy.

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