

原文題目(出處)：	Dental abnormalities in pituitary dwarfism: A Case report and review of the literature. Case Rep Dent Volume 2017, Article ID 5849173
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I. Introduction

Pituitary dwarfism 垂體性侏儒症

- the body fails to use the pituitary growth hormone (GH)
- congenital(rare) or acquired 先天(罕見)或後天
- nonsecreting adenomas 腺瘤
- ischemic necrosis of the pituitary gland 缺血性壞死
- surgical removal or irradiation of the pituitary adenohypophysis 手術切除或放療

Hormone deficiency

- no or decreased production
- inadequate absorption by the tissues responsible
- period of onset : expressed either in childhood or in adulthood

If expressed in childhood:

- Characteristic : underdeveloped forehead or retrognathism, small nose, childish face, and thin skin
- the maxilla and mandible being abnormally small
- lead to tooth malformation
- hypodontia, delayed tooth eruption, abnormalities of tooth shape and size, and double or impacted teeth.
- The skeletal age is below the stature age
- height below 120cm

II. Case Presentation

- A woman of 50 with very short stature (affected by pituitary dwarfism)
- Hypodontia together with multiple abnormalities, including tooth shape, small size, and double teeth (圖 1, 2)
- Panorex : five impacted teeth; fused roots of tooth 32-33 (圖 3) - rejected any form of removable partial denture.
- Fixed ceramic prosthesis : 43-42-41-x-32-33 (with zirconium substructure)
- tooth prepare→ impression→ temporary prosthesis→ delivery(圖 4)



圖 1: Initial clinical situation



圖 3: multiple dental anomalies: hypodontia, radicular fusion of tooth 32-33, and impacted permanent teeth.



圖 2: The initial situation



圖 4: The final phase of prosthetic rehabilitation.

III. Discussion

The anterior lobe of the pituitary gland :

- secretes :

- Growth hormones 生長激素(GH)
- Prolactin 泌乳激素(PRL)
- Thyroid stimulating hormone 促甲狀腺素(TSH)
- Follicle stimulating hormone 促濾泡生成素(FSH)
- Luteinizing hormone 黃體生成素(LH)
- Adrenocorticotrophic hormone 腎上腺皮質素(ACTH)

- Metabolic control, puberty and reproduction, stress response, and lactation

Etiology of pituitary hormone deficiency :

- genetic background
- environmental factors

Literature search :

- ✓ 57 cases with the presence of numerous anomalies (in particular 13 abnormalities in pituitary dwarfism)-- searching in PubMed for “oral cavity hypopituitarism”)

TABLE 1: Incidence of dental anomalies in pituitary dwarfism resulting from a search of PubMed for “oral cavity hypopituitarism” (ordered from most to least frequent abnormalities).

Oral abnormalities in pituitary dwarfism	Reported percentage incidence	Presence/absence in the case reported
Periodontal disease	98%	Present
Orthodontic malocclusion	95%	Present
Small size of the maxilla and mandible with overcrowding of teeth	95%	Present
Retention of permanent teeth in maxillary and mandibular shafts	75%	Present
Marked delay in eruption of permanent teeth	72%	Present
Delayed shedding of deciduous teeth	69%	Undefined
<u>Solitary median maxillary central incisor</u>	<u>59%</u>	<u>Absent</u>
No resorption of roots of deciduous teeth at the usual time	55%	Undefined
Development of apical parts of roots of retained permanent teeth and their growth toward the lower mandibular edge	55%	Present
Tilting of some of the retained teeth	35%	Present
<u>Displacement of first molars from the shaft to the ascending branch of the mandible</u>	<u>10%</u>	<u>Absent</u>
Complete absence of buds of wisdom teeth, even in patients in the fourth decade of life	10%	Present
Radicular fusion with crowns completely separate and independent	0%	Present

- Solitary median maxillary central incisor : occurred in almost 60% of cases of dwarfism
- deficient number of teeth, including diffused or generalized hypodontia : hypothesized the most frequent anomaly.

The case reported here:

- She had not received GH replacement therapy nor thyroid, gonadal, or corticoid replacements.
- very short stature (about 120 cm).
- had 69.2% of all reported anomalies of dwarfism.(表格列出 13 種只有 2 種沒有)
- not associated with any other particular disorder

Challenging:

- Prosthetic rehabilitation in the aesthetic zone 美觀區
- Patients with serious syndromes or hormonal dysfunction

Solution:

- a conservative therapeutic 保守治療
- Fixed prosthesis— the metal most used :zirconium 鋳
- frequent followups are essential

IV. Conclusion

A good prosthetic rehabilitation can be achieved without resorting to surgery

V. Question

題號	題目
1	下列哪項不是垂體性侏儒症常見的異常? (A) Hypodontia (B) Short stature (C) Macrodonia (D) Delayed shedding of deciduous teeth
答案 (C)	出處：Oral and Maxillofacial PATHOLOGY, Chapter17,Pituitary Dwarfism, p.831
題號	題目
2	下列何者關於 Hypodontia 的敘述不正確 ? (A) Genetic control appears to exert a strong influence on the development of teeth. Thus disordered expression of some genes might be implicated in the etiology of hypodontia. (B) The number of missing teeth in a patient with anodontia is less than the number of missing teeth in a patient with oligodontia. (C) Most commonly involves the third molars, second premolars, and maxillary lateral incisors. (D) Hypodontia is uncommon in the deciduous dentition.
答案 (B)	出處：Oral and Maxillofacial PATHOLOGY, Chapter 2, p.77-82, [Developmental alterations in the number of teeth]