J Oral Med Oral Surg 2018;24:149-150
https://doi.org/10.1051/mbcb/2018014

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JOMOS
Journal of Oral Medicine and Oral Surgery

Short Case Report

A case of isolated aglossia

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(Received: 1 April 2018, accepted: 12 June 2018)

Keywords:
speech defects / tongue / malocclusion

Abstract – Introduction: Aglossia is a rare condition of failure of development of the lateral lingual swellings during embryogenesis and is usually associated with other deformities especially the fingers and limbs. Isolated aglossia is extremely rare. **Observation:** This is a case report of a 21-year-old patient with isolated aglossia whose floor of the mouth compensated for the tongue's absence in speech, eating and swallowing. Thus the patient did not express any disability and refused reconstructive treatment. **Commentaries:** Aglossia may be accompanied by many deformities or as part of a syndrome, so other symptoms must be excluded. The floor of the mouth usually adapts to the role of the tongue leading to fulfillment of most of the functions of the tongue. **Conclusion:** Aglossia is a rare condition, however the adaptation of the surrounding tissues compensated for the absence of the tongue makes the condition tolerable to the patient, this however does not undermine the fact that a multidisciplinary approach is key in managing such a condition.

A 21-year old male patient presented to the Cairo university dental diagnosis clinic with a chief complaint of acute pulpitis. The patient's medical history revealed no systemic diseases nor allergies. He had a dental history of multiple extractions. On examination, the patient was found to have no tongue, only a small tubercle in place of the posterior part of the tongue. He suffered from malocclusion in the form of crowded teeth especially in the lower arch where the lower alveolar ridge was extremely small and malformed. The floor of the mouth was elevated bilaterally (Fig. 1).

The patient had no craniofacial deformities, normal cranial nerve function and normal extremities. He had no trouble swallowing and his speech was comprehensible, however his pronunciation was off. It was noted that the floor of the mouth had adapted to substitute for the function of the tongue. The patient was not aware he had any anomalies and refused any reparative or reconstructive intervention.

Aglossia is a rare anomaly where the lateral lingual swellings and the tuberculum impar fail to develop during embryogenesis [1]. Aglossia is rarely isolated and is usually accompanied by other anomalies such as adactyly, mental retardation, short stature and craniofacial deformities as micrognathia, cleft palate or lip, facial asymmetry and partial anodontia [1,2]. Aglossia whether isolated or in association with other symptoms may be due to Folic acid deficiency [3], maternal febrile illness, infection, hypothyroidism or vascular disruption during tongue development [4].

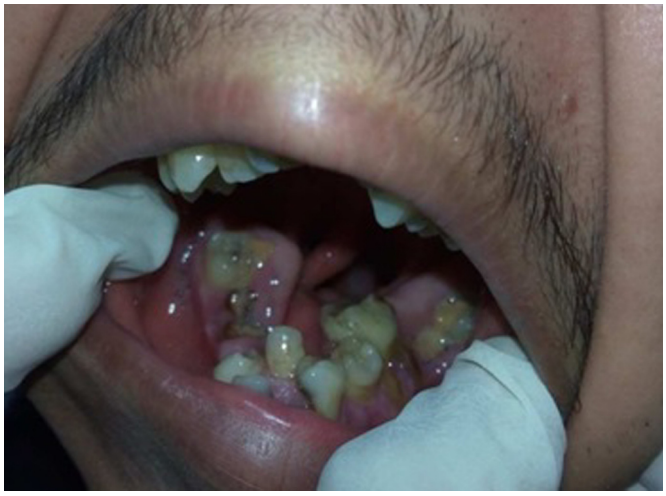

Fig. 1. Showing malaligned teeth in the mandibular arch, along with absence of the tongue.

The tongue is responsible for speech, swallowing, sucking, taste and jaw development. In its absence, the floor of the mouth has a remarkable ability to hypertrophy and adapt to the functions of the missing organ in swallowing and mastication [2]. The uvula enlarges to close the oropharynx to force the air through the nasal passage for the articulation

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of the nasal passage [2]. However, a multidisciplinary approach to treatment remains a necessity to correct the inevitable dentofacial deformities such as malocclusion, clefting or maldeveloped mandible. The main objective for treatment is usually arch expansion. Salles *et al.* used distraction osteogenesis to correct the alveolar ridges and give sufficient space for tooth eruption. This is in addition to orthodontic treatment and speech and hearing therapy to help the patient adapt to all these corrections [5]. In another case reported by Gupta, 2012, arch expansion was achieved by autologous rib graft [2]. In conclusion, isolated aglossia is a rare anomaly that causes many functional problems, however through development and adaptation, the rest of the surrounding tissues can make up for the missing organs and restore function.

Conflicts of interest: The authors declare that they have no conflict of interest in relation to this article.

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