Bilateral Parotid Gland Aplasia: Original Image

BİLATERAL PAROTİS BEZİ APLAZİSİ

Banu ALICIOĞLU, MD,[a] Levent SAYDAM, MD,[b] Yasemin KARADENİZ BİLGİLİ, MD,[c] Mehmet ÇAMURDANOĞLU, MD[a]

Departments of [a]Radiology, [b]Otolaryngology, Bayındır Kavaklıdere Private Hospital, ANKARA
[c]Kırıkkale University, School of Medicine, KIRIKKALE

Congenital absence of the major salivary glands, especially the parotid gland, is a rare occasion. The etiopathogenesis of this condition is poorly understood. Aplasia of the parotid glands may be unilateral or bilateral and may occur alone or with other developmental anomalies of the first branchial arch such as hypoplasia or aplasia of the lacrimal glands, hemifacial microsomia, mandibulofacial dysostoses, and multiple congenital anomalies.[1-4] Agenesis may be partial or total; more severely affected patients suffer from a dry mouth, an increased rate of dental decay and difficulty in wearing dentures.[2]

A 35 year-old woman presented with intermittant low cervical pain for the last two months. Physical examination of the head and neck was normal except for the absence of the parotid papillae bilaterally. The oral hygiene was good and no xerostomia was noted. Initially an US examination of the neck was performed and both parotid glands were not visualized. T1, T2 weighted transverse magnetic resonance imaging (MRI) scans confirmed the diagnosis of true parotid gland aplasia (Figures 1, 2). Bilateral submandibular glands were normal. The patient had no symptoms associated with the absence of parotid glands. On clinical re-examination, the oral mucosa was wet and the other major salivary glands were functional. Bilateral hemifacial contour was normal, and there were no depressions in both preauricular regions. Bilateral lacrimal punctuae were present. The available family members of the patient were examined, and they had no abnormality related with parotid glands.

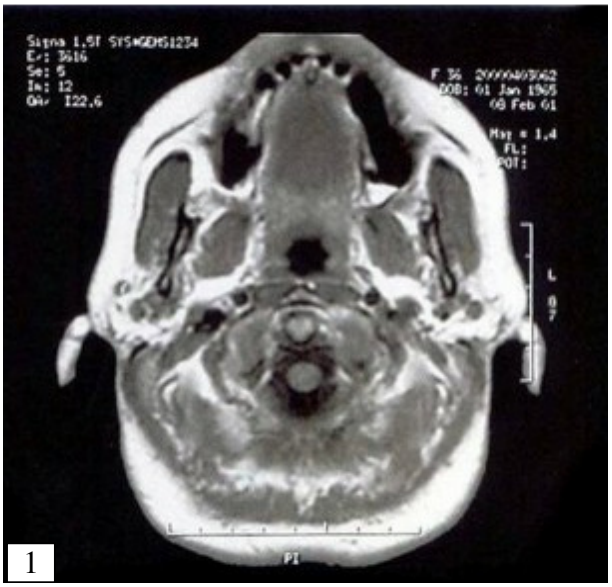
Agenesis of major salivary glands may be partial or total. The true incidence of aplasia of the parotid gland is difficult to ascertain because the condition is often asymptomatic. Because saliva will also be produced by submandibular, sublingual and minor salivary glands, mucosal dryness will not develop and parotid gland aplasia is not noticed by the patient in majority of cases. Clinical suspicion should arise if the papillae of the salivary gland ducts are absent. Total agenesis leads to marked reduction in salivary flow, which usually results with mucosal dryness, an increased incidence of oropharyngeal infection, premature loss of teeth and extreme difficulty in wearing dentures. There is also a recognized association with lacrimal punctum aplasia and agenesis of the lacrimal glands. This may also be a feature of first and second branchial arch anomalies occasionally seen in mandibulofacial dysostosis and in cases of hemifacial soft tissue and cranial nerve defects.[1-3]

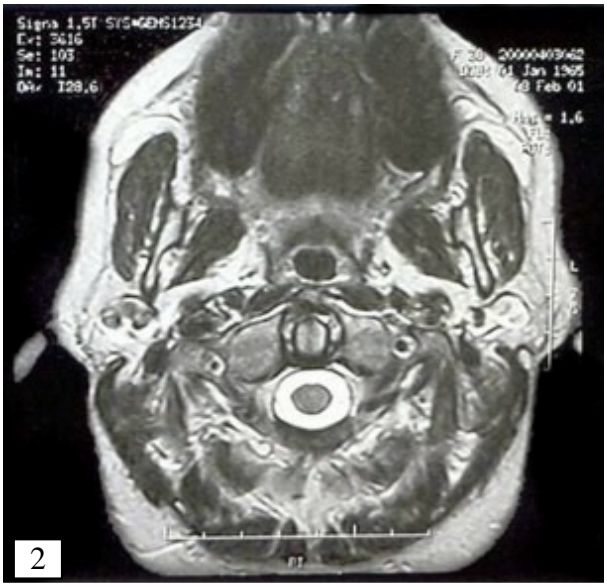
Imaging is fundamental for diagnosis of salivary gland diseases. US imaging should be carried

Geliş Tarihi/*Received:* 22.03.2205 **Kabul Tarihi/*Accepted:*** 07.06.2005

This case was submitted as poster at 22th National Radiology Congress (Antalya) in October 2001.

Yazışma Adresi/*Correspondence:* Banu ALICIOĞLU, MD
Bayındır Kavaklıdere Private Hospital,
Department of Radiology, ANKARA
banu_alici@yahoo.com





Figures 1, 2. T1, T2W transverse MRI shows bilateral absence of parotid glands and replacement of glandular beds by fat, no accessory glandular tissue was found.

out first, on both sides, in order to rule out unexpected contralateral aplasia. Coronal and transverse computarized tomography (CT) and MR scans have a high sensitivity and specificity with regard to soft tissues. Salivary gland scintigraphy with technetium-99m pertechnetate is another simple, rapid, relatively safe, and noninvasive procedure, and is an indicator of salivary function, because pertechnetate is fixed and excreted by the glandular parenchyma. The presence of residual and/or ectopic glandular tissue can be easily excluded.[1] Correlation of these imaging studies with clinicopathological findings allows a specific diagnosis of agenesis to be made.

Aknowledgement

I would like to express my gratudes to Özlem Karagözler for proof reading the article in English.

REFERENCES

1. Almadori G, Ottaviani F, Del Ninno M, Cadoni G, De Rossi G, Paludetti G. Monolateral aplasia of the parotid gland. Ann Otol Rhinol Laryngol 1997;106:522-5.
2. Whyte AM, Hayward MW. Agenesis of the salivary glands: A report of two cases. Br J Radiol 1989;62:1023-6.
3. Martinez Subias J, Royo Lopez J, Valles Varela H. Congenital absence of major salivary glands. Acta Otorrinolaringol Esp 2000;51:276-8.
4. Wiesenfeld D, Iverson ES, Ferguson MM, Hardman FG, McMillan NC, Sagar JA. Familial parotid gland aplasia. J Oral Med 1985;40:84-5.