

*Case Reports***Foix-Chavany Syndrome:
CT Study and Clinical Report of Three Cases**G. Ferrari¹, C. Boninsegna¹ and A. Beltramello²¹Division of Neurology, S. Chiara Hospital, Trento, and ²Department of Neurosurgery, Service of Neuroradiology, Verona, Italy

Summary. The Foix-Chavany syndrome is a neurological entity characterized by linguo-bucco-facial apraxia almost always caused by disturbed cerebral circulation. Three typical cases of this syndrome are described and the role of the CT scan to obtain a definite diagnosis is emphasized.

Key words: Cerebrovascular disease – Foix-Chavany syndrome – Linguo-bucco-facial apraxia – CT scan

The Foix-Chavany syndrome is clinically characterized by loss of the voluntary function of the muscles of the face, tongue, mastication and swallowing with preservation of the reflex and automatic functions.

With the name of 'diplégie facio-linguo-masticatrice' this syndrome was described by Foix, Chavany and Marie in 1926 [3, 4] and recognized as an independent entity among the wide group of the pseudobulbar palsies by Alajouanine and Thurel in 1933 [1].

The neuropathological findings consist in bilateral, symmetrical cortico-subcortical lesions almost always of vascular origin, localized at the Rolandic operculum, inferior portion of Fa and base of F3 [2, 3].

Three typical cases of the Foix-Chavany syndrome are reported in this paper; in all of them the clinical diagnosis was confirmed by CT scan.

Case Reports

Case 1. A right-handed female, 41 years old, was hospitalized for sudden right hemiparesis and slight aphasia in October 1976, probably due to cerebral embolism from bacterial endocarditis. A CT scan performed 3 months later revealed a left frontotemporal hypodense area (Fig. 1). Later, some disturbances related to aortic valvular dysfunction became

evident, and the patient underwent a surgical operation in May 1977.

The next day she suffered from complete palsy of the voluntary movement of the muscles of face, tongue, pharynx and mastication associated with right hemiparesis. Reflex and automatic movements were preserved.

A second CT scan disclosed the previous left infarction and a symmetrical hypodense area in the right hemisphere smaller than the contralateral one (Fig. 2). The patient slowly improved and about 4

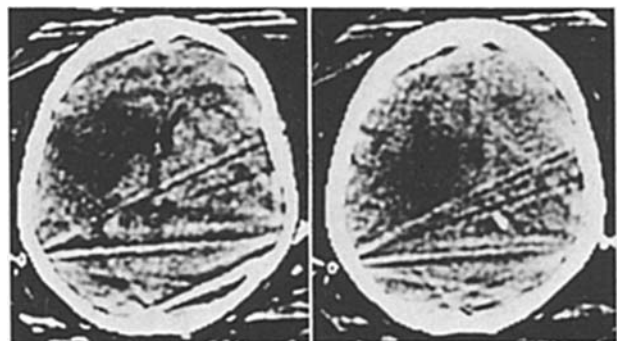


Fig. 1. Case 1. CT scan: left frontotemporal hypodense area

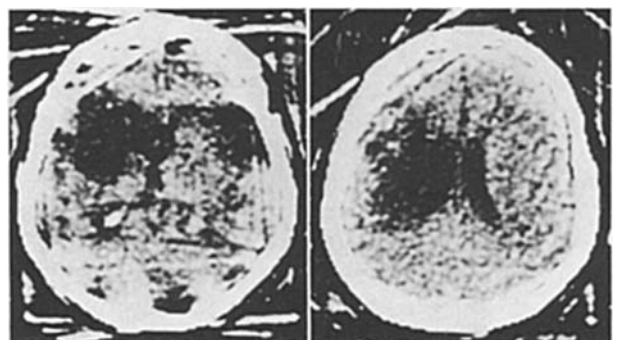


Fig. 2. Case 1. CT scan: previous lesion in left hemisphere; right symmetrical hypodense area of recent lesion smaller than the contralateral one

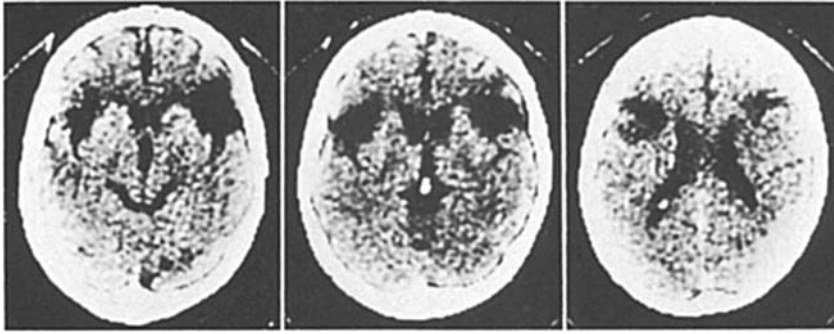


Fig. 3. Case 2. CT scan: two symmetrical hypodense areas affecting rolandic operculum bilaterally. Lesion on right is larger and also affects motor prerolandic area

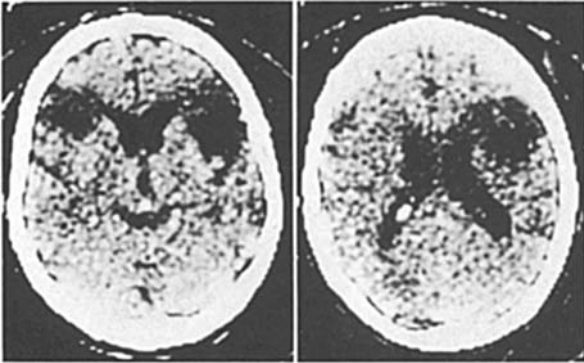


Fig. 4. Case 3. CT scan: two hypodense cortico-subcortical areas located almost symmetrically in inferior frontal gyrus and in rolandic operculum

months after operation, was able to speak and to eat by herself.

Case 2. A right-handed man, 65 years old, sustained facial diplegia with paralysis of the tongue, pharynx, vocal chords and uvula in December 1976. The reflex and automatic activities of the same muscles were preserved and the remaining neurological examination was normal. Seven years previously the patient suffered from a left faciobrachial paralysis, almost completely reduced.

A CT scan was performed in February 1977 which revealed two symmetrical hypodense areas affecting the rolandic operculum bilaterally (Fig. 3). The right lesion, probably produced by the previous infarct, was larger than the contralateral one and also involved the right motor prerolandic area. The clinical and neuroradiological pictures were unchanged in 1978.

Case 3. A right-handed man, 58 years old, suddenly sustained a linguo-bucco-facial apraxia with anarthria, inability to masticate and to swallow, without other neurological deficit in December 1977.

The patient suffered from aphasia 14 years before which completely improved within an hour. Moreover, 3 years previously he had an indefinite transitory confusional state associated with facial paresis. During the present hospitalization his symptoms improved and were replaced by aphasia, alexia and agraphia. There remained a central right facial palsy with expressive aphasia 3 months later.

A CT scan was performed and disclosed two hypodense cortico-subcortical areas located almost symmetrically in the inferior frontal convolutions and, bilaterally, in the rolandic operculum (Fig. 4).

Conclusions

1. The clinical pictures in our cases correspond with those reported in the literature for the Foix-Chavany syndrome.
2. All the patients have shown neurological manifestations, more or less serious and transitory, probably due to anoxia from disturbed cerebral circulation.
3. The linguo-bucco-facial apraxia is not likely to be a disease or a nosographic entity, but a syndrome which can characterize the course of a cerebrovascular disease. The clinical picture appeared with the same characteristics at a variable time from a previous stroke(s). In only one case (Case 2) it persisted in nature and severity.
4. The CT scan demonstrates bilateral lesions in the living and is the only neuroradiological procedure which can support the clinical diagnosis. Case 1, documented by CT scan before and after the onset of the linguo-bucco-facial apraxia, demonstrated the causality and necessity of bilateral lesions in order to produce the typical Foix-Chavany syndrome.

References

1. Alajouanine, T., Thurel, R.: La diplegie faciale cerebrale forme corticale de la paralysie pseudobulbaire. *Rev. Neurol.* **2**, 441-458 (1933)
2. Chateau, R., Fau, R., Gros Lambert, R., Perret, J., Boucharlat, J., Chatelain, R.: A propos de trois observations de diplegie linguo-facio-masticatrice d'origine corticale: la forme de l'adulte et celle de l'enfant. *Rev. Neurol.* **114**, 390-395 (1966)
3. Foix, C., Chavany, J. A.: Diplégies faciales d'origine corticale. *Ann. Méd.* 480 (1926)
4. Foix, C., Chavany, J. A., Marie, J.: Diplégie facio-linguo-masticatrice d'origine cortico-sous corticale sans paralysie de membres. *Rev. Neurol.* **1**, 214-219 (1926)

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