Dyke-Davidoff-Masson Syndrome in Two Children

Mete ÖZDİKİCİ MD*, Volkan TANI MD*, Suat EREN MD*, Çetin ÇELENK MD*

A three year old boy and a 12 year old girl with uniateral cerebral atrophy were diagnosed as Dyke-Davidoff-Masson syndrome using cranial computed tomography. Magnetic resonance imaging was also done in the second case. The findings were compared with the relevant literature.

Key Words: *Dyke-Davidoff-Masson syndrome, unilateral cerebral atrophy, radiology*

İki çocukta Dyke-Davidoff-Masson sendromu

Üç yaşındaki bir erkek ve 12 yaşındaki bir kız çocukta bilgisayarlı tomografide unilateral serebral atrofi bulguları ile Dyke-Davidoff-Masson Sendromu tanısı kondu. İkinci hastada manyetik resonans görüntüleme yöntemide kullanıldı. Sunulan olgular daha önce bildirilmiş literatürle karşılaştırıldı.

Anahtar kelimeler: *Dyke-Davidoff-Masson sendromu, unilateral serebral atrofi, radyoloji*

Unilateral cerebral atrophy or hypoplasia is named as Dyke-Davidoff-Masson syndrome. This syndrome was first defined by Dyke in 1933 (1). We detected two cases of this syndrome and present the radiological findings.

CASE REPORTS

CASE 1: First patient was 3 year old boy having cranial asymmetry and weakness of left extremities. On cranial computed tomography examination, there were atrophy of left cerebral hemisphere, displacement of mid brain system to left and ipsilateral ventricular dilatation (Fig 1).

CASE 2: A 12 year old girl had right sided hemiparesia and developmental retardation. This patient underwent cranial CT and MRI examinations. We detected left cerebral atrophy, displacement of mid brain system to left, minimal ventricular dilatation and porencephalic cyst ipsilateral to atrophy (Fig 2, 3a and 3b).

These findings led to the diagnosis of Dyke-Davidoff-Masson syndrome since no causative factors were identified after thorough history taking and clinical examination.

It is thought that there are two types of Dyke-Davidoff-Masson syndrome; congenital and acquired. The cause of congenital form is a vascular brain damage in intrauterine life. In the acquired form, trauma, infection, vascular

* Department of Radiology, Research Hospital, Atatürk University, Erzurum.

Fig 1. Cranial CT of the first patient.

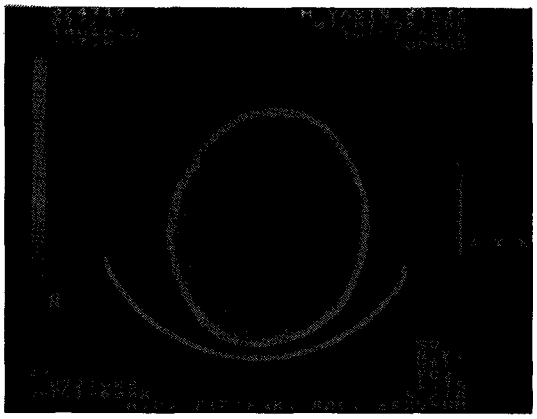
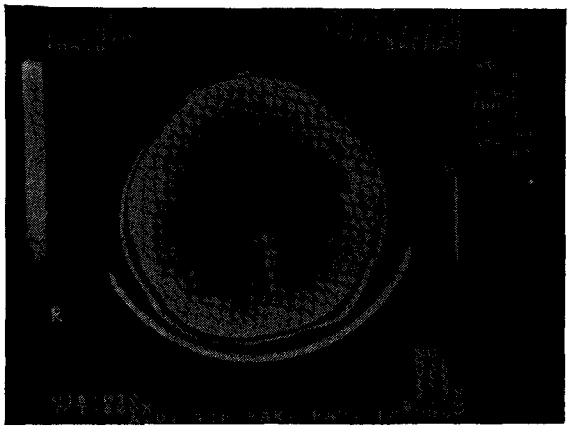


Fig 2. Cranial CT of the second case.



abnormalities and ischemic-hemorrhagic pathologies are suspected causes. The radiological diagnosis of this syndrome can be made by seeing unilateral cerebral volume deficiency and the compensatory changes of calvarial bones (2,3).

Clinically, craniofacial asymmetry, hemiparesia-hemiplegia, epilepsy and mental retardation may be present. Increase of diploeic distance, thickening of inner tabula, widening of paranasal sinuses and mastoids, displacement of mid brain system, lateral ventricular dilatation, volume decrease of white and gray matter and porencephalic cyst can be named as the changes

Fig 3a. T1 weighted MR image of the second case.

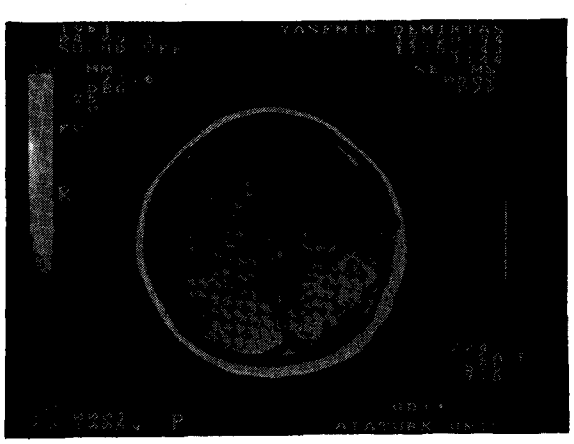
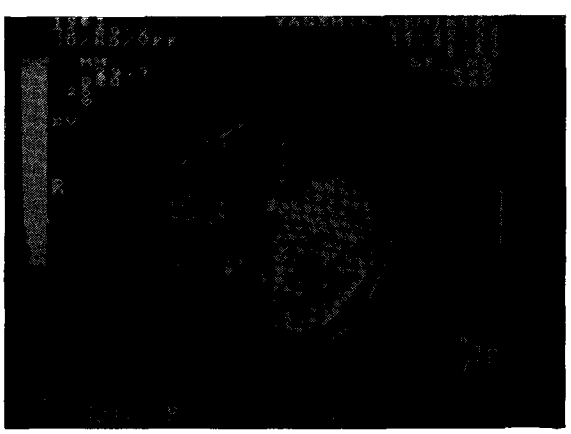


Fig 3b. T2 weighted MR image of the second case.



of calvarium and parenchyma lateral to cerebral hemiatrophy (4-6).

In our cases, we detected craniofacial asymmetry, displacement of mid brain, volume decrease of white and gray matter related with the atrophy, lateral ventricular dilatation and porencephalic cyst as the CT findings. CT and MRI examinations of these cases are reasonably helpful for the diagnosis and control.

REFERENCES

1. Zilkha A. CT of cerebral hemiatrophy. AJR 1980; 135:259-262.
2. Şener RN, Junkins JR. MR of craniocerebral hemiatrophy. Clinical Imaging 1992; 16:93-97.
3. Jacoby CG, Go RT, Hahn FJ. Computed tomography in cerebral hemiatrophy. AJR 1977; 1295-9.
4. Danziger A, Price HI. CT findings with cerebral hemiatrophy. Neuroradiology 1980; 19:267-271.
5. Maehara T, Machida T, Tsuchiya K, Lio M. Brain tumors with ipsilateral cerebral hemiatrophy. AJNR 1983; 4:478-480.
6. Yorulmaz İ, Kalaycıoğlu S, Örgüç Ş et al. Serebral hemiatrofi (Dyke-Davidoff-Masson sendromu) vakalarının BT ve MR ile görüntülenmesi. Radyoloji ve Tıbbi Görüntüleme Dergisi 1993; 1:63-68.

Correspondence Address:
Dr. Mete ÖZDİKİCİ
Atatürk Üni. Tıp Fak. Radyoloji Anabilim Dalı
ERZURUM

Tel: 0-442-3159163