



# A Fahr's Syndrome Case Presented with Vertigo

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## ABSTRACT

*Fahr's syndrome is a entity characterized by clinical and neuro-imaging findings. A 36-year-old man presented to emergency room with vertigo that started 3 days ago. On his neurologic examination there were horizontal nystagmus, dysmetria and ataxia. Blood calcium was lower than normal levels (5.3 mg/dl). He had seizures since the age of 17. We thought that patient diagnose Fahr's syndrome and got brain CT. Calcifications on brain CT were most prominent in dentate nucleus and bilateral basal ganglia. These patients diagnosed usually accidentally but we present a case presented with vertigo complaint and then diagnosed Fahr's syndrome.*

**Key words:** Fahr's syndrome, vertigo, emergency room

## Vertigolu bir Hastada Fahr Sendromu

### ÖZET

*Fahr sendromu klinik ve nöro-görüntüleme bulguları ile karakterize bir tablodur. 36 yaşında, erkek hasta 3 gün önce başlayan vertigo ile acil servise başvurdu. Nörolojik muayenesinde horizontal nistagmus ve ataksi vardı. Serum kalsiyum seviyesi normalden daha düşüktü (5.3 mg/dl). 17 yaşından bu yana nöbet geçiriyordu. Hastanın Fahr sendromu olabileceğini düşünerek beyin BT çek-tirdik. Beyin BT'de dentate nükleuslarda ve bilateral bazal ganglionlarda belirgindi. Bu hastalar sıklıkla tesadüfen tanı almakta olmasına rağmen vakamız vertigo ile başvurmuş ve Fahr sendromu tanısı almıştır.*

**Anahtar kelimeler:** Fahr sendromu, vertigo, acil servis

## INTRODUCTION

Bilateral symmetrical calcifications of the basal ganglia and cerebellar nuclei are denominated as Fahr's syndrome in 1930. Thereafter, the classical triads of this syndrome consisting of bilateral striopallidodentate calcinosis, hypoparathyroidism and neurological manifestations are defined (1). Fahr's syndrome is a entity characterized by clinical and neuro-imaging findings. Common clinical findings of the disease are characterizing headache, movement disorders such as parkinsonism, dystonia, chorea and ataxia, syncope, seizures and psychiatric symptoms (2). In this study; we presented a case of Fahr's syndrome presented with vertigo.

## CASE

Patients who present to the emergency department with complaints of dizziness complaints in relation to routine blood assays detected neurology consultation required with hypocalcaemia. Patient was not described seizure but he suffered from epilepsy since 17 ages. On his neurologic examination there were horizontal nystagmus, dysmetria and ataxia. Considered to be the central source of vertigo in patients with a history of epilepsy-existing hypocalcemia and Fahr's syndrome came to be considered. Captured supported our diagnosis of brain CT (Figure).

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**Figure.** Calcifications on brain CT were most prominent in dentate nucleus and bilateral basal ganglia

## DISCUSSION

Fahr's syndrome is characterized clinically by seizures, extrapyramidal and neuro-psychiatric signs as a result of bilateral diffuse calcifications of the basal ganglia, dentate nucleus and white matter (2,3). Intracranial calcifications are encountered accidentally in 0.3-1.2% of routine radiological examinations (4,5).

Endocrine disorders such as hypoparathyroidism are also important conditions in the etiology of the basal ganglia calcification (3). About half of the patients with basal ganglia calcifications exhibit neurological manifestations and deficits. Common clinical findings of the disease are characterizing headache, movement disorders such as parkinsonism, dystonia, chorea and ataxia, syncope, seizures and psychiatric symptoms (6).

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## REFERENCES

1. Manyam BV, Bhatt MH, Moore WD, Devleschoward AB, Anderson DR, Calne DB. Bilateral striopallidodentate calcinosis: Cerebrospinal fluid, imaging, and electrophysiological studies. *Ann Neurol* 1992;31:379-84.
2. Taxer F, Haller R, Konig P. Clinical early symptoms and CT findings in Fahr syndrome *Nervenarzt* 1986;57:583-8.
3. Harati Y, Jackson JA, Benjamin E. Adult onset idiopathic familial brain calcifications. *Arch Intern Med* 1984;144:2425-7.
4. Avrahami E, Cohn DF, Feibel M, Tadmor R. MRI demonstration and CT correlation of the brain in patients with idiopathic intracerebral calcification. *J Neurol* 1994; 241:381-4.
5. Beall SS, Patten BM, Mallette L, Jankovic J. Abnormal systemic metabolism of iron, porphyrin, and calcium in Fahr's syndrome. *Ann Neurol* 1989;26:569-75.
6. Fenelon G, Gray F, Paillard F, Thibierge M, Mahieux F, Guillani A. A prospective study of patients with CT detected pallidal calcifications. *J Neurol Neurosurg Psychiatry* 1993;56:622-5.