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HEREDITARY HEMORRHAGIC TELANGIECTASIA: A CASE REPORT

HEREDİTER HEMORAJİK TELANJİEKTAZİ: BİR OLGU SUNUMU

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Abstract
Hereditary hemorrhagic telangiectasia (HHT) is a rare autosomal dominant inherited disorder. The typical findings of the disease are telangiectasias in skin and mucous membranes, and arteriovenous malformations and aneurysms presenting in the organs like brain, lung, intestine and liver. A wide variety of clinical manifestations in HHT have been described. The most common symptom is epistaxis. Telangiectasias and visceral organ involvements occur later. We report a case of hereditary hemorrhagic telangiectasia with typical skin lesions and visceral organ involvement. (Anatol J Clin Investig 2010:4(1):51-54).

Özet
Herediter hemorajik telenjiektazi (HHT) otozomal geçiş gösteren, nadir görülen bir hastalıktır. Hastalığın tipik bulguları deri ve müköz membranlarda telenjiektaziler, beyin, akciğer, barsak ve karaciğer gibi organlarda oluşan arteriyovenöz malformasyonlar ve anevrizmalardır. Hastaların çoğu epistaksis nedeniyle başvurur, daha sonra telenjiektazi ve iç organ tutulumları gelişir. Tipik deri bulgularıyla birlikte okuler, gastrointestinal, pulmoner tutulumu olan ve HHT tanısı konan bir olgu bildirilmektedir. (Anatol J Clin Investig 2010:4(1):51-54).

Introduction

The Osler-Weber-Rendu syndrome or Hereditary Hemorrhagic Telangiectasia (HHT) is a rare systemic fibrovascular dysplasia which bears an alteration in the elastic and muscle layers of vessel walls, making them more liable to spontaneous ruptures and injuries [1,2]. The typical findings of the disease are telangiectasias in skin and mucous membranes, and arteriovenous malformations and aneurysms presenting in the organs like brain, lung, intestine and liver [2]. Complaint of 90% of the patients are epistaxis at the presentation, then telangiectasias and visceral organ involvements occur [3,4]. We report a case of hereditary hemorrhagic telangiectasia with typical skin lesions and visceral organ involvement.

Case

Sixty-eight years-old male patient applied to our clinic with multiple red dots on his face, finger tips and tongue. His complaints had begun at 20 years-old, and it increased recently. Similar lesions present in his mother and his sister. Besides, repetitive nasal bleedings exist in the patient. He was operated due to arterio-venous fistula in the lung twelve years ago. In dermatological examination, lots of telangiectasias were seen in his face, oral mucosa, tongue, finger tips and palms (Figure 1, 2). With the initial diagnosis of HHT, consultations were done. The Haematic dots of the patient were detected by the ear-nose-throat clinic in the upper and lower choanas and hard palate, and they were cauterized (Figure 3). In the ophtalmological examination, telangiectasias were examined in the bilateral conjunctivas (Figure 4). Gastrointestinal endoscopy reveals spider shaped angiodysplasic lesions in the bulbus and second part of the duodenum. Sclerotherapy was offered for these lesions (Figure 5). Thorax computerized tomography (CT) detected arteriovenous malformation in the left lung, pulmonary embolisation was recommended. Cranial magnetic resonance angiography examination and other system investigations were normal. Complete blood count, platelet count and coagulation test results were normal. With these findings, HHT was diagnosed, and the patient was taken into follow-up.

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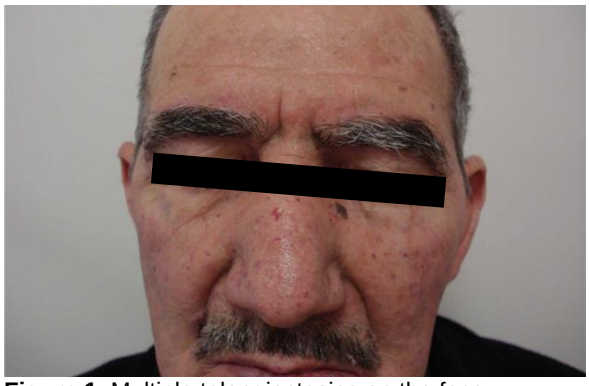

Figure 1. Multiple telangiectasias on the face.

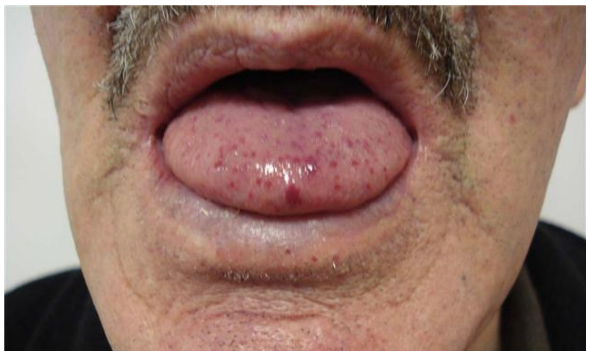

Figure 2. Multiple telangiectasias on tongue.

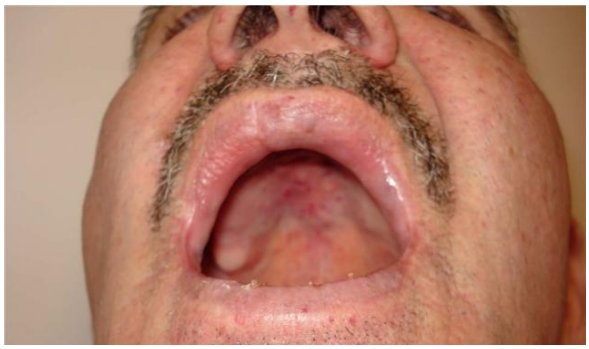

Figure 3. Telangiectasias on hard palate.

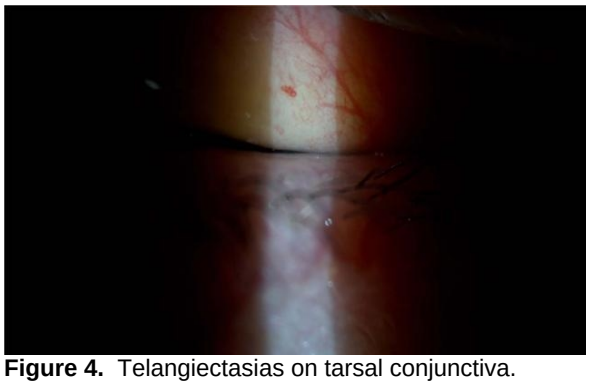

Figure 4. Telangiectasias on tarsal conjunctiva.

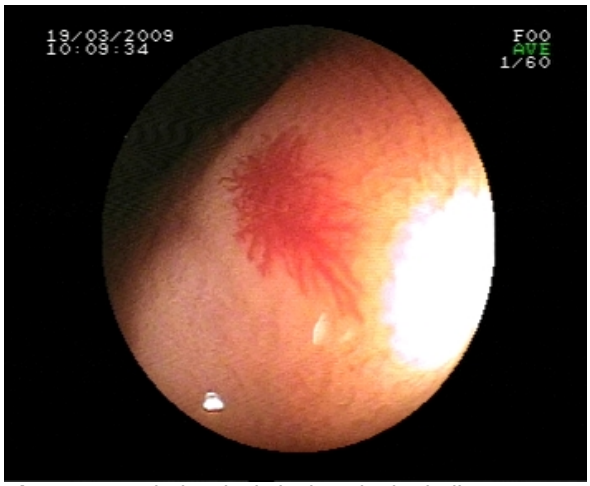

Figure 5. Angiodysplasic lesions in the bulbus.

Discussion

HHT is the hereditary rare systemic disorder of fibrovascular dysplasia with dominant autosomal transmission, despite the fact that about 20% of the cases do not have a family history; they could represent sporadic mutations [1].

HHT occurs with a wide geographic distribution among many ethnic and racial groups, but white patients are primarily affected. Men and women are affected equally [5-7]. In earlier studies the incidence of the disease was estimated at 1–2 in 100,000; however, HHT prevalence nowadays is more frequent than formerly thought [5]. HHT represents two related but discrete autosomal dominant diseases displaying a similar phenotype of vascular dysplasia involving the skin, mucous membranes, and viscera [1]. A genetic alteration at chromosome 9q3, which encodes the protein endoglin, is present in some families, and a distinct mutation at 12q, encoding ALK1, is seen in the second currently recognized form of HHT [8,9]. These proteins are closely related in that both are involved in serine-threonine kinase signaling within the endothelial cell. Possible phenotypic differences between the two forms of HHT are just beginning to be elucidated [9].

Clinical diagnosis is made based on the Curaçao Criteria, established by the Scientific Division of the HHT International Foundation [4-6]. Diagnostic criteria was shown in the table 1. The presence of 3 of all findings show definitive diagnosis, 2 findings of all show probable diagnosis [4-6].

Classical clinical finding is mucocutaneous telangiectasia that are situated in the nail bed, palm, lip, tongue, conjunctiva, ear, face, chest, nasal mucosa, palate and buccal mucosa [3,4,9]. Mucocutaneous telangiectasias occur in the 50-

80 percent of the patients. The lesions increase in size and number with age. Minor hemorrhages can occur, and can be diagnosed by inspection [1,5].

Table 1. Diagnostic criteria (Curaçao Criteria)

1) Epistaxis	Spontaneous and recurrent nasal bleeding
2) Telangiectasia	Multiple and in characteristic sites (lips, oropharynx, fingers and nose)
3) Visceral lesions	Gastrointestinal telangiectasia, pulmonary, hepatic, brain and spinal arteriovenous malformations
4) Family history	One first degree relative with HHT

Spontaneous recurrent hemorrhage result from telangiectasia of the nasal mucosa and is the most frequent clinical finding. It can be diagnosed with inspection. Epistaxis, hemangioma and hemorrhages resulting from gastrointestinal system may cause chronic anemia, low levels of serum iron and ferritin, high level of transferrin [5]. The patient had a complaint of recurrent epistaxis from time to time, but it had been decreased with the age [5].

Ocular abnormalities in HHT have been described in the literature, but generally as incidental findings. In the literature, eye involvement has been documented in 45–65% of patients with HHT, with the most common lesions being conjunctival telangiectasias usually of the palpebral conjunctiva [1,2]. Retinal arteriovenous malformations, retinal telangiectasia and choroidal haemorrhage during intraocular surgery have also been seen rarely [1-3,10].

Pulmonary arteriovenous malformations (pAVMs) consist of direct connections between a branch of a pulmonary artery and a pulmonary vein through a thin-walled aneurysm. They are often multiple and appear in both lungs, with a predilection for the lower lobes. It is estimated that approximately 60–70% of pAVMs occur in patients with HHT [5]. Our patient had pAVMs. It recrudesced although it had been operated before.

Cerebral vascular malformations (CVMs) and most of their complications are thought to affect up to 15% of patients with HHT. Neurologic symptoms can include migraine headache, brain abscess, transient ischemic attack, stroke, seizure, and both intracerebral and subarachnoid hemorrhage, particularly affecting those HHT patients who have a personal or family history of pAVMs [5].

Recurrent hemorrhage of the upper or lower GI tract occurs in a minority of patients with HHT. Usually, GI bleedings do not start until the fifth or sixth decade of life and often present as iron-deficiency anemia or occasionally as acute GI hemorrhage. Telangiectases occur throughout the GI tract, and are more commonly situated in the stomach or duodenum than in the colon [5,11]. We also detected anjiodysplasias in the bulbus and the duodenum of the patient. There was not any symptom of the patient, but we offer sclerotherapy.
Liver involvement with fistulas due to the presence of multiple AVMs or with atypical cirrhosis is a rare but important manifestation of HHT. Usually, platelet function and coagulation parameter of the patients with HHT are normal. Nonetheless, one case with concomitant von Willebrand's disease was reported [5]. Though many patients are asymptomatic, high cardiac output caused by left-to-right shunting within the liver can lead to heart failure. Cases with hepatomegaly, portal hypertension, biliary manifestation with pain in the right upper quadrant, jaundice and abdominal angina from a mesenteric arterial "steal" have been described [9].

Treatment is of palliative nature; there still is no consensus on the best treatment option. The important thing in these cases is to control the disease as long as possible [1]. Controlling the epistaxis is difficult. Options vary between anterior and posterior nasal packing and chemical or laser cauterization of the lesions, all the way to surgical treatment, such as dermoseptoplasty and nasal cavity obliteration through Young's approach [5,6,9]. For the pulmonary complications, classical treatment is surgery, but it is invasive. Nowadays, embolisation can be done, but long term results are not known [6]. In the treatment of small gastrointestinal hemorrhagies, combinated estrogen and progestron, endoscopical laser, bipolar coagulation and aminocaproic acid can be used. Surgery, embolisation, radiosurgery are treatment modalities for central nervous system malformations [6].

In conclusion, HHT is the disease that affects multiple systems and causes life-threatening complications. All systems should be investigated at the time of diagnosis and patients must be taken into follow up because of probable occurrence of the complications.

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