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Case Report / Olgu Sunumu

A Rare Cause of Recurrent Iron Deficiency Anemia: Osler Weber Rendu Syndrome

Tekrarlayan Demir Eksikliğinin Nadir Bir Nedeni: Osler Weber Rendu Sendromu

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ABSTRACT

Osler-Weber-Rendu Syndrome (hereditary hemorrhagic telengiectasis) is a hereditary disease with autosomal dominant inheritance characterized by muco-cutaneous telengiectasis, arterio-venous malformations in internal organs. The disease is manifested by telengiectasis in oral mucosa, ear, nasal mucosa, fingertips and finger-beds and recurrent hemorrhage. Epistaxis is among the typical findings of the disease. Coexistence with arterio-venous malformations is common. It may lead to gastrointestinal hemorrhage and neurologic problems due to mucosal telengiectasis. Herein, we presented a case who had recurrent iron deficiency anemia and diagnosed with Osler-Weber-Rendu Syndrome as the result of radiologic and endoscopic examinations performed due to the presence of oral telengiectasis.

Key words: Hereditary hemorrhagic telengiectasis, Osler-Weber-Rendu Syndrome, iron deficiency anemia, pulmonary arterio-venous malformation, hemorrhage

ÖZET

Osler-Weber-Rendu Sendromu (herediter hemorajik telenjiektazi) mukokütanöz telenjiektazi, iç organlarda arteriovenöz malformasyonlar ile karakterize, otozomal dominant geçişli kalıtsal bir hastalıktır. Hastalık oral mukoza, kulaklar, burun mukozası, parmak uçları, tırnak yataklarında telenjiektaziler ve tekrarlayan kanamalar ile kendini gösterir. Epistaksis hastalığın tipik bulgularındandır. Arteriovenöz malformasyonlar ile birlikte sık görülür. Mukozal telejiektazilere bağlı gastrointestinal kanama ve nörolojik problemlere yol açabilir. Burada tekrarlayan demir eksikliği anemisi ve oral telenjiketazileri olduğu için yapılan radyolojik ve endoskopik muayeneler sonucunda Osler-Weber-Rendu Sendromu tanısı koyulan bir olguyu sunduk.

Anahtar kelimeler: Herediter hemorajik telenjiektazi, Osler-Weber-Rendu Sendromu, demir eksikliği anemisi, pulmoner arteriovenöz malformasyon, kanama

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INTRODUCTION

Osler-Weber-Rendu (OWR) syndrome is a rare disease with autosomal dominant inheritance characterized by recurrent epistaxis, telengiectasis in skin and mucosa and arterio-venous malformations (AVM) in many organs.[1] The reported incidence is 1-2 cases per 100,000 population annually. The overall prevalence is estimated to be approximately 1-2 cases per 10,000 population. However, the prevalence may be underestimated because many cases may be asymptomatic.[2] OWR syndrome is manifested by muco-cutaneous telangiectasis and arterio-venous malformations (AVMs), a potential source of serious morbidity and mortality.[3] Lesions can affect the nasopharynx, central nervous system (CNS), lung, liver, and spleen, as well as the urinary tract, gastrointestinal (GI) tract, conjunctiva, trunk, arms, and fingers.[3,4] We presented this case report due to its rarity and to emphasize the importance of physical examination. Family medicine addresses the rare presentations of common conditions and also common presentations of rare conditions, therefore physicians should keep in mind the rare presentation of iron deficiency anemia, a common condition in primary care.

CASE

A 48-year-old female patient was admitted to Family Medicine Outpatient Clinic of Başkent University due to recurrent iron deficiency anemia (IDA). In her medical history, she had 4 miscarriages, her last delivery was 16 years ago and she did not have menstruation since then. She had been using levothyroxine sodium due to hypothyroidism and antiepileptic medications due to seizures for a long time. She was learned to have short-lasting epistaxis and she did not have any other hemorrhages. She had been receiving perioral or intravenous iron therapy however her hemoglobin levels were learned to decrease a short while after treatment. On her physical examination, blood pressure was 110/70 mmHg, heart rate was 96 bpm, she had muco-cutaneous pallor, atrophic papilla and 3 lesions measuring 1-2 mm consistent with telengiectasis on her tongue. Her physical examination was otherwise normal. On her laboratory examination, hemoglobin was 7.8 gr/dL, MCV 64.3 fL, WBC 4.33 x106/µl, ferritin 2 ng/mL, TIBC 300 µg/dl and iron was 62 µg/dl. Urine analysis normal. Stool test was negative. She did not have the family history of OWR syndrome. She was diagnosed with IDA based on these findings. A gastroenterology consultation was made for investigation of the etiology of IDA as she had had menopause for 16 years and telengiectasis in oral mucosa. Her tomography of abdomen and thorax revealed arterio-venous shunting in thoracic field, between the right hepatic artery and the right portal vein, thrombus in the right hepatic vein. Esophago-gastro-duodenoscopy revealed multiple angiodysplastic lesions without hemorrhage in antrum and corpus of the stomach (Figure 1-2), the lesions were coagulated with argon plasma coagulation (APC). She experienced epistaxis in the course of the procedure. Her ileo-colonoscopy revealed normal findings. An MRI of the brain had been performed due to seizures at another institution. A lesion extending toward frontal horn of the lateral ventricle was observed in the right frontal lobe. She was recommended to undergo MR angiography for further investigation of the lesion however she did not accept this due to socioeconomic problems. She was diagnosed with OWR syndrome based on these findings.

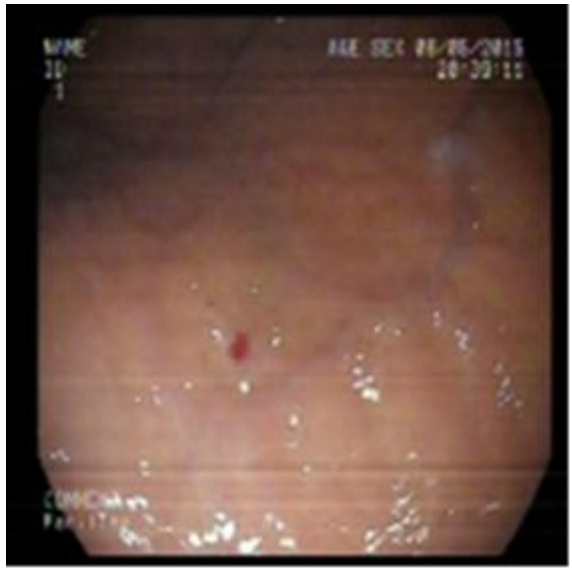

Figure 1. Angiodysplastic lesion in stomach

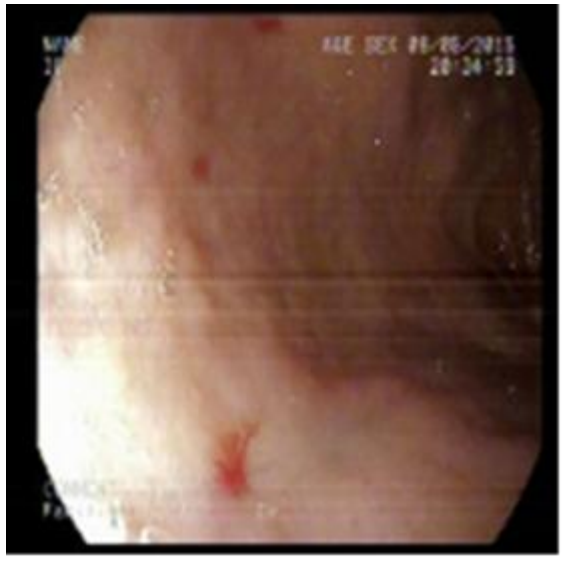

Figure 2. Angiodysplastic lesions in antrum

DISCUSSION

Osler- Weber- Rendu is a syndrome characterized by familial telengiectasis and genetic factors are accused in its etiology. Endoglin on chromosome 9 and activin receptor-like kinase-1 genes on chromosom 12 are responsible for vascular development and repair.[5] Diagnosis is based on the four components of the Curaηao criteria, established by the Scientific Advisory Board of the Hereditary Hemorrhagic Telengiectasis Foundation International, Inc., (1) epistaxis: spontaneous and recurrent; (2) telengiectasias: multiple, at characteristic sites, including lips, oral cavity, fingers, and nose; (3) presence of internal lesions: GI telengiectasis, pulmonary, hepatic, cerebral, and spinal AVMs; and (4) family history: first-degree relative with OWR according to these criteria. The diagnosis is considered definite if any three of the above mentioned criteria are present and possible if any two of the criteria are present. The diagnosis is unlikely if less than two criteria are present.[6] Our patient meets diagnostic criteria with presence of epistaxis, oral telengiectasis, arterio-venous malformations in the lungs and liver.

Telengiectasis are usually seen in face, lips, tongue, oral mucosa, gingiva, conjunctiva and fingers. Hemorrhages related with telengiectasis are frequent. Recurrent epistaxis may be seen in 90% of the patients as in our case.[4]

Pulmonary arterio-venous malformation may lead to right-to-left shunting and brain abscess. Vascular thrombus may lead to cerebral embolism, defined as paradoxal embolism. Pulmonary arterio-venous malformations may enlarge during pregnancy, symptoms may include dyspnea, exercise intolerance and cyanosis although it may be asymptomatic.[7] Cerebral arterio-venous malformation may be seen in 10-15% of the patients.[8] Patients with OWR are at substantially at increased risk for serious neurologic and hemorrhagic complications.[9] Menopause developing after delivery at 32 years of age, antiepileptic treatment use and hypothyroidism were suggested to develop due to a pineal gland problem however this could not be exactly revealed as the patient did not accept MRI.

Gastrointestinal involvement is seen in 10-15% of the patients. Acute or chronic hemorrhage and anemia may be seen. Hemorrhage usually develops after 30 years of age. Telengiectasis may be present on endoscopic examination.[10] We detected multiple angiodysplasia in our patient. Arterio-venous malformation may be seen in 70% of the patients. While patients are usually asymptomatic, congestive heart failure, portal hypertension and rarely hepatic failure may develop in some patients.[11,12] Our patient had an arterio-venous shunting between the right hepatic artery and the right portal vein and thrombus in the right hepatic vein.

In conclusion, OWR is a vascular disease which has different clinical findings. It is a rare condition which can lead to mortality and morbidity due to pulmonary and cerebro-vascular complications. A careful systemic examination is essential in recurrent iron deficiency anemia cases, presence of muco-cutaneous telengiectasis and family history are suggestive for OWR.

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