

Case Report

An Interesting Case of Hereditary Haemorrhagic Telangiectasia with Chronic Parenchymal Liver Disease

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Abstract

Hereditary haemorrhagic telangiectasia(HHT) also known as Osler-Weber-Rendu disease is a rare autosomal dominant disorder that causes vascular dysplasias of all the blood vessels and results in a tendency for bleeding. It has a triad of mucocutaneous telangiectasiae, recurrent epistaxis, positive family history. We report a case of HHT in a 60 yr old male who was admitted with recurrent epistaxis, multiple mucosal and skin lesions, strong family history associated with chronic parenchymal liver disease which is a rare association.

Key Words: Hereditary Hemorrhagic Telangiectasia, Epistaxis.

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Introduction

Hereditary haemorrhagic telangiectasia(HHT) is a rare genetic disorder having a prevalence of approximately 1 in 8000 people. It is manifested by vascular lesions like mucocutaneous telangiectasis and arteriovenous malformations (AVMs) which are a potential source of serious morbidity and mortality¹. The diagnosis of HHT is made clinically on the basis of the Curaçao criteria², which includes : a) Epistaxis b) Telangiectasias c) Visceral lesions d) Family history (a first-degree relative with HHT). Three out of the four criteria is diagnostic of HHT. Our present case met all the four criteria for HHT; recurrent epistaxis, telangiectasiae of the fingertips and tongue, GI bleeding from multiple vascular ectasias, and positive first-degree family history. Further our patient also had features of chronic parenchymal liver disease which is very rarely associated with HHT.

Case Report

A 60 year old male presented with history of breathlessness of NYHA Class II, abdominal distention, bilateral leg swelling for 6 months. He had recurrent epistaxis since the age of 13, last episode being 1 week back. There was no history of haemoptysis, fever, abdominal pain, vomiting, or jaundice.

Patient had recurrent blood transfusions in the past for anaemia, was also treated for TB lymphadenitis in 1991 and for jaundice in 2003. Argon plasma coagulation was done for gastrointestinal vascular ectasias. Patient had undergone diagnostic laproscopy for an evaluation for ascites and treated for TB peritonitis in 2014. He is a known diabetic, non smoker and non alcoholic. There is family history of epistaxis and his grand mother died because of UGI bleed (Fig 1).

At the time of admission patient was severely anaemic with bilateral pitting pedal edema with a pulse rate 100/min and respiratory rate 24/min. Purpuric, punctuate tiny macules, blanching with pressure were noticed on fingertips (Fig 2), soft palate and tongue (Fig 3). Systemic examination revealed free fluid in the abdomen and hepatic bruit over liver. Cardiac auscultation revealed an ejection systolic murmur in pulmonary area.

His investigations revealed Hb-2.4 g/dL, ESR-150 mm/hr, Stool occult blood- Positive. HbsAg, anti-HCV, ANA were negative. UGI scopy and colonoscopy revealed gastric, duodenal, caecal and colonic angioectasias (Fig 4). USG abdomen was suggestive of chronic parenchymal liver disease with ascites. CT abdomen confirmed the features of chronic parenchymal liver disease in addition to the tortuous hepatic artery. Contrast echocardiogram with saline showed mild pulmonary hypertension without any pulmonary A-V malformation. Fundus- Roth spots in Lt eye probably due to severe anaemia. CT Brain was negative for A-V malformation.

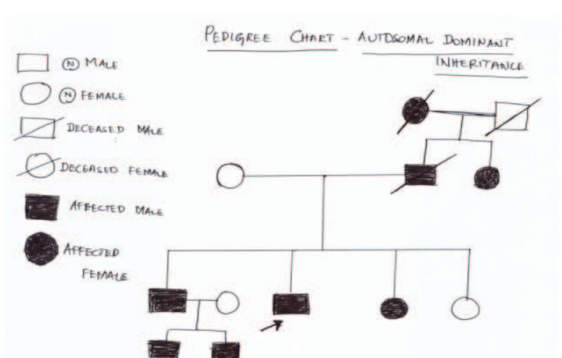


Fig. 1 - Pedigree Chart

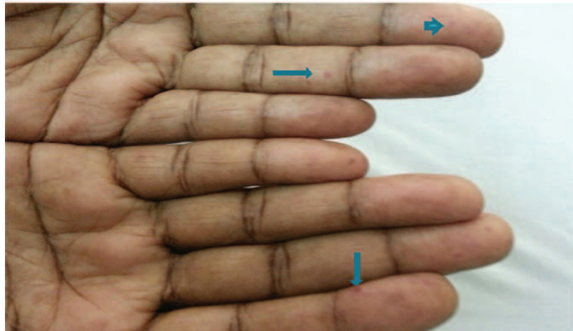


Fig. 2 - Telangiectasia on finger tips



Fig. 3 - Tongue Telangiectasias



Fig. 4 - Gastric Vascular Ectasia

Discussion

HHT was first recognized in the 19th century as a familial disorder with abnormal vascular structures causing bleeding from the nose and gastrointestinal tract. HHT is characterized by telangiectatic lesions in nose, lips, finger tips and visceral organs like liver, spleen, GI tract, genitourinary tract, lungs, brain, spinal cord. The most common clinical presentation is recurrent and severe epistaxis leading to severe anaemia which frequently requires transfusion³.

HHT is classified into four types genetically⁴. Out of the two major types of HHT (HHT₁ and HHT₂) disease severity is more in HHT₁ than HHT₂, with an earlier age of onset for epistaxis, mucocutaneous telangiectasias, and a higher incidence of pulmonary AVMs. HHT₁ can be induced by mutations in the gene, ENG (endoglin), encoding endoglin on chromosome 9q. HHT₂ can be induced by mutations in the gene, ALK-1 (activin receptor-like kinase 1), encoding activin receptor-like kinase 1 on chromosome 12q13^{5,6}. They cause alteration in the elastic and muscle layers of vessel

walls, leads to spontaneous rupture and injuries⁷. Further, other minor types are associated with mutations in *madh4* gene (HHT with juvenile polyposis) and unidentified gene in chromosome 5 (HHT₃). The clinical manifestations vary among families and sometimes may vary within the same family. Common clinical manifestations are shown in Table 1.

Table 1 - Common Clinical Manifestations

Epistaxis (90%) – most common
Skin and mucosal lesions (75%)
Pulmonary involvement (30%) – AV Malformations
Hepatic involvement (30%) - Jaundice, variceal bleed or atypical cirrhosis
GI bleeding (15%)
CNS involvement – Cerebral AVMs , Spinal AVMs

Management options are very limited. There is no definitive treatment for HHT as of now. Epistaxis could be treated with packing, aminocaproic acid, estrogen, argon beam ablation. Cutaneous lesions may be treated with electrocauterization with diathermy, hypertonic saline sclerotherapy, or laser therapy. Recently, limelight has been on Bivacizumab, a humanised monoclonal anti-VEGF antibody. It is given in the dose of 5 mg/kg as IV infusion for 4 weeks for reducing GI blood loss and epistaxis. Our patient was treated for chronic parenchymal liver disease with diuretics and symptomatically for epistaxis. To summarise, ours is a case of Hereditary Haemorrhagic Telangiectasia with a rare association of chronic parenchymal liver disease.

Acknowledgement

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For obese people, size does not matter

To keep a check on how much we eat is not all that easy. One stratagem commonly employed by those who are keen to eat less, is to eat from a smaller plate, bowing to conventional knowledge that smaller plates carry smaller portions. But these acts of self-deception do not work for all. Particularly, it does not work for those who desperately need to eat less – obese teenagers. In a new study carried out at UConn Health Alcohol Research Center on teenage girls, the researchers discovered that the overweight subjects paid very little attention to the size of the plate or the container. Undistracted by the trick, they consumed until they felt full. They also failed to pay much attention to the detailed dietary charts. The only way to curb their appetite is to subject them to simple, clear, interesting and repetitive diet education. The study was presented at the Annual Meeting of American Psychosomatic Society.

[University of Connecticut. "Smaller plates, smaller portions? Not always." Science Daily. Science Daily, 27 March 2015]

- Dr. K. Ramesh Rao