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Case Report

Osler-Weber-Rendu Syndrome in association with port wine spot

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Abstract
Osler-Rendu-Weber syndrome also known as hereditary hemorrhagic telangectasiea (HHT) is an autosomal dominant vascular disorder. The pathogenesis of this disorder involves dilated post-capillary venules in the mucus membranes of different organs and large arteriovenous malformations. Gastrointestinal hemorrhages contribute to iron deficiency anemia in one third of these patients. Port wine stains belong to the family of arteriovenous disorders. These are due to abnormally dilated capillaries and produce reddish or pink discoloration of the skin. These are present at birth and increase in size during the growth period. No association has so far been reported between port wine stains and hereditary hemorrhagic telangectasiea. We report a case of 41 years old lady presenting with co- existence of these two lesions.
Key words: Osler-Rendu-Weber syndrome, Port wine stain, GI endoscopy

Introduction

Osler-Rendu-Weber syndrome also known as hereditary hemorrhagic telangectasiea (HHT) is an autosomal dominant vascular disorder with varying degree of penetrance and expressivity[1]. It is characterized by severe and recurrent nose bleeds and gastrointestinal hemorrhages. In some cases, arteriovenous malformations in pulmonary, hepatic, cerebral and gastrointestinal systems may result in severe bleeding[2]. Port wine stains also belong to the family of arteriovenous disorders. These are due to abnormally dilated capillaries and produce reddish or pink discoloration of the skin. These congenital lesions increase in size during the growth period. These are usually benign but may be associated with psychosocial problems related to their appearance. Though, there is similar underlying micro vascular pathophysiology, the co-existence of these lesions has not so far been reported.

Case Report

A 41 year old married lady presented with lethargy, easy fatigability, palpitation and dyspnoea on exertion for the last three to four years. She had normal menstrual cycles and there was no H/O menorrhagia or polymenorhoea. There was no evidence of overt blood loss. She had normal appetite and there was no change in bowel habits. She had H/O of several admissions and blood transfusions in the past. On physical examination, the patient was pale and well preserved there was marked pallor of skin and buccal mucosa. Her palmar creases were lighter than the surrounding skin. Her Radial pulse was 86/ min strong and regular; BP 130/70 mmHg; Temp 98.6 F. Her JVP was not raised and she was non-jaundiced and non-cyanosed. There was a large port wine spot around her left eye extending over to left side of forehead. (Figure 1) There was no lymphadenopathy or pedal edema. Heart sounds were normal with systolic flow murmur and pulmonary examination revealed bilateral normal vesicular breath sounds. On Abdominal examination Liver and Spleen were not palpable. There was no shifting dullness and bowel sounds were normal.

Her Blood complete examination showed Hb. 6.4 gm %, MCV 58.6 fl with normal Leukocyte and platelet counts. Serum ferritin and iron levels were decreased. Her stool was positive for occult blood. The routine biochemistry, LFTs, Urine analysis and screening for Hepatitis B and C were normal.

Patient's upper GI endoscopy was performed under conscious sedation (Inj.Medazolam I/V 3 mg) and

local pharyngeal anesthesia with 4% Xylocaine spray. It showed large number of vascular telangectasiea in the body of stomach along greater curvature and on anterior and posterior wall. (Fig 2) Oesophagus, proximal part of body of stomach, distal antrum and duodenum were normal. The patient was diagnosed as a case of Osler-Rendu-Weber syndrome. She was managed with blood transfusions and haematonics and referred for Argon plasma laser coagulation therapy.

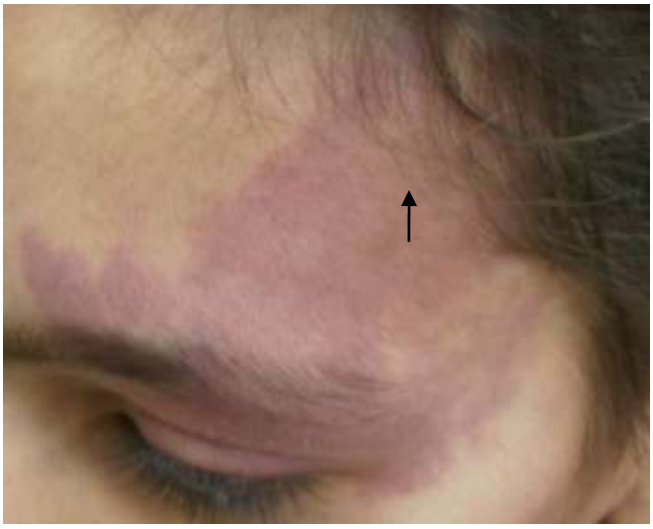

Fig 1: Port wine spot

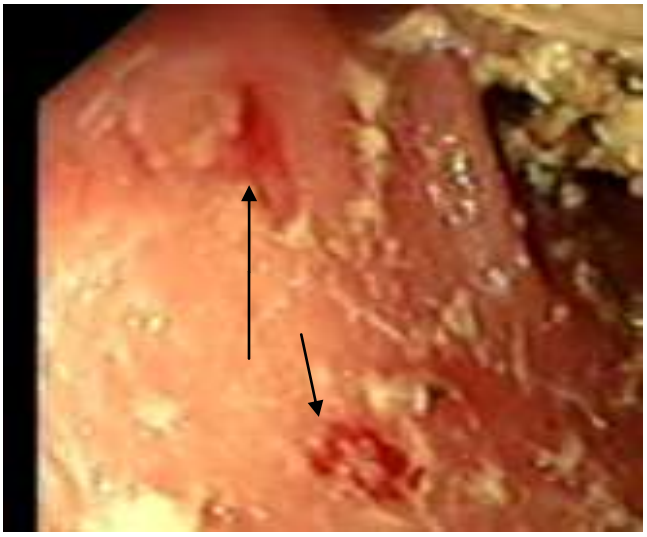

Fig2: Endoscopicview of the gastric lesion.

Colour Page

The patient's chest radiograph was normal.
Ultrasonography of abdomen showed normal viscera with no lymphadenopathy or ascites.

Discussion

Osler-Rendu-Weber syndrome also known as hereditary hemorrhagic telangectasiea (HHT) is an autosomal dominant vascular disorder with varying degree of penetrance and expressivity. It is characterized by severe and recurrent nose bleeds and gastrointestinal hemorrhages. In some cases, arteriovenous malformations in pulmonary, hepatic, cerebral and gastrointestinal systems may result in severe bleeding. There are two types of hereditary hemorrhagic telangectasiea. The type 1 results from mutations in ENG on chromosome 9 (coding for endoglin) and type 2 results from mutations in ACVRL1 on chromosome 12 (coding for activin receptor-like kinase 1). These are members of the TGF-beta receptor family and are essential for maintaining vascular integrity. These two mutations account for most of the clinical cases[3]. The pathogenesis of this disorder involves dilated post-capillary venules in the mucus membranes of different organs and large arteriovenous malformations.

Gastrointestinal hemorrhages contribute to iron deficiency anemia in one third of these patients[4]. Most of these individuals are typically affected in the later years of life. They commonly present with iron deficiency anemia but occasional overt gastrointestinal hemorrhage can also occur. The onset is usually after the 5th decade of life.

These telangectasiea are more common in stomach and duodenum but may involve the whole of GI tract. These lesions can easily be identified during upper GI endoscopy[5]. They appear as bright red spots similar to mucocutaneous lesions. Most of these patients can be managed with iron replacement and blood transfusions.

Spontaneous epistaxis from telangectasiea of nasal mucosa is common and recurrent clinical presentation. Severity of nasal bleeds varies from occasional mild bleeding to large bleeding on daily basis[6]. In cases of severe epistaxis emergency transfusions and nasal packing is required. Cautery is best avoided in these patients due to the risk of regrowth of fragile blood vessels.

Mucocutaneoustelangectasiea are present in three fourth of affected patients. These lesions usually present in third decade of life and increase in number with the passage of time. They are commonly observed over face, hands, fingers, lips, tongue and buccal mucosa. They are of cosmetic concern with occasional, insignificant trivial bleeding[7].

The most serious consequences are due to the cerebral involvement. The different types of lesions which may involve the CNS are telangectasiea, aneurysms and arterio-venous malformations. They may cause headache and seizures but the serious complications are intra cerebral or sub-arachnoid haemorrhages[8]. These hemorrhages are associated with significant mortality and long term morbidity with personal, social and economic consequences.

Pulmonary arteriovenous malformations (AVMs) are thin walled abnormal vessels forming a sack like structure between pulmonary and systemic circulation[9]. These AVMs act as right to left shunts and can lead to hypoxemia. Sometimes these fragile vessels bleed into bronchus and cause significant hemoptysis.

Hepatic involvement is often silent and usually detected during Doppler Sonography of liver. Symptomatic patients may present with high output cardiac failure, biliary disease or portal hypertension depending upon the severity and pattern of vessel involvement[10].

The management of these patients is multidisciplinary involving ENT surgeons, hepatologists, neurophysicians and pulmonologists. Luckily most of these patients only require supportive care, homeostasis and iron supplements.

Port wine stains belong to the family of arterio venous disorders. These are due to abnormally dilated capillaries and produce reddish or pink discoloration of the skin. These are present at birth and increase in size during the growth period[11]. Port wine stains may be the part of Sturge-Weber syndrome or Klippel-Trenaunay-Weber syndrome.

No association has so far been reported between port wine stains and hereditary hemorrhagic telangectasiea. The co- existence of these two lesions in this patient is unusual and not reported. As both disorders are due to abnormal, pathological dilatation of capillaries their possible association needs more research and reporting of similar cases.

References

1. Abdalla SA, Letarte M. Hereditary Hemorrhagic telangiectasia: current views on genetics and mechanisms of disease. J Med Genet. 2006; 43:97–110.
2. Shovlin CL. Hereditary hemorrhagic telangiectasia: pathophysiology, diagnosis and treatment. Blood Rev. 2010; 24:203–219.
3. Abdalla SA, Cymerman U, Rushlow D, Chen N, Stoeber GP, Lemire EG, Letarte M. Novel mutations and polymorphisms in genes causing hereditary hemorrhagic telangiectasia. Hum Mutat. 2005; 25:320–321.
4. Fleagle JM, Bobba RK, Kardinal CG et al.Iron deficiency anemia related to hereditary hemorrhagic telangiectasia: response to treatment with bevacizumab. Am J Med Sci. 2012 Mar; 343 (3):249-51.
5. Minsu Ha, Yoon Jae Kim, KwangAn Kwon. Et al Gastric angiodysplasia in a hereditary hemorrhagic telangiectasia type 2 patient**.** World J Gastroenterol. 2012 April 21; 18(15): 1840–1844.
6. Sadick H, Sadick M, Götte K, et al. Hereditary hemorrhagic telangiectasia: an update on clinical manifestations and diagnostic measures. Wien KlinWochenschr. 2006; 118:72–80.
7. Govani FS, Shovlin CL. Hereditary haemorrhagic telangiectasia: a clinical and scientific review. Eur J Hum Genet. 2009; 17:860–871.
8. Graf CJ, Perrett GE, Torner JC. Bleeding from cerebral arteriovenous malformations as part of their natural history. *J Neurosurg* 1983; 58:331–7.
9. Berg JN, Guttmacher AE, Marchuk DA, Porteous ME. Clinical heterogeneity in hereditary haemorrhagic telangiectasia: are pulmonary arteriovenous malformations more common in families linked to endoglin. J Med Genet. 1996; 33:256–257.
10. Garcia-Tsao G. Liver involvement in hereditary hemorrhagic telangiectasia (HHT) J Hepatol. 2007; 46:499–507.
11. Monteagudo B, Labandeira J, Acevedo A. et al. Salmon patch: a descriptive study. ActasDermosifiliogr. 2011 Jan; 102(1):24-7. Epub 2010 Dec 2