



## EDİTÖRE MEKTUP/LETTER TO THE EDITOR

### Heyde's syndrome: the association between severe aortic stenosis and anemia.

Heyde sendromu: ağır aort stenozu ile anemi arasındaki ilişki

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*Cukurova Medical Journal 2016;41(4):825-826.*

Dear Editor,

Heyde's Syndrome was first described in 1958 by Edward Heyde who observed the association between aortic stenosis (AS) and gastrointestinal bleeding (GIB) due to angiodysplasia<sup>1</sup>. The pathogenesis of Heyde's syndrome includes an acquired type 2A von Willebrand factor (vWF) deficiency secondary to AS and other degenerative disease in elderly patients with concomitant GIB. vWF is a multimeric glycoprotein that circulates in the blood and binds to factor VIII. vWF normally broken down by a metalloproteinase ADAMTS13. According to Warkentin et al. over a stenosed aortic valve vWF multimers are subjected to high shear stresses that change their structure and render them more susceptible to proteolysis by ADAMTS13 resulting in depletion of vWF. This results in an acquired bleeding disorder: von Willebrand syndrome type 2A (vWS-2A)<sup>2</sup>. Another explanation of Heyde' s Syndrome include gastrointestinal angiodysplasia formation from reduced gastrointestinal perfusion due to aortic stenosis witch lead to hypoxemia-induced dilatation of blood vessels<sup>3</sup>.

We report a case of 85-years-old patient with a past history of coronary heart disease (Coronary Artery By Pass Graft before 11 years) and of aortic disease (severe AS) with preserved systolic function. Patient had frequent re-admissions the last two years in our hospital due to dyspnea and anemia (iron deficiency

anemia) without melena or hematochesia. CT scan of the abdomen was normal and tumor markers were negative. Gastroscopy and colonoscopy were also normal. Endoscopic capsule was performed and an angiodysplasia was detected in the jejunum, followed by enteroscopy witch did not achieve to found and treat lesions previous marked by endoscopic capsule.

In the reported case the suspicion of Heyde' s syndrome was raised after confirming severe AS by echocardiography (critical calcific AS with an aortic valve area of 0.9 cm<sup>2</sup> and a severely hypertrophied left ventricle). Aortic valve replacement (open surgery aortic replacement or transcatheter aortic valve implantation) appears to offer the best option of long-term resolution of the bleeding, and should be considered<sup>3,4</sup>. Patient referred for further evaluation, but he refused any intervention. Unfortunately the patient's re-admissions continued and anemia treated with red blood cells transfusions.

Clinicians should be aware of the association between severe AS and angiodysplasias especially in elderly patients with anemia in order to make an early diagnosis of Heyde' s syndrome and to schedule the appropriate management. The presence of angiodysplasia on endoscopy or a failure of the investigations to find a clear site of gastrointestinal bleeding, should raise the possibility of Heyde' s syndrome, especially in patients with known AS<sup>4</sup>.

## REFERENCES

1. Heyde E. Gastrointestinal bleeding in aortic stenosis. *N Engl J Med.* 1958;259:196.
2. Warkentin TE, Moore JC, Anand SS, Lonn EM, Morgan DG. Gastrointestinal bleeding, angiodysplasia, cardiovascular disease and acquired von Willebrand Syndrome. *Transfus Med Rev.* 2003;17:272–86.
3. Saad RA, Lwaleed BA, Kazmi RS. Gastrointestinal bleeding and aortic stenosis (Heyde syndrome): the role of aortic valve replacement. *J Card Surg.* 2013;28:414–16.
4. Massyn MW, Khan SA. Heyde syndrome: a common diagnosis in older patients with severe aortic stenosis. *Age Ageing.* 2009;38:267–70.