

**Is the incidental finding of a double atrial septum an indication for antithrombotic therapy?**

**Roman Komorovsky, MD**

<sup>1</sup>2nd Department of Internal Medicine, I. Horbachevsky Ternopil National Medical University and "Multysono" Medical Center, Ternopil, Ukraine

**Article category:** Letter to the Editor

**Running head:** double interatrial septum

**Keywords:** double interatrial septum, interatrial space, thromboembolic risk, therapy

**Corresponding author:**

Roman Komorovsky

vul. Klinichna, 1

46002 Ternopil

Ukraine

Tel.: +38 093 844 2829

Fax: +38 035 243 8033

Email: roman\_komor@yahoo.com

**Funding source:** none

**Conflict of interest:** none

Dear Editor,

I read with interest a case report by Jarayam et al. entitled “Double atrial septum with persistent interatrial chamber: a rare but clinically significant anomaly” published in *Echocardiography* [1]. In one of the earlier *Echocardiography* issues we also published a series of images featuring this anomaly [2]. In the case report of Jarayam et al [1] and in our image series [2] the double interatrial septum (IAS) with persistent interatrial space (chamber) was an incidental finding in asymptomatic subjects aged 3 to 22 years. Considering the published cases of thromboembolic complications in patients with double IAS [3, 4], Jarayam et al [1] prescribed low-dose (50 mg) aspirin therapy for the asymptomatic 6-year-old boy with double IAS and proposed prophylactic antiplatelet therapy in all patients with this IAS abnormality. We agree with Jarayam et al. [1] that double IAS may be associated with increased risk of systemic thromboembolism in some patients. However, the proposal of prophylactic antiplatelet therapy in all patients, as well as administering aspirin to an asymptomatic 6-year-old boy, seem very controversial in the light of the lack of convincing evidence that double IAS is associated with an increased risk of thromboembolic complications in subjects without additional risk factors for thrombosis and, specifically, in children. In fact, the youngest reported patient with thromboembolic complications associated with a double IAS was a 25-year-old female with additional risk factors (active smoking and hormonal contraception) [3]. Although the exact thromboembolic risk associated with double IAS is unknown [4], it might be similar to that of patients with left atrial septal pouch (LASP). Both LASP and double IAS with persistent interatrial chamber communicating with the left atrium share the same features favoring blood stasis and potential thrombus formation [5]. Yet, the presence of LASP by itself does not correlate with increased incidence of stroke, and most of the published case reports demonstrate that in patients with LASP thrombus formation occurs in the presence of additional risk factors [6, 7]. Therefore, the suggested by Jarayam et al [1] recommendation of antiplatelet therapy in all subjects with double IAS seems unjustified. In asymptomatic subjects with double IAS, the risks of long-term daily aspirin use in terms of gastrointestinal complications may outweigh the benefits unless other predisposing factors for thrombosis coexist.

**References:**

1. Jarayam AA, Kumeri AR, Rao SM, et al: Double atrial septum with persistent interatrial chamber: a rare but clinically significant anomaly. *Echocardiography* 2020; DOI:10.1111/echo.14858
2. Komorovsky R, Tran HN: An unusual interatrial septum. *Echocardiography* 2020;37:150-1.
3. Breithardt OA, Papavassiliu T, Borggrefe M: A coronary embolus originating from the interatrial septum. *Eur Heart J* 2006;27:2745
4. Robaei D, Buchholz S, Feneley M: Double inter-atrial septum: a rare cause of cardioembolic stroke. *Heart Lung Circ* 2013;22:315-6.
5. Ohanyan A, Cuminetti G, Morissens M: Beware of the LASP! A structure with thrombogenic potential. *Echocardiography* 2020;37:152-3.
6. Strachinaru M, Castro-Rodriguez J, Verbeet T, et al: The left atrial septal pouch as a possible risk factor for stroke: a systematic review. *Arch Cardiovasc Dis* 2017;110:250-8.
7. Zisa D, Faletra FF, Wessler BS, et al: Ridges and pouches: a case series of anomalous septal fusion. *CASE (Phila)* 2020;4:7-17.