Editorial

Reabsorbable Device: a Step Towards the Ideal Way to Close Holes within the Atrial Septum

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Transcatheter closure of patent foramen ovale in patients with previous episodes of cryptogenic transient ischemic attacks/strokes is a widespread procedure. Several devices are currently used in clinical practice, generally with good results; however, for further improvement, it is certainly desirable to have a device with high closure rate, low complications rate, easy to use, the least amount of foreign material and possibly the feature of "disappearing" (being reabsorbed) after providing a scaffold for patient endothelial cells growth.

In this issue of the **Revista Brasileira de Cardiologia Invasiva**, Queiroz et al.[1] describe their experience in closing patent foramen ovale in 9 patients by using the BioSTAR™ prosthesis, that is an evolution of the STARflex™.[2] Both devices have the identical metal frame, made of MP35N, while the BioSTAR™ incorporates bioresorbable collagen over the wire frame. The technique of implantation, clearly described in the paper, is well known and relatively straigthforward in experienced hands; in case of device malposition or even embolization (as occurred in one patient) transcatheter retrieval in feasible, with no major difficulties. The immediate and midterm closure rate is very satisfactory. Device interference with the adjacent structures did not occur; no thrombotic complications were observed, reinforcing the characteristics of "low thrombogenicity" of the device, although the number of patients is too low and the follow-up too short for claiming the superiority of BioSTAR™ as compared to STARflex™ in this respect. Being reabsorbable, the BioSTAR™ device can offer the important advantage of giving a transseptal access to left atrium for possible need of ablative therapies in those patients[3] that may develop atrial fibrillation later in life.

Thinking about the attractive feature of a reabsorbable device with small amount of metal frame, the use of BioSTAR™ could be extended to atrial septal defect closure as well, although probably limited to small/moderate size defects.[4]

Overall this is a very interesting experience about the use of BioSTAR™, a device with certainly promising features and not so commonly used worldwide.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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Received on: 12/6/2010 • Accepted on: 12/7/2010