Parasympathetic denervation as an alternative to permanent pacing

To the editor We read with interest the case report by Kalińska et al[1] presenting a 62-year-old man who received a dual-chamber pacemaker because of carotid sinus syndrome (junctional rhythm and sinus pauses) secondary to spontaneous dissection of the right internal carotid artery. The authors stated that, during a short-term follow-up, the atrial and ventricular pacing rates were zero and that the explantation of the pacemaker can be considered in the future if no need for pacing is confirmed on longer follow-up. Although the current European Society of Cardiology guidelines[2] recommend pacemaker implantation in patients with severe cardioinhibitory carotid sinus syndrome, this treatment method is associated with well-known complications and not always effective. In this context, it is worth remembering that there are 2 other approaches to patients with syncope due to vasovagal syndrome or carotid sinus syndrome. One is called cardioneuroablation,[3] and the second one—carotid denervation by adventitial stripping of the proximal carotid internal artery.[4] The latter would be probably of value to the patient described by Kalińska et al.[1] Both treatments are effective in the majority of patients and obviate the need for permanent pacing.

ARTICLE INFORMATION

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Authors' reply We would like to thank Prof. Kułakowski and Prof. Baran for their interest in our article on recurrent syncope in a patient with spontaneous carotid artery dissection and practical comments, which are so valuable in making difficult decisions, as in the presented clinical situation[1]. The incidence of carotid sinus syndrome (CSS) is a significant and probably underreported clinical issue. The controversy concerns its natural history. Available data suggest that the symptoms of severe CSS recurred within 3 years in more than half of individuals after the first episode of syncope.[2] The decision to adopt a "wait-and-see" strategy must be dictated by the severity and complexity of symptoms. So far, many of these patients receive permanent cardiac pacing.[3] Cardioneuroablation (CNA) is a new, promising method for the treatment of cardioinhibitory vasovagal syncope, and Prof. Kułakowski is its precursor in Poland.[4] Cardioneuroablation appears to be safe and effective during a short-term follow-up and may offer an attractive alternative to pacemaker implantation in patients with CSS, but the optimal procedural strategy and endpoints of CNA have not been established yet. Therefore, CNA did not obtain any class of recommendation in the latest European Society of Cardiology guidelines on the diagnosis and management of syncope.[3] To date, several invasive techniques have been reported in the literature. A few of them were assessed in prospective randomized trials with a short-term follow-up but, to our knowledge, none of them was used in a patient with

spontaneous carotid artery dissection.[2] Anticoagulation therapy or endovascular stenting is the treatment of choice in this acute clinical scenario. Surgical carotid denervation is suggested in patients with clinically proven carotid sinus hypersensitivity and, so far, the effectiveness of the technique as an elective procedure has been assessed. In our patient, we considered interventional endovascular treatment, but finally, after discussing all the pros and cons, we decided to apply anticoagulation with low-molecular-weight heparin, that is, the therapy of choice. Due to observed recurrent in-hospital sinus node dysfunction and syncope, the decision to implant a pacemaker was made. Cardioneuroablation may be a potential alternative to pharmacotherapy and pacemaker implantation in carefully selected patients with cardioinhibitory vasovagal syncope. It could eliminate the immediate cause of disturbances in the intrinsic cardiac autonomic nervous system, but it still needs further evaluation.

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