

Cardioneuroablation in patients with a permanent pacemaker

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Malignant vasovagal syncope, refractory to clinical measures, had permanent pacemaker implantation as the only available treatment. Some companies, such as Rate Drop from Medtronic, have developed specific generator algorithms to prevent syncope and symptoms related to the pathology in question. However, even though the algorithms were activated accurately and the syncope episodes were not repeated, many patients developed persistent symptoms defined by sudden variations in heart rate. We present a case of a patient with a permanent bicameral pacemaker due to vasovagal syncope refractory to clinical measures. Due to the origin of the pathology, the implantation of a device with a Rate Drop algorithm was chosen, which is activated when there are sudden drops in the heart rate, preventing new episodes of syncope. The patient evolved with no syncope but with several activations of the algorithm associated with frequent symptoms with a direct impact on quality of life. We chose to submit the patient to cardioneuroablation, with denervation of the main parasympathetic ganglia in the left atrium and right atrium. The parameter selected before and after the immediate procedure was vagal stimulation through the neurostimulator with electrode positioning through the jugular foramen and direct stimulation of the vagal system, demonstrating satisfactory vagal denervation. With the patient maintaining the pacemaker, we can observe the Rate Drop algorithm 6 months after the procedure and the absence of symptoms related to low output.