

Cardioinhibitory syncope 2b with 48-second pause in a patient with Down Syndrome and corrected AV septal defect: Description of the case and therapeutic plan

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Introduction: Syncope usually begins in adolescence. Approximately 20% of the population experiences their first episode of fainting between the ages of 10 and 20. Although extremely distressing, these are not always investigated. Only 25 to 50% of patients are evaluated in health services. However, some cases deserve treatment due to the risk of events and require specialized monitoring, including monitoring the indication of pacemaker devices (PM) in case of refractoriness to clinical treatment. This occurs in some cases of syncope with a neuromediated pattern of the cardioinhibitory type with pause (cardioinhibitory syncope 2b in the Tilt Test). **Objective:** To describe the case of a post-pubertal patient with Down Syndrome and recent onset recurrent Syncope with a positive tilt test (TT) (2b response). **Case description:** 13-year-old female patient with Down Syndrome with a total AV Septal defect in the post-operative phase of total correction with good surgical results. Recurrent syncope with prodromes (abdominal pain and pallor). She has Holter monitoring without arrhythmic changes and an echocardiogram with RVEF at the lower limit of normality. ECG analysis shows signs of the right anterior superior divisional block. She was submitted for evaluation by TT. She had performed a passive tilt protocol at 70 degrees without sensitization. After 5 minutes of rest, she was tilted and remained stable for 7 minutes. In the eighth minute of tilting, she presented abdominal pain, followed by syncope with cardioinhibitory response 2b and a 48-second pause despite returning to the Trendelenburg position (-30 degrees). There was a return of the heartbeat with immediate recovery of the level of consciousness. Clinical treatment began with guidance on increasing water intake, suspending triggering factors (prolonged orthostasis, hot environments, for example) and maintaining strict monitoring to assess refractoriness and the need for PM indication. **Conclusion:** 1) Neuromediated syncope is particularly common during adolescence, especially after the growth spurt; 2) cardioinhibitory responses can appear suddenly and have significant repercussions. Despite this fact, clinical treatment must always be prioritized; 3) The patient must be monitored for recurrences and refractoriness to clinical therapy for the precise indication of PM in patients with cardioinhibitory syncope 2b with long pauses refractory to general measures.