

Late-presenting complete heart block after pediatric cardiac surgery



Bana Agha Nasser ^{a,*}, Abdu Rahman Mesned ^a, Tagelden Mohamad ^b,
Mohamad S. Kabbani ^c

^a Pediatric Cardiac Intensive Care, Prince Sultan Cardiac Center, Qassim

^b Pediatric Cardiac Surgery, Prince Sultan Cardiac Center, Qassim

^c Pediatric Cardiac Intensive Care, King AbdulAziz Medical City, King Saud Bin AbdulAziz University, Riyadh

^{a,b,c} Saudi Arabia

Late presenting complete heart block after pediatric cardiac surgery is a rare complication and its management is well defined once the initial diagnosis is made timely and appropriately. In this report we described a child who underwent atrioventricular septal defect repair with a normal sinus rhythm during the postoperative period, as well as during the first 2 years of follow up.

She subsequently developed complete heart block with bradycardia that required insertion of a pacemaker. Here we discuss this unusual late-presenting complication, possible risk factors, and management.

© 2015 The Authors. Production and hosting by Elsevier B.V. on behalf of King Saud University. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Keywords: Complete heart block, Pediatric cardiac surgery

Introduction

Complete heart block (CHB) following open-heart surgery for congenital heart disease is uncommon but a well-known complication. Its incidence ranges between 1% and 3% [1], with more occurrences during surgeries or interventions adjacent to the atrioventricular node [2]. Early-presenting heart block (HB) associated with cardiac surgery or intervention usually appears during surgery or shortly thereafter. However, any HB that develops after 30 days of surgery or intervention, is considered to be late onset [2]. It

has been described in children following cardiac surgical repair or cardiac intervention with an interim period of normal rhythm followed by late development of HB that may occur months to years after initial repair [2]. In this report we present a case of a child with trisomy 21 syndrome who underwent atrioventricular septal defect (AVSD) and then presented with CHB 2 years after surgery. The report will review some of the available literature that focuses on late-presenting CHB after pediatric cardiac surgery, try to early identify high-risk groups, and suggest strategies for the follow up of high-risk groups for this potential life-threatening complication.

Disclosure: Authors have nothing to disclose with regard to commercial support.

Received 21 January 2015; revised 2 June 2015; accepted 17 June 2015.
Available online 25 June 2015

* Corresponding author at: Prince Sultan Cardiac Center, Buraidah, Qassim, Saudi Arabia. Tel.: +966 63252000x2508; fax: +966 3270229.
E-mail address: bana30pedia@yahoo.com (B.A. Nasser).



P.O. Box 2925 Riyadh – 11461KSA
Tel: +966 1 2520088 ext 40151
Fax: +966 1 2520718
Email: sha@sha.org.sa
URL: www.sha.org.sa



1016–7315 © 2015 The Authors. Production and hosting by Elsevier B.V. on behalf of King Saud University. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer review under responsibility of King Saud University.
URL: www.ksu.edu.sa
<http://dx.doi.org/10.1016/j.jsha.2015.06.004>



Production and hosting by Elsevier

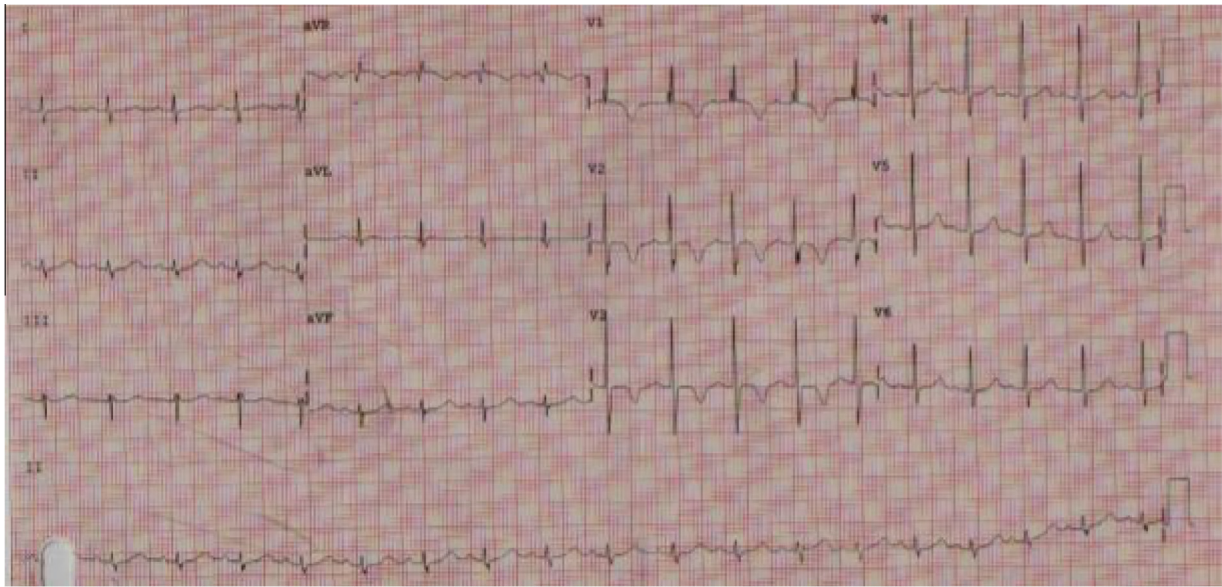


Figure 1. Electrocardiography immediately after cardiac surgery.

Case report

A 4-year-old girl with Down syndrome diagnosed at the age of 1.5 years was found to have complete balanced AVSD. She underwent a total repair of the AVSD at the age of 2 years with the usual postoperative course that included normal sinus rhythm with a heart rate ranging between 110 beats/min (bpm) and 150 bpm (Fig. 1). The child was discharged 10 days after surgery with good condition and with no reported arrhythmia during her entire hospital course. After discharge, the patient had satisfactory repair and normal sinus rhythm throughout 2 years of follow up (Fig. 2). However, at 4 years of age during a

routine follow-up visit she was found to have CHB with a heart rate ranging between 50 bpm and 76 bpm with junctional escape rhythm (Fig. 3). Although she was clinically asymptomatic, her Holter monitor confirmed the diagnosis of persistent CHB with a junctional rhythm that slowed periodically to 50 bpm. She underwent permanent pacemaker insertion with ventricular pacing – ventricular sensing – inhibit (VVI) mode and was discharged with good condition.

Discussion

The incidence of CHB after pediatric cardiac surgery ranges from 1% to 3% [1]. Most

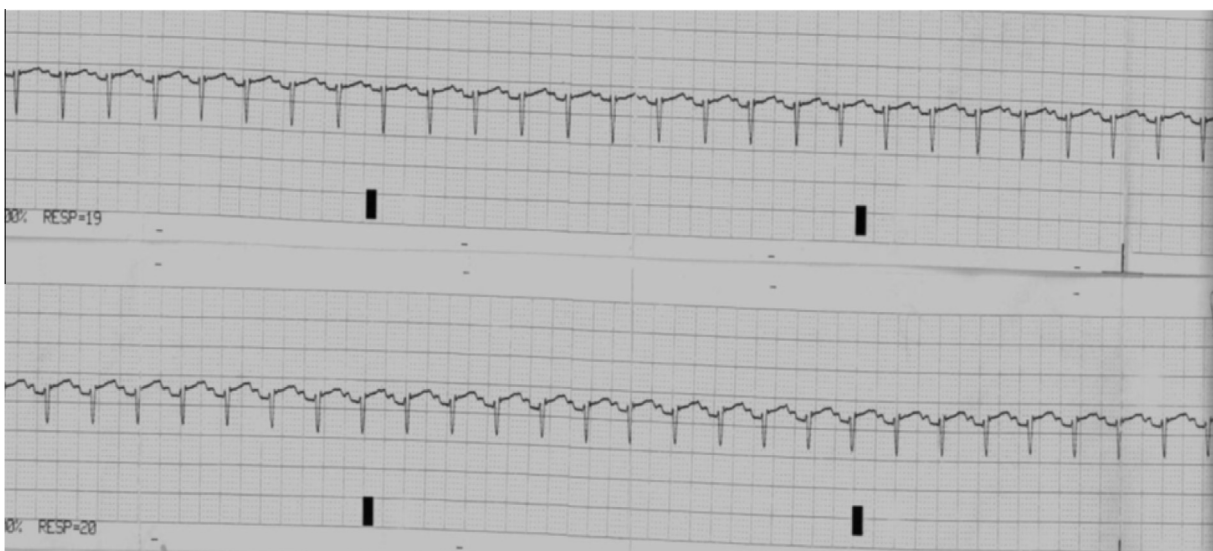


Figure 2. Electrocardiography during follow up as an outpatient.

Download English Version:

<https://daneshyari.com/en/article/2977783>

Download Persian Version:

<https://daneshyari.com/article/2977783>

[Daneshyari.com](https://daneshyari.com)