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SUPRA VENTRICULAR TACHYCARDIA-WOLFF PARKINSON WHITE SYNDROME: A CASE REPORT

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ABSTRACT

Wolff-Parkinson-White Syndrome[WPW] is an uncommon condition associated with rhythm disorder. Supraventricular tachycardia (SVT) is often the rhythm abnormality. The cardiovascular status with the SVT could be stable or unstable. In this case, the presentation and management of a neonate with SVT, whose arrhythmia was detected in postpartum is presented.[1]

KEYWORDS: Supra ventricular tachycardia, Wolff-Parkinson-white syndrome, Adenosine.

INTRODUCTION

Wolff-Parkinson-White Syndrome [Wpw] is a congenital cardiac condition that can cause cardiac arrhythmias. The incidence is 0.9–3% of the general population. WPW syndrome may be asymptomatic or could present with symptoms such as palpitations and exertional dyspnea. Supraventricular tachycardia (SVT) is a common mode of presentation which could cause heart failure.[1] People born with WPW often have characteristic changes on their ECG, and frequently develop SVT, a type of rapid arrhythmia that often produces severe palpitations. People with WPW are born with an abnormal electrical connection that joins one of the atria with one of the ventricles. These abnormal electric connections are called Accessory Pathways which results in abnormal cardiac rhythms.[2]

The initial symptoms of WPW-SVT syndrome usually include sensation of rapid, fluttering or pounding heart beats[Palpitations], dizziness, anxiety, irritability, lack of appetite. Presently we are reporting a case of Supra ventricular tachycardia-Wolff-Parkinson-White Syndrome.

CASE REPORT

A 1month 7 day Neonate presented to pediatric cardiology department with complaints of irritability[CRY], refused to feed and tachycardia with palpitations. On clinical examination the patient was found to be Irritable, HR was found to be 250-260 bpm, felt in SVT rhythm, cold extremities. Family history includes baby born to the G2P1L1 mother by Elective LSCS at 38 week gestation with birth weight 2.5kgs.

Complete blood count, Electrolytes test, renal function tests were conducted. A slight increase in the count of eosinophil's-7.0% (1-6), and increase of lymphocytes 58.9%[25-33%], RBS was found to be 105 gm/dl[<200 mg/dl] and potassium was 6.53mEq/L[3.5-5mEq/l] are noted. Pulmonary function test done showed PO2 was 27.9 mmHg and PCO2 was 59 mmHg. Echo showed small PFO with left to right shunt. The patient was diagnosed with Supra ventricular Tachycardia with Wolff-parkinson-syndrome.

The treatment given was Inj.ADENOSINE 0.5mg IV BD bolus was given and there is no response. Then second dose of 1mg Adenosine bolus given and rhythm reverted to sinus rhythm. Patient started on maintenance fluid and shifted to NICU. Inj. Atropine 0.6 mg and Epinephrine 1ml IV was given STAT. Tab. INDERAL dose was optimized, which abolish reentry induced SVT by increasing the refractory period of AV node. Child remains stable. Provided Tab.Inderal 3.5 mg as Discharge medication.

DISCUSSION

Wolff-Parkinson-White (WPW) syndrome is a conduction disturbance characterized by the presence of an accessory pathway between the atria and the ventricles (Kent bundle), which provides an alternative route for ventricular activation. WPW syndrome may occur in patients with a normal heart, but also it can be associated with congenital heart disease (Ebstein's anomaly, atrial and ventricular septal defects, coronary sinus diverticula). It is defined by a shortened PR interval (<0.12seconds) with normal P wave, wide QRS complex and the presence of a delta wave.[3]

WPW Syndrome is an uncommon condition associated with episodes of tachyarrhythmia. The tachyarrhythmia is often SVT with reentry tachycardia and it can be paroxysmal. Most cases are paroxysmal lasting for short periods of time and usually not leading to heart failure and hydrops.[4]

RESULTS

This case is a typical presentation of SVT, successfully treated with IV adenosine following which Delta waves found to be suggestive of pre-excitation in WPW syndrome.[5] Intravenous administration of ADENOSINE led to successful cardio-conversion in pediatric emergency department patient's events that are presumed to be SVT. A dose range of 1mg/kg was successfully found to be most effective. Adenosine was not associated with significant adverse effects.[6]

The patient has been followed as an outpatient with continued propranolol therapy, with dose titrations for somatic growth and no evidence of breakthrough tachycardia.

ABBREVIATIONS

Supra ventricular tachycardia[SVT], Wolff-Parkinson-White Syndrome(WPW).

REFERENCES

1. WILSON E.SADOH, IKECHUKWU R. OKONKWO, Supraventricular tachycardia in a neonate with Wolff-Parkinson-White syndrome Nigerian Journal of Cardiology, July - December 2015; 12(2).
2. RICHARD N.FOGOROS, MD. a board certified physician updated very well health, wpw july 06, 2018.
3. Ben Ghezala Hassen, Snouda Salah, Abbes Fehmi, Bechikh Imen Wolff–Parkinson–White syndrome presenting as atrial fibrillation in a female patient with situs inversus Case Reports International, 2005; 4.
4. Barabara j.deal, md john f.keane, md, paul c. Gillette, md, facc, arthur garson, jr., md, facc. Wolff-parkinson-white syndrome and supra ventricular tachycardia during infancy: management and follow-up American College of Cardiology Foundation Accepted August 10, 1984.
5. Yong Chuan Chee, Jian-Gang Ang A Case of Supraventricular Tachycardia Associated With Wolff-Parkinson-White Syndrome journal of medical cases, February 2018; 9(3): 54-57.

6. Joseph D Losek, MD Erin Endom, MD Ann Dietrich, MD Gail Stewart, DO William Zempsky, MD Kathy Smith, MD Adenosine and Pediatric Supraventricular Tachycardia in the Emergency Department: Multicenter Study and Review Annals of emergency medicine- An international journal., February 1999; 33(2): 185-191.