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PICTURE OF THE MONTH

Cardiac Rhabdomyomas as a Cause of Neonatal Arrhythmias

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A term male newborn, 2.3 kg, born to a primigravida, by vaginal delivery was referred to authors' unit because of respiratory distress. At the time of admission, heart rate was 220/min, with low volume pulses and ECG showed supraventricular tachycardia (SVT) (Fig. 1a). Sinus rhythm was restored after IV adenosine. General examination showed ash leaf macules (Fig. 1b) over the lumbosacral region, left hand and shoulder. Echocardiography showed multiple cardiac rhabdomyomas (Fig. 1c) in both ventricles with no significant obstruction to blood flow. The baby was started on propranolol, furosemide, and digoxin. On day 3 of admission, the baby had an increase in the number of hypopigmented patches and the size of rhabdomyomas, with another episode of SVT. Baby was started on sirolimus. The baby had malignant ventricular tachycardia (VT) on day 8 of life and could not be revived. Exomic sequencing was positive for TS 2 gene on chromosome 16.

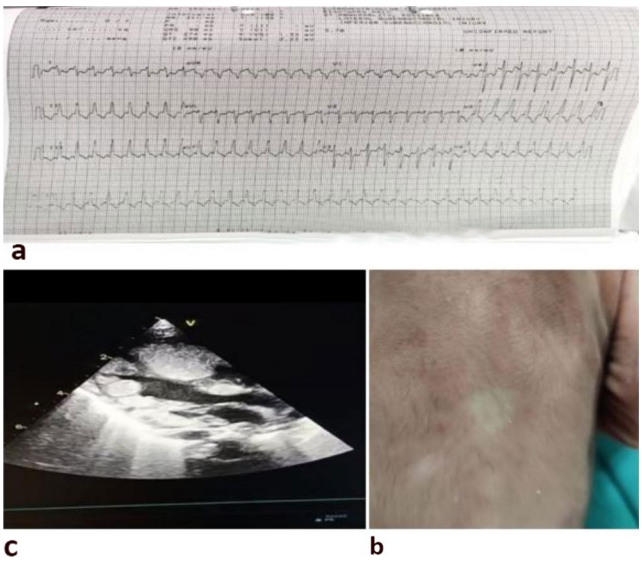

Fig. 1 Systemic manifestations of Tuberous sclerosis complex (**a**) ECG of the neonate showing supraventricular tachycardia (Narrow QRS complex, absent 'P' waves). (**b**) Ash leaf macules on the lumbo sacral region of the neonate. (**c**) Echocardiography showing rhabdomyomas in the left ventricular wall

Neonatal cardiac tumors are uncommon. Sixty percent of cardiac tumors are rhabdomyomas [1]. The incidence of tuberous sclerosis in children with rhabdomyomas is 50% [2]. They are mostly asymptomatic, can be found during prenatal ultrasounds, and spontaneously remit within the first three years of life. Their circumference shrinks by 2 mm per month [3]. Whilst usually asymptomatic and benign, the tumors can cause heart failure and arrhythmias. The presence of several tumors that grew gradually in size to cause left ventricular outflow obstruction and malignant VT in the present case makes it noteworthy to report.

Declarations

Conflict of Interest None.

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