



## A Neonatal Myxoma, Obstructing Right Ventricular Outflow Tract

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### Abstract

**Introduction:** Myxomas; although they are the most common primary cardiac tumors in the adults; they are very rare in pediatric age group. There is limited data in the literature.

In this report we aimed to present an interesting neonatal case operated for the myxoma obstructing the right ventricular outflow tract.

**Case:** Five days-old full-term male infant weighted 3700 gr was referred to our center for the heart murmur. Transthoracic echocardiogram revealed a mass in the right ventricle sized 13.5 mm × 8 mm. It was seen that the mass was prolapsing in Right Ventricular Outflow Tract (RVOT) in each systole and causing an obstruction. We have measured 60 mmHg pressure gradients in RVOT. Successful excision of the tumor was done without any complications. Pathological investigation revealed that the excised tumor was a myxoma.

**Discussion:** Myxomas usually arise from the right atrium or the left ventricular cavity. The most interesting feature of our case that myxoma originated from RV not from atria. In the literature we have found only three reports of neonatal right ventricular myxomas therefore our case is the fourth one.

Most neonatal cardiac tumors are rhabdomyomas that regress by time. Myxomas are rare in pediatric age group, only sporadic cases were reported. They are benign tumors however, if they increase in size and cause an obstruction in outflow tract like our case, should be treated by surgical excision.

### Introduction

Myxomas although they are the most common primary cardiac tumors in the adults; they are very rare in pediatric age group. There is limited data in the literature. In this report we aimed to present an interesting neonatal case operated for the myxoma obstructing the right ventricular outflow tract.

### Case Presentation

Five days-old full-term male infant weighted 3700 gr was referred to our center for the heart murmur. He was asymptomatic without any respiratory distress and good peripheral perfusion. In his physical examination: 2/6 systolic ejection murmur on pulmonary area was noted. Oxygen saturation was 98% in room air, his pulse rate 140/min and rhythmic, blood pressure was 79/58 mmHg, respiratory rate was 32/min. Transthoracic echocardiogram revealed a mass in the right ventricle sized 13.5 mm × 8 mm (Figure 1). It was seen that the mass was prolapsing in Right

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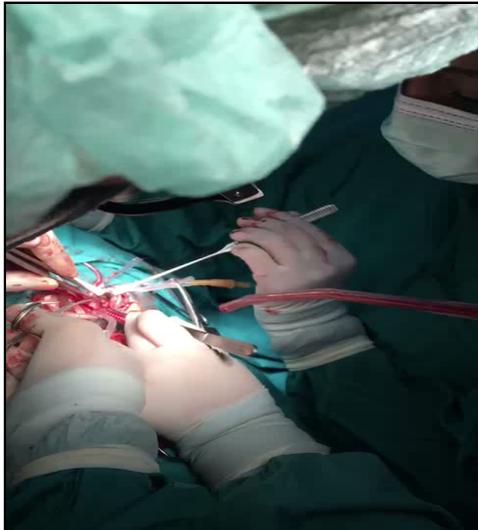
Figure 1: Transthoracic echocardiogram revealed a mass in the right ventricle sized 13.5 mm × 8 mm.



**Figure 2:** Tumor macroscopic view after total excision.



**Video 1:** The mass was prolapsing in Right Ventricular Outflow Tract (RVOT) in each systole and causing an obstruction.



**Video 2:** Successful excision of the tumor was done by surgery.

Ventricular Outflow Tract (RVOT) in each systole and causing an obstruction. We have measured 60 mmHg pressure gradients in RVOT (Video 1). Therefore; the patient was taken to the operating room. Successful excision of the tumor was done without any complications (Video 2). Macroscopic view of tumor was seen in Figure 2 after total excision. Pathological investigation revealed that the excised tumor was a myxoma consisting of cells with eosinophilic cytoplasm, indistinct cell borders, and a lack of mitotic activity.

## Discussion

Myxomas usually arise from the right atrium or the left ventricular cavity. The most interesting feature of our case that myxoma originated from RV not from atria. There are sporadic cases but mostly adult population reported in the literature [1,2]. In the literature we have found only three reports of neonatal right ventricular myxomas therefore our case is the fourth one [3,4]. Most neonatal cardiac tumors are rhabdomyomas that regress by time. Myxomas are rare in pediatric age group, only sporadic cases were reported. They are benign tumors. Main clinical symptoms depend on its position and size. If they are huge or progressively increase in size and cause an obstruction in outflow tracts whether LVOT or RVOT like our case, they should be treated by surgical excision. Morbidity and mortality rate of surgery in these cases is very low and the prognosis for patients after surgical resection is excellent in most of the cases.

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