196. PERSISTENT ARTERIAL HYPERTENSION IN AN ADOLESCENT WITH REPAIRED TETRALOGY OF FALLOT: A CASE REPORT

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Introduction. Primary arterial hypertension is increasingly diagnosed in adolescents, mainly due to excess body weight, low levels of physical activity, unhealthy diet and a positive family history. Secondary hypertension is less common, but is particularly important to consider in patients with congenital heart disease after surgery. In adolescents after surgical correction of Tetralogy of Fallot, blood pressure is usually monitored, but the long-term impact of moderate and persistent elevation may still be underestimated.

Case presentation. A 13-year-old boy with complete surgical repair of Tetralogy of Fallot at the age of 3 years is being followed routinely by a pediatric cardiologist and is referred after 6 months of elevated blood pressure up to 145/90 mmHg and intermittent headaches. He is overweight, with body mass index (BMI) 27 kg/m², has a sedentary lifestyle, and both parents have grade 2 arterial hypertension. On examination he is clinically stable, with BP 142/88 mmHg, heart rate 82 beats per minute and a soft systolic murmur over the pulmonic area, without signs of heart failure. Laboratory tests and renal ultrasound with Doppler are normal. Transthoracic echocardiography (TTE) shows an intact ventricular septum, good surgical result, moderate pulmonary regurgitation and mild right ventricular dilation with preserved systolic function. Ambulatory blood pressure monitoring (ABPM) confirms persistent arterial hypertension, with mean arterial pressure (MAP) 105 mmHg, average daytime blood pressure 138/86 mmHg and night-time 124/78 mmHg, with preserved nocturnal dipping pattern. He is managed with lifestyle modification and low-dose angiotensin-converting enzyme (ACE) inhibitor therapy, which reduces average blood pressure to about 130/80 mmHg and improves his symptoms.

Discussions. This case shows that a common combination in adolescents — excess weight, low physical activity and a family history of hypertension — can be sufficient to cause arterial hypertension even in otherwise healthy children, and may have an even stronger effect in a patient with surgically corrected Tetralogy of Fallot. Persistent hypertension on ABPM in a boy who appears clinically well after repair highlights that this group remains vulnerable and requires attention not only to residual structural and rhythm problems, but also to general cardiovascular risk factors.

Conclusions. This case emphasizes that, in adolescents after repair of Tetralogy of Fallot, blood pressure should be systematically assessed at each visit and home blood pressure monitoring should be encouraged within the family. Early recognition of persistent hypertension and timely lifestyle modification, together with appropriate drug therapy, may help reduce long-term cardiovascular risk and improve quality of life in these patients.

Keywords. secondary arterial hypertension; adolescent; repaired Tetralogy of Fallot.

https://doi.org/10.66603/medespera2026.727