

LOW DOSE INTRATHECAL BUPIVACAINE FENTANYL COMBINATION FOR INGUINAL HERNIA REPAIR IN A PATIENT WITH TETRALOGY OF FALLOTDr. S. Parthasarathy¹, Dr. M. Ravishankar²**SUMMARY**

Tetralogy of Fallot (TOF) is the most common cyanotic congenital cardiac lesion that is likely to result in survival to adulthood. We report a case of unrepaired tetralogy of Fallot with right inguinal hernia for mesh repair where we successfully managed the case with low dose intrathecal bupivacaine with fentanyl.

Introduction

The original anatomic description of tetralogy of Fallot (TOF) included a tetrad of malformations, namely, ventricular septal defect (VSD), right ventricular outflow tract obstruction (RVOTO), aorta overriding the ventricular septum, and RV hypertrophy (RVH). TOF is the most common cyanotic heart defect seen in children beyond infancy. Furthermore, TOF is the most common cyanotic congenital lesion that is likely to result in survival to adulthood.^{1,2} Four diagnostic subgroups of TOF are described:

- (1) TOF, absent pulmonary valve syndrome;
- (2) TOF, common atrioventricular canal (AVSD);
- (3) TOF, pulmonary atresia;
- (4) TOF, pulmonary stenosis.

TOF, absent pulmonary valve syndrome is a form of TOF with a severely dysplastic pulmonary valve and markedly dilated pulmonary arteries. This relatively rare lesion represents only 3-5% of all cases of TOF. TOF with an absent pulmonary valve is commonly associated with respiratory difficulties. Severe problems with oxygenation especially ventilation are thought to be related to bronchial compression secondary to the marked pulmonary artery dilatation.

TOF, common atrioventricular canal (AVSD) is the presence of both TOF and complete AVSD. This rare lesion represents only 2% of all cases of TOF. Complete surgical

repair of this lesion is riskier than repair of TOF or AVSD alone. Nevertheless, combined complete repair is possible.

TOF, pulmonary atresia is a form of pulmonary atresia with VSD in which the intracardiac anatomy is TOF. TOF with pulmonary atresia is commonly associated with hypoplastic branch pulmonary arteries and may be associated with major aortopulmonary collateral arteries (MAPCAs).

TOF, pulmonary stenosis is the common form of TOF. In TOF with pulmonary stenosis, pulmonary stenosis may be at the subvalvar, valvar, or supra-valvar level, or it may involve any combination of these three levels. We report a successful management of a case of an adult male with inguinal hernia with type three TOF with MAPCAs

Case report

A 21 year old male presented with right inguinal hernia and a history of dyspnoea. On clinical examination, he was conscious, afebrile with minimal cyanosis and clubbing. The pulse rate was 82/min and a blood pressure of 136/84 mm Hg. The cardiovascular system revealed a systolic murmur and the respiratory system was clear. The Haemoglobin was 13.2 gm with a PCV of 39. Other routine investigations were normal including a coagulation profile. His chest Xray revealed a right ventricular dominance and the ECG showed significant RVH. Echo showed a tetralogy of fallot. On going through the previous records the patient had undergone a cardiac catheterisation five years ago which showed tetralogy of fallot with pulmonary atresia, hypertensive MAPCAs and a mild aortic regurgitation. His preoperative oxygen saturation was 88%. The patient was fasted for 8 hours with an instruction to take 500 ml of clear fluids four hours before. The premedication included antibiotics and 7.5 mg of IM metoclopramide. An 18 G venflon was inserted in the right upper limb with a three way adapter with strict instructions on debubbling techniques during IV injections. The debubbling techniques are described as follows.

- Meticulous debubbling of all IV tubing and vascular catheters.
- To have a free flow from the tubing and cannula before connection.
- Prior ejection of any air from syringe and needle before injection.
- To avoid the last ml of fluid during injection.

1. Chief anaesthesiologist, Govt. Dist headquarters hospital, Kumbakonam (India)

2. Prof. and HOD
Dept. of anaesthesiology, Mahatma Gandhi medical college and research institute.
Pondicherry, India.

Correspond to:**Dr. S. Parthasarathy**

Email : painfreepartha@yahoo.com

rshankarm@gmail.com