Background Clopidogrel is a thienopyridine drug that acts by binding selectively and irreversibly to the adenosine diphosphate P2Y12 receptor on platelets. Platelet aggregation is consequently inhibited. Clopidogrel is used to prevent ischemic events in patients at risk, when other drugs fail or are not tolerated. Paediatric use is not authorised because of limited information about efficacy and safety.

Purpose To illustrate our experience in the three-month use of clopidogrel in children with a systemic-to-pulmonary arterial shunt, prior to definitive surgical intervention.

Materials and Methods On February 2012 a temporary systemic-to-pulmonary arterial shunt was placed in a four-month-old patient, affected by Tetralogy of Fallot with hypoplasia of the infundibulum and pulmonary valve. We administered two antiaggregant drugs, ASA 18 mg and clopidogrel 0.2 mg/Kg once a day, because of the high risk of thrombotic closure of the shunt. We chose an extemporaneous preparation of type 5 capsules with lactose as a diluent. After that, four other children (from 2 months to 4 years old) were treated with clopidogrel, mostly in association with ASA or together with enoxaparin.

Results We prepared capsules from 0.75 to 3.5 mg. For all patients we obtained authorization by the Ethics Committee and the patient’s informed consent. After surgery, the children were observed for 7–8 days depending on clinical follow up and complications. We checked the blood count and shunt patency with clinical observation, analysis and echocardiogram. After discharge, patients were first recalled 10–15 days later, then after 1–2 months to see the doctor, have an ECG, blood tests and echocardiogram. It was not necessary. No serious side effects were observed.

Conclusions Paediatric clopidogrel treatment is rapidly increasing. A wider number of cases, a comparison with other professional experience, and, most of all, controlled clinical trials, would be desirable.

No conflict of interest.