Table IId. Antiplatelet and antithrombotic medications used in pediatric thrombosis

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| **Drug** | **Treatment Dose** | **Monitoring** | **Mechanism** | **Comments** |
| **Oral antiplatelet drugs** |  |  |  |  |
| Aspirin | Prophylaxis: 1-5 mg/kg/day Kawasaki disease: 80-100 mg/kg/day for 2 weeks followed by 3-5 mg/kg/day for 7 weeks or until coronary artery narrowing improves (if present). | Used in low doses to inhibit platelet aggregation and improve complications of venous stasis and thrombosis. | Permanently inactivates cyclooxygenase and prevents thromboxane A2 production in platelets. Platelet function does not fully recover until new platelets are made without aspirin present (5 to 10 days after the last dose) | Inactivating platelets in patients on therapeutic doses of anticoagulation is relatively contraindicated, since major hemorrhage can result. Shorter-acting platelet inhibitors should be considered in this setting so that effects can be quickly reversed if hemorrhage occurs. |
| Clopidogrel | Age < 2 years: 0.2 mg/kg/dose once daily.  Age > 2 years: 1 mg/kg/dose once daily (maximum 75 mg, which is the adult dose). | Not commonly used in children. | Irreversibly blocks the ADP receptor of platelets and inhibits platelet aggregation | Has no effect on prostaglandins. |
| **Other antithrombotic agents** |  |  |  |  |
| Protein C concentrate | For an acute episode or during a period of high risk for thrombosis, administer 100-120 IU/kg IV bolus followed by 60-80 IU/kg every 6 hours x 3 doses; then 45-60 IU/kg every 6 to 12 hours as maintenance. | Dosage and treatment duration depend on the severity of protein C deficiency and the clinical situation, including the progression (or resolution) of the thrombosis.  For long-term prophylaxis, administer 45-60 IU/kg every 6 to 12 hours with a goal to achieve peak protein C activity >25% U/dL. | Recombinant protein C used for replacement in deficient patients. |  |
| Antithrombin | Dosing is individualized based on pretherapy antithrombin activity levels to achieve an activity level 80% to 120% of normal. A loading dose should be given as a 15-minute infusion, followed by maintenance dosing as a continuous infusion in situations with severe deficiency or critical illness. | In children with active thrombosis and antithrombin deficiency, the dose should be adjusted to maintain antithrombin levels between 80% to 120% of normal. | Recombinant antithrombin used to replace antithrombin in deficient patients with thrombosis or at high risk to develop thrombosis | Because heparins anticoagulate via activation of antithrombin, patients with antithrombin deficiency who develop thrombosis may have an inadequate response to heparin therapy, so measurement of the antithrombin level and replacement if deficient (<50 to 80%) may be warranted. |