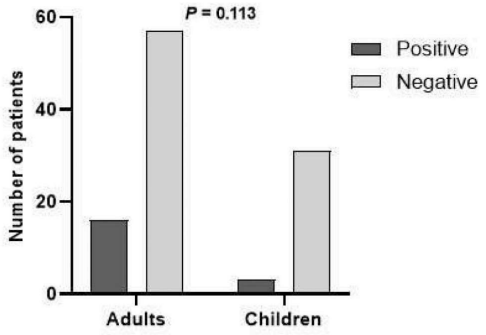

N	Adults	Children
Positive	16	3
Negative	57	31
Total	73	34
%		
Positive	21.9	8.8
Negative	78.1	91.2
Fisher's exact test, P = 0.113		

FIGURE 2 A positive diagnosis of HIT in children vs. adults

PB0276 | Real world data of pediatric thromboembolic disease by the international pediatric thrombosis network

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Background: Pediatric thromboembolism (TE) is a rare disease. In 2017, we established an International Pediatric Thrombosis Network (IPTN) to improve the care of children with TE. The IPTN currently consists of 92 pediatric thrombosis centers in 27 countries. Through the IPTN, we established a prospective disease registry, the Throm-PED registry, that brings together real world data on arterial (ATE) and venous TE (VTE) in children of all age groups globally.

Aims: To report the epidemiology, risk factors and management of children enrolled in the Throm-PED registry.

Methods: An international, multicentre, prospective observational cohort study of children (< 18 years) with TE. The following data are prospectively collected in the basic registry: age at diagnosis, gender, TE type, location, risk factors, and treatment. In addition, the Throm-PED registry contains four sub-registers: safety and efficacy of DOACs, neonatal renal vein thrombosis, catheter-related ATE, and adolescent TE.

Results: The number of included children increased from 148 in 2019 (5 centers) to 895 in January 2022 (15 centers). Of 895 children, 795 had VTE (88.8%) and 100 had ATE (11.2%) (Table 1). Age distribution of VTE was bimodal with peaks in neonates and infants < 1 year and teenagers. Almost 80% of ATE children were younger than 8 years. Catheters, surgery, and congenital heart disease were more frequent in younger children with VTE, whereas thrombophilia, obesity, malignancy and immobility were more common in teenagers. Unprovoked VTE and infection were more common in males than females, whereas obesity and oral contraceptives were more frequent in females. DOACs were increasingly used, especially in teenagers.

Conclusion(s): The Throm-PED registry is an important tool to collect real world prospective data of pediatric TE which can provide post marketing surveillance data to validate previous clinical trials, identify geographic variations in clinical care, and assist in identifying optimal questions for future clinical trials.

TABLE 1 Clinical characteristics of 895 children enrolled in the Throm-PED registry

Characteristic	Venous TE (n,%) n=795	Characteristic	Arterial TE (n,%) n=100
Male: female: non-binary	397:393:3	Male: female: non-binary	58:41:0
Age (median, range)	4.0 (0-18)	Age (median, range)	0.5 (0-18)
< 1 year of age	261 (32.8%)	< 1 year of age	49 (49%)
Location			
Upper extremity	174 (21.9)	Intracardiac	57 (57)
Lower extremity	259 (32.6)	Aorta	11 (11)
Intracranial	99 (12.5)	Lower extremity	19 (19)
Jugular vein	77 (9.7)	Upper extremity	4 (4)
Abdominal vein	72 (9.1)	Other	9 (9)
Risk factors			
Central venous catheter	399 (50.2)	Cong. heart disease	34 (34)
Infection	191 (24)	Arterial catheter	21 (21)
Surgery	143 (18)	Infection	14 (14)
Immobility	108 (13.6)	Surgery	18 (18)
Cong. heart disease	103 (13)	Malignancy	12 (12)
Malignancy	95 (11.9)	Unprovoked	2 (2)
Obesity	51 (6.4)		
Contraceptives	46 (5.8)		
Thrombophilia	39 (4.9)		
Unprovoked	48 (6)		
Treatment			
LMWH	617 (77.6)	LMWH	64 (64)
Unfractionated heparin	145 (18.2)	Unfractionated heparin	42 (42)
Vitamin K antagonists	59 (7.4)	Vitamin K antagonists	13 (13)
DOAC	120 (15.1)	DOAC	3 (3)
Fondaparinux	15 (1.9)	Fondaparinux	1 (1)
Bilivarudin	6 (0.8)	Bilivarudin	3 (3)
Thrombolysis	27 (3.4)	Thrombolysis	7 (7)
No treatment	63 (7.9)	No treatment	5 (5)
Aspirin	0 (0)	Aspirin	8 (8)

Abbreviations: TE thromboembolism, n number, Cong Congenital, LMWH low molecular weight heparin, DOAC direct oral anticoagulant

VPB0280 | Retrospective case series study of patients with may-Thurner syndrome in a single tertiary pediatric center

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Background: The 2018 ASH Pediatric Guidelines for Management of Venous Thromboembolism suggests against using thrombolysis in symptomatic deep venous thrombosis (DVT) patients (conditional recommendation).

Aims: Here we present a single center case series of 25 pediatric patients with May-Thurner Syndrome. Patients underwent thrombolysis followed by anticoagulation with little complications and no long-term significant post-thrombotic syndrome (PTS), challenging current guidelines. Current data using anticoagulation only demonstrates up to 80% PTS in this age group, suggesting alternative treatment regimens should be explored.

Methods: Deidentified data were extracted from outpatient records under institutional IRB exempt STUDY21050204, from the last 10 years. Thrombolysis consisted of institutional protocol using t-PA (0.03mg/kg/h), AngioJet (Boston Scientific) and unfractionated heparin infusion (10 u/kg/h). All patients received outpatient anticoagulation. Diagnosis of May-Thurner Syndrome was confirmed by venogram. Anticoagulation was started immediately after thrombolysis for 3 months followed by prophylaxis. PTS was assessed using modified Villalta Score (VS) and Manco-Johnson Instrument (MJI).

Results: Of 25 patients, 23 had analyzable data. Median age: 16 years old (80% females, 80% white). Presentation of symptoms to procedure: 4 days average. 78% with complete occlusion of, at least, one deep vein (Femoral, External Iliac, and Common Iliac). 46% of patients received a 2-day procedure and 81% received stent placement. Complications: 4 patients dropped ≥ 2g/dl hemoglobin, none required red cell transfusions, there were no bleeding in critical areas or compartment syndrome. Only 2 patients had readmissions for a second procedure due to recurrence of thrombosis. No patient scored moderate or higher in the VS nor Physically and Functionally Significant PTS in the MJI.

Conclusion(s): Thrombolysis in pediatric patients with May-Thurner Syndrome can be safe and effective, and may be considered in experienced pediatric tertiary centers. Further data is urgently needed to standardize care and avoid PTS is this young healthy population.

VPB0281 | The use of Apixaban for thromboprophylaxis and treatment in children with cardiac disease younger than 6 months of age

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Background: Antithrombosis for children with congenital heart disease (CHD) is complicated by developmental hemostasis, difficult administration and monitoring. The evaluation of novel anticoagulation strategies is critical. To our knowledge, we report the first use of Apixaban in this age group with commercially available dosing.

Aims: Evaluate safety (clinically relevant non-major (CRNM) or major bleeding; thrombotic events) and efficacy (thrombosis improvement and resolution) of Apixaban in children with CHD.

Methods: Retrospective single-center analysis of children < 6 months old with CHD treated with Apixaban.

Results: From 1/2020–12/2021, 24 children < 6 months received Apixaban, median age 4.7 months (0.4–5.9), median weight 5.2 kg (2.9–6.5), for 2815 total days (1–396). Single ventricle CHD accounted for 14/24. Eight required thromboprophylaxis, 16 treatment (8 arterial, 1 intracardiac, 10 venous; 4 multifocal). Over half (13) received concomitant aspirin. Smallest dose possible using 2.5 mg tablets was 0.625 mg BID (21/24 patients) with median dose of 0.15 mg/kg/dose, median peak level (Apixaban chromogenic anti-Xa assay, HE-Stago 2) of 205 ng/ml (66–396, *n* = 21). Based on level and indication, 10 patients required 1.25 mg BID (0.22 mg/kg/dose). Those requiring 0.625 mg BID were smaller (4.65 vs 5.5