Clinical care of children and adolescents with COVID-19: recommendations from the National COVID-19 Clinical Evidence Taskforce

To the Editor: Fraile Navarro and colleagues[1] recently published 20 recommendations for the treatment of coronavirus disease 2019 (COVID-19) in children and adolescents from the National COVID-19 Clinical Evidence Taskforce.

For the paediatric inflammatory multisystem syndrome (PIMS-TS) recommendations, the Taskforce convened an expert advisory group.[1] In the absence of clinical trials, the panel considered peer-reviewed guidelines and cohort studies to formulate consensus recommendations.[1] However, they deferred providing any guidance to help clinicians prevent thromboembolism. We suggest the Taskforce consider the same approach for paediatric anticoagulation guidance.

COVID-19 is associated with marked coagulation activation and hypercoagulability in children.[2,3] Life-threatening pulmonary embolus requiring thrombolysis has been encountered in Australian adolescents hospitalised with COVID-19.

A retrospective cohort study published in 2021 found that 2.1% of children hospitalised with symptomatic COVID-19 infection and 6.5% of those with PIMS-TS developed thrombosis.[4] Thrombosis occurred more frequently in children aged 12 years and over who had central lines, PIMS-TS, or an underlying oncological diagnosis. A D-dimer of more than five times the upper limit of normal was significantly associated with thrombosis.[4]

The authors refer to "paediatric guidelines published in the US", which are published on behalf of the Pediatric/Neonatal Hemostasis and Thrombosis Subcommittee of the International Society of Thrombosis and Haemostasis; these adapt current consensus prophylaxis guidelines to include COVID-19-specific features.[5]

In deferring making specific recommendations, the authors suggested using existing local thromboprophylaxis guidelines. The Royal Children's Hospital, Melbourne and the Sydney Children's Hospital, Randwick have both independently developed COVID-19-specific thromboprophylaxis guidelines (that are very closely aligned),[6,7] as have many other centres globally because previous local thromboprophylaxis guidelines are inadequate for COVID-19-associated thrombotic coagulopathy. The Melbourne/Sydney guidelines advise baseline coagulation testing in hospitalised children with COVID-19, incorporating D-dimer to assist risk assessment, twice-daily enoxaparin and anti-Xa monitoring/dose titration.[6,7] These could be provided as supplemental material in these living guidelines.

The COVID-19 anticoagulation in Children–Thromboprophylaxis (COVAC-TP) trial — a phase 2 single-arm study looking at 40 children who will receive monitored, low dose, twice-daily enoxaparin (ClinicalTrials.gov Identifier NCT04354155) — will not change the level of evidence, so waiting for completion of this trial does not seem appropriate.

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