Intravenous Access in Children in the Emergency Department

To the Editors:

The recent meta-analysis by Heinrichs et al[1] did not find any significant benefit in using new technologies for aiding peripheral intravenous cannulation (PIVC) in children. Novel methods to improve PIVC are important because in the sickest children, a delay to fluid resuscitation is associated with increased mortality; in septic shock, every hour that passes without restoration of normal blood pressure has been associated with at least a 2-fold increase in mortality odds.[2] In difficult children, the total time for PIVC can be as high as 90 minutes.[3]

In a recent 12-month audit in our pediatric emergency department, we looked at children with severe sepsis who were subsequently admitted. We incidentally found that only 9 (27%) of the 33 children received prescribed intravenous fluids within the recommended 1 hour[4] of seeing a clinician, along with only 8 (24%) of the 34 patients prescribed antibiotics. Although documentation and timings are difficult to obtain accurately retrospectively, the difficulty in cannulation in this group of patients would undoubtedly have played some role in the delay. None of these children had intraosseous (IO) access. Clinicians seem hesitant to use IO access, despite it being the standard procedure in the advanced pediatric life support course and rarely having complications.[5] Whilst there is no validated alternative in speeding up peripheral intravenous access in difficult pediatric patients, we urge emergency department clinicians to consider IO access. Intraosseous access has fewer complications than a central line and can be performed faster than PIVC or central access when vascular collapse is present.[6,7]

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DISCLOSURE

The authors declare no conflict of interest.

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