Intravenous access: A different approach

Sir,

Vascular access is the cornerstone of medical therapy in the pediatric population and presents unique challenges. The common reasons for failure to have a proper venous access in children are (1) lack of patient cooperation, (2) very small size of many veins, (3) improper visualization of the course of vein especially in chubby babies with excessive subcutaneous fat and in dark-skinned babies, (4) choosing inappropriate size of the cannula. The various techniques of improving venous prominence and / or locating peripheral veins are (1) proximal application of ordinary rubber venous tourniquet or manual circumferential limb compression (less efficient and uncomfortable), (2) application of sphygmomanometer cuff inflated to just below the diastolic pressure (time-consuming), (3) local warming,[1] (4) Topical nitroglycerine[2] (risk of local skin reaction and headache), (5) ultrasonic guidance[3] (not available in most centers and need skilled personnel) (6) venous distension device.[4]

Here, I would like to suggest a different approach to venous cannulation in difficult situations, which has been used successfully in our center with a 100% success rate. The technique involves the placement of a torchlight (flashlight) or a cold light source (for example, the endoscopic light which uses a xenon light source delivered to the tip by fibreoptic bundles and commonly available in operating room settings) under the limb / palm to visualize the veins on the dorsum of hand. For better contrast the lights in the treatment room to be turned off. The veins can be identified as dark lines in the pinker subcutaneous tissue. With this technique, venous visualization is also possible even with hematoma formation, previously punctured veins and in dark-skinned babies. The advantages of this technique are that it (1) provides better visualization and assessment of depth and caliber of vein (2) a torch (flash) light is easily available in hospital wards (3) provides a method of venous cannulation that is easier to master by the novice and (3) gives a visual check on successful catheterization of the vein.

REFERENCES


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