
Abstract:

PURPOSE: To evaluate venous pool technique (VPT) for obtaining neonatal blood samples as compared with the needlestick technique.

METHOD AND SAMPLE: An experimental design was used with subjects enrolled in two phases: an equivalence phase (N = 10) and a comparison phase (N = 64). In the equivalence phase, subjects weighing 1,500 g or more had two needlesticks. In the comparison phase, subjects weighing 800 g or more were randomized to receive blood drawn by either needlestick method or VPT.

RESULTS: Comparative results suggest that infant and maternal demographic factors, sampling attempts, and sampling failures were similar. However, for the outcome of hematoma development, the standard technique was significantly worse ($t = 2.25$; $p = .029$). Results suggest that the VPT method is safe and accurate for use in critically ill neonates.

CLINICAL IMPLICATIONS: This study demonstrated that the VPT process is easily learned and may provide advantages over standard blood sampling methods. Nurses can use this
information to evaluate this VPT technique in their institutions.