

STOMA MANAGEMENT (GASTROINTESTINAL)

Supporting information

For patients with high stoma output, capillary blood gas test more appropriate than arterial blood gas test?

The majority of studies show clinically acceptable agreement between capillary and arterial pH. (McLain 1988, Johnson 2000). A prospective study (Johnson 2000) of 21 infants in a NICU, comparing paired capillary and arterial results of pH, PO₂, PCO₂, lactate, sodium, potassium, ionized calcium, and haematocrit found no capillary-arterial differences were observed for pH, PCO₂, lactate, or sodium. Although capillary results were slightly, but significantly ($p < .01$), higher for potassium (+0.4 mEq/liter), ionized calcium (+0.47 mg/dl), and hematocrit (+4 percent), these differences fell within acceptable Clinical Laboratories Improvement Act (CLIA) performance criteria.

Johnson KJ, Cress GA, Connolly NW et al. Neonatal laboratory blood sampling: comparison of results from arterial catheters with those from an automated capillary device. Neonatal network, 2000; 19: 27-34.

McLain B, Evans J, Dear P. Comparison of capillary and arterial blood gas measurements in neonates. Arch Dis Child. 1988;63:743-747

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1590118/pdf/archdisch00904-0051.pdf>

Evidence Level: IV

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