percalcemia in the setting of a normal total calcium (or albumin-corrected calcium), as seen in this case report.

Patients with suspected acid–base disorders often receive blood gas measurements. Because most modern blood gas analyzers have the capability to measure \( iCa^{2+} \) and traditional blood gas parameters, ordering and reporting of this important parameter can facilitate the diagnosis of disturbances in calcium homeostasis.

Clinicians may derive a false sense of security from an albumin-corrected calcium value, not realizing that an \( iCa^{2+} \) measurement corrects for both albumin abnormalities and acid–base disturbances. In addition, the \( iCa^{2+} \) measurement can be done on a venous blood sample, and it can be performed with a shorter turnaround time.

When a calcium abnormality is suspected clinically, an \( iCa^{2+} \) determination can often be the best test.

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