tent at the race finish, while the other was certified dead later in a local private hospital.

Previous medico-legal autopsy diagnoses after sport-related deaths in our personal experience in Durban included cardiomyopathy, coronary artery disease, Marfan's syndrome and ruptured cerebral berry aneurysms. It is regrettable that autopsies were not performed in the above cases. Whether they should have been considered natural or unnatural may be debatable, but postmortem examinations could have served to establish the cause/s and mechanism/s of death without need for speculation, and before considerations on their preventability. Routine autopsy examinations in such instances would enlighten issues of familial/genetic study and counselling, scientific research into this area, and for 'selective pre-competition screening' in sport.

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## Pre-analytical, analytical and post-analytical considerations in glucose point-of-care testing

**To the Editor:** Point-of-care (POC) blood glucose monitoring has become an accepted method to evaluate patients in the hospital setting. In most situations, the method is accurate with a short turnaround time, which expedites treatment decisions. The important issue to keep in mind is that any point of care test is subject to pre-analytical, analytical and post-analytical variability.

A case in point: a neonate who presented with prolonged jaundice, liver dysfunction (elevated transaminase, coagulopathy), and renal tubular dysfunction (normal anion gap metabolic acidosis and glucosuria), was treated with insulin after POC glucose values were reported to be above 15 mmol/l. When the patient's condition deteriorated, the POC glucose results were correlated with the laboratory plasma glucose concentrations done on the Beckman LX, using a glucose oxidase ion selective electrode method. The laboratory values were consistently low (discrepant to POC values). The urine showed 4+ galactose and the red cells showed reduced galactose-1-phosphate uridyl transferase (GALT) activity. The patient was diagnosed with galactosaemia.

POC blood glucose meters have evolved rapidly and new-generation meters can exclude many of the previously encountered pre-analytical problems including inadequate sample volume, improper application and timing, removal of excess blood and lockout function if controls are out of range. Variables that may influence the analytical process include the haematocrit, environmental temperature or humidity, hypoxia, high triglyceride concentrations, and inaccuracy at very high and very low concentrations.[1] Method-specific interferences are also encountered, e.g. the POC device in this case (Roche Accu-Check Active) is a glucose dehydrogenase pyrroloquinolinequinone (GDH-PQQ)-based glucose measuring system. This system is not specific for glucose and may give false elevated glucose values in the presence of maltose, xylose or galactose (Accu-Check Active test strips package insert). Post-analytical factors that influence the interpretation of the result are whether a plasma or serum value is reported and the unit in which the result is reported. Recently, an International Federation of Clinical Chemistry (IFCC) working group recommended that all meters must be harmonised to the concentration of glucose in plasma, irrespective of the type of sample used.[1,2]

When a POC device is used, the clinician should always familiarise himself with the test method and the influence of possible interferences on the method. Methods using glucose dehydrogenase with NAD as co-factor (GDH-NAD), hexokinase or glucose oxidase are specific for glucose and do not exhibit interference as a result of interfering sugars.[3]

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## Hypertension: Holding on to your ACEs may be a good bet

**To the Editor:** The recently published South African Hypertension Guideline[1] provides a comprehensive review of the causes and risks of abnormal blood pressure and of its treatment, but falls short of offering a cost-effective approach to managing the burden. Understanding the causes of hypertension, the morbidity associated with it, and the effective treatments are necessary, but not sufficient, conditions for a cost-effective programme.[2,3] Also, adding to the debate, one has to look at this from another perspective.

In clinical practice, it is often assumed that angiotensin receptor blockers (ARBs) and angiotensin-converting enzyme