

HAEMOGLOBIN VARIANT AND FALSELY HIGH HAEMOGLOBIN A1C VALUE ON ION-EXCHANGE CHROMATOGRAPHY

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Dear Sir,

We would like to comment on the case report "A rare haemoglobin variant (Hb Phnom Penh) manifesting as a falsely high haemoglobin A1c value on ion-exchange chromatography" by Chen and Tai.⁽¹⁾ Interference of a haemoglobin (Hb) variant in the measurement of HbA1c is a common problem in endemic areas with haemoglobinopathy, such as Southeast Asian countries.⁽²⁾ Several Hb variants have been reported for their interference effect on HbA1c measurement.⁽²⁾ Chen and Tai suggested that "cautious inspection of the chromatogram may provide a valuable clue to the presence of an Hb variant".⁽¹⁾ In reality, however, this is very difficult and impractical, since the interfering Hb variant usually leads to chromatograms with results mimicking high HbA1c values. Therefore, measuring HbA1c values in the follow-up of a diabetic patient in an endemic region can be problematic. To determine the HbA1c values of diabetic patients in these regions (i.e. endemic regions with haemoglobinopathy cases), an alternative test, such as one that tests for levels of fructosamine, is recommended.^(2,3) Nevertheless, the interpretation of HbA1c values depends on the assays used, and not all assays are dependent on Hb variants.⁽²⁾ Should HbA1c analysis be required, a standard reference technique such as liquid chromatography-mass spectrometry should be considered.⁽⁴⁾

Yours sincerely,

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