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Erratum

Vol 1 No 3
May/June 2001, p247
Letters to the Editor –
'Aspirin against cancer'
The name of author of this letter was incorrectly spelt. We would like to apologise to Ricky A Sharma, Oncology Department, University of Leicester.

Clinical & Scientific letters

Letters not directly related to articles published in *Clinical Medicine* and presenting unpublished original data should be submitted for publication in this section. Clinical and scientific letters should not exceed 500 words and may include one table and up to five references.

Capillary blood gas analysis for long term oxygen therapy assessment

Long-term oxygen therapy (LTOT) prescription requires the performance of arterial blood gas analysis (ABG) which is usually done by arterial puncture[1]. Arterialised capillary blood gas analysis (CBG) involves the measurement of oxygen and carbon dioxide levels in a sample of blood secured from a stab of an anaesthetised earlobe to which a vasodilator cream has been applied. Whilst not an unqualified substitute for ABG, capillary gas analysis is a valuable measure of blood gas levels of oxygen and carbon dioxide particularly when oxygen levels are low[2]. There is no risk of arterial injury; it is less painful, does not require medical staff and is performed by trained non-medical staff. The college working party on domiciliary oxygen therapy services in the UK acknowledges the value of CBG analysis in the assessment of patients for LTOT and identifies it as an alternative to arterial sampling in this situation[1].

We conducted a telephonic survey of all the lung function laboratories[3]; only 35 of the 153 laboratories contacted used CBG for LTOT assessment. 122 used arterial gases (4 labs used both). In the labs that used CBG, the procedure was performed by a respiratory technician (27/35;77%) or a specialist nurse (8/35;23%). In the 122 labs that used arterial stabs, the procedure was performed by a junior doctor in 105 (86%), by respiratory nurses in 7 (6%), by doctors and nurses in 6 (5%) by a physiotherapist or a respiratory technician in 4 (3%). Six labs indicated that they planned to start using CBG in the near future. The common reasons given for not using CBG were the absence of a blood gas analyser in the laboratory and the physician-in-charge not being convinced of the validity of the technique.

Despite studies highlighting its value[4,5] and the college working party on domiciliary oxygen therapy endorsing it for LTOT assessment, capillary gas analysis remains unpopular. Whilst capillary sampling is not a substitute for arterial sampling, it is a useful tool in measuring oxygen levels at the lower end of the scale, where long term oxygen therapy is a therapeutic issue. Performed by respiratory technicians as part of standard lung function testing, perhaps in those with an oxygen saturation of less than 92% (as measured by pulse oximetry), CBG analysis might improve selection of those patients with COPD who are appropriate candidates for long term oxygen therapy. Capillary sampling is also a useful tool in ascertaining the flow level (litres/min) of oxygen therapy. Oxygen and carbon dioxide levels should be assessed at various flows of oxygen to ensure that oxygen does not worsen the hypercapnia[1]. Repeated capillary gas analysis at various flow levels of oxyen is a less traumatic alternative to repeated arterial stabbing.

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