Interleukin-1α and soluble interleukin-2 receptor in atopic dermatitis

Sir,—Dr Agata and colleagues reported enhanced interleukin-1 (IL-1) activity in blood mononuclear cells from patients with food sensitive atopic dermatitis and showed in the table. 1

Taking these observations into account the authors may find that there are both seasonal and latitudinal variations in arterial oxygen saturation along with the barometric pressure such that their proposed reference ranges should be interpreted with caution in summer and probably not used at all at latitudes or altitudes distant from Bogota.

Before receiving the changes in barometric pressure with season and altitude the ascent of Everest ($8848$ m) without supplemental oxygen was thought impossible. In 1978 Messner and Habeler proved the physiologists wrong. 3

P. GREALY 1  M. HUSSAIN 1  J. PRICE
Department of Child Health, Thoracic Medicine, King’s College Hospital, London SE5 9PZ

R. COLEMAN
Department of Dermatology, Hospital for Sick Children, Great Ormond Street, London WC1N 3JH


Pulse oximetry reference values at high altitude

Sir,—Lozano et al in their article on pulse oximetry reference values at high altitude conclude that their reference values could be used for the interpretation of oxygen saturation at high altitude for children and other cities with a similar altitude. 4 However, the authors have failed to take into account potential sources of error.

The fall in arterial oxygen saturation at altitude is due to the fall in barometric pressure rather than the gain in altitude per se. There is a corresponding fall in atmospheric oxygen tension ($Po_2$) with fall in barometric pressure (at 2000 m atmospheric $Po_2=124.9$ mm Hg (16.6 kPa) and at 3000 m $Po_2=110.2$ mm Hg (14.7 kPa)) such that the author’s proposed reference ranges are not suitable for use at altitudes other than that of Bogota ($2640$ m) as even small changes in altitude will alter the availability of atmospheric oxygen and the arterial oxygen saturation.

Furthermore, at a given altitude the barometric pressure changes with local variations in weather and to a greater extent with the season such that in mid-summer the barometric pressure may be $111$ mm Hg (14.7 kPa). 5 These pressure variations will affect the partial pressure of oxygen in the atmosphere. Although of little significance at sea level pressures, these changes in atmospheric $Po_2$ in the already ‘desaturated’ infant at altitude may significantly affect arterial saturation.

Taking these observations into account the authors may find that there are both seasonal and latitudinal variations in arterial oxygen saturation along with the barometric pressure such that their proposed reference ranges should be interpreted with caution in summer and probably not used at all at latitudes or altitudes distant from Bogota.

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A) POLLARD
The Children’s Hospital, Ladywood Middlesex, Birmingham B16 8ET