Medical Image of the Week: Lactate Threshold

Figure 1. V slope method for lactate threshold is where the CO₂ production (VCO) increases compared to oxygen consumption (VO₂). This is indicated by the vertical line.

The lactate or anaerobic threshold in exercise physiology is the point at which lactic acid starts to accumulate as the anaerobic component of metabolism increases and has been used to assess cardiopulmonary fitness. The V-slope method is a non-invasive way of estimating the lactate or anaerobic threshold (1). As lactate accumulates the H⁺ is mainly buffered by HCO₃⁻ and produces CO₂. A point can be seen in Figure 1 where CO₂ production (VCO₂) abruptly increases relative to O₂ consumption (VO₂). This represents the point at which the lactate threshold occurs.

Mohammad R. Dalabih, MBBS and Naser J. Mahmoud, MBBS
Division of Pulmonary, Allergy and Critical Care
The University of Arizona
Tucson, AZ USA

Reference

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