LEAD AN ESSENTIAL TRACE ELEMENT

Pages with reference to book, From 181 To 181

Dear Madam,

Please allow me to reply to Professor NA. Jafarey's criticisms (JPMA., 1991,41:120) of my editorial "Lead - an essential trace element" in the March issue. I was not retracting anything I had written in a previous editorial "Plumbum - Karachi Quo Vadis?" (JPMA., 1988,38:227). I doubt whether there is anyone in the medical or scientific world who is not convinced that lead is a highly toxic element especially at the levels that the human race is now subject to. Resulting blood lead levels are in the order of parts per million. However, evidence began to come to light recently that lead is also an essential trace element but at levels of parts per billion. This evidence, such as it is so far, was presented at the Seventh International Symposium on Trace Elements in Men and Animals, Dubrovnik, Yugoslavia last year (reference 3 of the editorial). Studies have been on animals only and for ethical reasons cannot be carried out on humans. Agreed the precise metabolic function has not yet been worked out and may or may not be in future. The precise metabolic functions of chromium, copper, zinc, magnesium, manganese and selenium in carbohydrate metabolism have not been elucidated, but there is little doubt as to their essentiality here and deficiency of any one of them may result in diabetes. Naturally, one cannot conclude from this that lead is also essential to maintain health but the evidence to date cannot be dismissed as being merely hypothetical either. Whether the title of the article and emphasis of the contents are correct or not is a matter of opinion but I fail to see that either provide ammunition for the vested interests opposed to the reduction of lead in the environment. Scientific facts are scientific facts, full stop! The essentiality of lead is suspected to be at blood and tissue levels of one-hundredth or even at one- thousandth of the toxic levels we are now forced to endure. Nowhere on earth can this be achieved in 1991 even by taking refuge in the remotest part of the Amazonian jungle. I will not argue about the other points raised. Time alone and scientific research will tell.

William W. T. Manser