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Conflict-of-interest disclosure: The authors declare no competing financial interests.

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To the editor:

Impact of lead intoxication in children with iron deficiency anemia in low- and middle-income countries

Recently, Pasricha et al¹ reported on the control of iron deficiency anemia in low- and middle-income countries.

The article discusses common contributory etiologies ranging from nutritional to infectious causes for iron deficiency anemia in the pediatric age group. Given that lead ingestion exacerbates iron deficiency,²⁻⁴ may accelerate the cognitive injuries of iron deficiency,⁵ and may also confound the diagnosis of microcytic anemia, we were surprised that the authors did not mention lead in their article.

Clune et al⁶ found that lead intoxication is remarkably common in many areas in the world including those described by the authors. Our own pilot study, conducted in a semiurban Indian setup, indicated strikingly high prevalence rates of lead intoxication. Fifty-six percent of the children in the age group of 0 to 6 years had a mean blood lead level (BLL) above 5 mcg/dL, with close to 10% of children in this age group having BLL dangerously above 15 mcg/dL.

Similar results were reported^{7,8} in separate moderate to large population-based studies from different parts of India with an average BLL in toxic ranges, well above the upper limit set by the World Health Organization and the Centers for Disease Control and Prevention for acceptable BLLs.⁹

Increased existence of hotspots of lead exposure in the South Asian region exist, but the lack of universal lead-screening programs in the developing world underrecognizes lead poisoning as a significant health hazard. Given the geographical overlap, it is likely that many of the patients in the study of Pasricha et al had concomitant lead poisoning.

Given the value of the authors' discussion in creating awareness and perhaps initiating legislation on the global level, we think the likely contribution of lead intoxication should be brought to the attention of investigators and public health officials.

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Conflict-of-interest disclosure: The authors declare no competing financial interests.

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To the editor:

Iron deficiency anemia in low- and middle-income countries

The paper by Pasricha et al¹ addresses several issues on the control of iron deficiency anemia (IDA) in low- and middle-income countries. When dealing with the topic of iron supplementation or fortification, a major topic is overlooked, which is critical and of concern in developing countries.

Iron is highly effective in treating IDA; this therapy is usually straightforward, simple, and inexpensive, and most of the time the response is predictable and gratifying. The standard preparation for oral use is ferrous sulfate; ferrous gluconate and ferrous fumarate are equally satisfactory and have about the same incidence of side effects.² However, oral iron hydroxide polymaltose (IP) preparations are ferric compounds that have been licensed as well as heavily promoted in developing countries to treat IDA²⁻⁶; interestingly, these preparations are not available in developed countries. Compared with ferrous salts, oral ferric salts are less absorbable but less aggressive to the gastrointestinal tract. The better gastrointestinal tolerability of IP has been widely used as an argument to promote its use in the treatment and prevention of IDA in some countries. However, its ineffectiveness has also been clearly identified.²⁻⁶ As a result of the heavy advertisement campaigns in Mexico, both general practitioners and internists prescribe oral IP as the first choice in the treatment of IDA. In Mexico, oral IP preparations are at least 15% more expensive than ferrous fumarate. Since hemoglobin levels fail to increase in most patients given oral IP,²⁻⁶ selecting adequate iron preparations for either fortification or supplementing food is of particular interest in low- and middle-income countries where IP is being widely distributed.

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Conflict-of-interest disclosure: The author declares no competing financial interests.

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