

Iron supplements do not boost malaria risk: study



Global health experts have warned against giving iron supplements in areas where malaria is rampant, but a study Tuesday found no rise in cases of the mosquito-borne disease among children who took iron.

However, hospital visits for severe diarrhea episodes were significantly higher among children in Ghana given extra iron, raising questions about its safety, experts said.

Malaria is a leading cause of death among children in sub-Saharan Africa, while iron deficiency is one of the area's most common nutritional deficiencies.

Nearly 2,000 children, aged six months to almost three years old, were part of the randomized study led by Stanley Zlotkin of the Hospital for Sick Children in Toronto, Canada and published in the Journal of the American Medical Association.

Children who were given a micronutrient powder (MNP) containing iron for five months showed no higher incidence of malaria than those who did not get the supple-

ments. All were given insecticide-treated bed nets.

The findings contrast with previous research that has suggested iron-deficiency anemia may protect against malaria, and that iron supplements may make malaria more deadly.

"Children in the iron group experienced fewer malaria episodes, but more in this group were admitted to the hospital during the intervention period," said the study.

In 2006, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) urged that in malaria-endemic areas, iron supplements be given only to children with anemia and at risk of iron deficiency.

"The findings from the current study not only address a gap in the literature, but also have potentially important policy implications for countries like Ghana that have not implemented iron supplementation or fortification as part of anemia control programs in part due to the joint recommendation from the WHO and UNICEF."

The WHO has recently updated its guidelines to urge that in malaria-prone areas, iron be given along with measures to prevent and treat malaria.

The Ghana study also raised questions about the safety of iron supplements, however, with its finding that hospital admissions were significantly higher in the iron group (156) than in the non-fortified group (128).

An accompanying editorial in JAMA by Andrew Prentice of the London School of Hygiene and colleagues suggested that the iron powder used in the study may not have been as effective as that used in previous studies, and called for more research on safety.

"The conclusion that iron did not increase the risk of malaria may offer limited reassurance and may be related to a lack of desired efficacy of the iron-containing MNP in respect to anemia resolution," they wrote.

The rise in hospitalizations "adds further to the concerns about the safety of iron administration in highly malaria-endemic environments," and leaves global health policy makers with an "unresolved dilemma."