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Estimation of DDT concentration in food items and serum samples for reproductive age group women, BangladeshRehnuma Haque¹, Tsukasa Inaoka², Miho Fujimura² and Daisuke Ueno²¹Kagoshima University, Japan²Saga University, Japan

This research was conducted to identify and reduce human exposure to DDT, especially women of reproductive age in Bangladesh and determine a relation between the DDT exposure levels in serum and major food items. DDT is a persistent, lipophilic chemical that is known to accumulate in human tissues. Exposure to these chemical has been linked to reproductive health effects, cancer and impaired growth and development of children. Primary routes exposure to DDT is through diet, breastfeeding and placental transfer. DDT has significant potential to bio accumulate in the food chain and living organisms due to its persistence, and is a major public health concern, especially in areas prone to malaria. In Bangladesh, the utilization of DDT as a pesticide in agriculture to increase crop production can be traced back to the mid-1950s. DDT products have been mostly used chemicals for public health, particularly for mosquito eradication program, started in 1965, as indoor residual spray (IRS) which was supplied by the World Health Organization. In early 1980s DDT was prohibited for agricultural purposes. Around 1992/93, all usages of DDT products were banned in every sector. Currently, they are used only if a detrimental outbreak occurs in certain focal areas. In this study several POPs (DDTs, PCBs, Chlordanes, HCHs, HCBs and PeCBs) were quantified. Among them DDTs showed the highest concentration. It was followed by PCB>PeCBs>HxCBs. Furthermore, meat and fish exhibited higher concentrations of DDT and its metabolites (DDTs: p, p'-DDT, p, p'-DDD and p, p'-DDE). However, only p, p'-DDE was detected in the serum samples. Statistical results suggested that consumption of meat such as beef and mutton may contribute to higher serum levels of p, p'-DDE.

Biography

Rehnuma Haque is currently a Doctoral student under Department of Human Ecology in Kagoshima University. Her research focuses on reproductive and child environmental health. She is interested to understand the basic information necessary to identify major routes of exposure to environmental toxicants such as pesticides with detrimental effects on child bearing aged women and also the toxicological impact of environmental chemical compounds on children in different stages of developmental milestone.

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