

# ORGANOCHLORINE PESTICIDES AND PCBs IN NEWBORNS IN A GENERAL POPULATION OF A STRONGLY INDUSTRIALIZED AREA

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**Background and Aims:** During pregnancy, organochlorine pollutants (OCs) are transferred from mother to fetus through the placenta (Vizcaino et al. 2011). Prenatal exposure may be related to future health problems of infants (Gladen et al. 1988). The body burden of compounds arriving to fetus depends on the environmental conditions in which the mothers live. In the present study prenatal exposure to OCs in a strongly industrialized area (Asturias, Spain) is investigated.

**Methods:** As part of the INMA (Environment and childhood) project (Ribas-Fito et al. 2006), 226 cord serum samples from the cohort of Asturias were analysed for OCs, including pentachlorobenzene (PeCB), hexachlorobenzene (HCB), 7 polychlorobiphenyl congeners (PCBs), 4 hexachlorocyclohexane isomers (HCHs) and dichlorodiphenyltrichloroethane (DDT) and its metabolites. The analyses were performed using liquid-liquid extraction, followed by gas chromatography electron capture detection (GC-ECD).

**Results:** 4,4'-DDE was the most abundant compound (median concentration of 0.51 ng/ml), and was detected in 99 % of the samples, while 4,4'-DDT (0.07 ng/ml) was found in 68 % of the samples. PCB congeners 118, 138, 153 and 180 were detected in more than 90 % of the samples, with PCB153 as the most abundant congener (0.14 ng/ml). HCB (0.14 ng/ml) and •-HCH (0.05 ng/ml) could be detected in respectively 96 and 86 % of the samples.

**Conclusions:** Prenatal exposure to OCs and PCBs is also occurring in Asturias. Comparing with other previously published INMA cohorts the observed concentrations are lower than those in samples from Menorca, but similar to those found in Valencia (Vizcaino et al. 2011).

## References:

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