

Table 2.12.1: Case-control studies on relationship of endocrine disruptors with endometriosis

Region and number of subjects	Compound	Detection rate from serum		Comparison of serum levels		P value	Odds ratio by category					
		Case	Control	Case	Control		1.00	2	3	4	5	P trend
Gerhard, 1992												
Germany 28 Cases, 441 controls	PCBs Chlorinated pesticides			Significantly higher serum levels of PCB138, 153 and 180 in cases								
Boyd, 1995												
U.S. 15 Cases, 15 controls	Dioxins Furans PCBs			No association								
Lebel, 1998												
Canada 86 Cases, 77 controls	PCB28 PCB52 PCB99 PCB101 PCB105 PCB118 PCB138 PCB153 PCB156 PCB170 PCB170 PCB183 PCB187 Beta-HCH HCB Mirex Oxychlorane Trans-nonachlor p,p'-DDE p,p'-DDT Total PCB ³⁾ Total chlordane ⁴⁾ Total DDT ⁵⁾			Geometric mean plasma levels (μ g/g lipid)								
				2.2	2.2	NS						
				2.3	2.1	NS						
				8.3	7.5	NS						
				2.7	2.5	NS						
				2.0	1.9	NS						
				8.3	8.5	NS						
				23.0	22.1	NS						
				30.7	29.7	NS						
				4.2	4.3	NS						
				6.4	6.3	NS						
				18.3	17.8	NS						
				2.3	2.1	NS						
				6.5	6.4	NS						
				13.4	11.6	NS						
				16.9	16.9	NS						
				3.4	3.1	NS						
				6.7	6.9	NS						
				9.9	9.9	NS						
				227.4	218.2	NS						
				9.2	9.1	NS						
				123.5	119.3	NS						
				22.4	22.3	NS						
				238.2	229.0	NS						
Pauwels, 2001												
Belgium 1996-98 Hospital-based Female outpatients for infertility 42 Cases (25-42 years of age) (diagnosed laparoscopically) 27 Controls (24-41 years of age)	TEQ ⁶⁾ PCB118 PCB138 PCB153 PCB180	34/42 40/42 40/42 40/42 39/42	24/27 25/27 24/27 25/27 25/27	Median serum level (pg TEQ/g fat)								
				29	27	NS						
				26	21	NS						
				69	59	NS						
				89	78	NS						
				68	55	NS						

1) Odds ratio (95% CI) = 7.6 (0.87-169.7)

2) No significant difference among multivariate odds ratios

3) Total of PCB 28, 52, 99, 101, 105, 118, 128, 138, 153, 156, 170, 180, 183 and 187

4) Total of α -chlordane, γ -chlordane, trans-nonachlor, oxychlorane and cis-nonaachlor

5) Total of p,p'-DDE and p,p'-DDT

6) by CALUX bioassay

Table 2.12.2: Cross-sectional studies on relationship of endocrine disruptors with endometriosis

Region and number of subjects	Compound	Exposure	Prevalence	P value
Garry, 2002				
U.S. 5 Areas in Red River Valley 1070 Men out of 1340 randomly chosen from 3000 qualified pesticide spraying operators 802 Wives of 802 married men	agricultural chemicals	Residence, province, city	32/332 (9.6%) 9/125 (7.2%)	Not specified
Heilier, 2004				
Belgium A single hospital? Adenomyosis: 10, endometriosis (moderate or milder): 7, control: 10 Analysis of serum level of 11 PCBs	11 PCBs	Serum level (ng/g fat) ¹⁾ Adenomyosis: about 325 Endometriosis (moderate or milder): about 200 Control: about 200		

1)Read out from the chart

Table 2.7.3: Synchronic studies on relationship of endocrine disruptors with thyroid functions

Region and subjects	Compound	Measure of effects	Findings	P trend
		Frequency of normal thyroid gland (%)	Employed for 21-35 years: 33.6, employed for 11-20 years: 49.3 Employed for 21-35 years: 33.6, matched controls 46.1	P<0.05 P<0.025
Mazhitova, 1998				
Kazakhstan Region near Aral Sea 12 Hospitalized children, 7.5-15 years of age Schoolchildren in Stockholm as controls	PCB	Thyroid hormone TSH		No significant difference No significant difference
Nagayama, 1998				
Japan 36 Infants 1 year of age	PCDD, PCDF, Co-PCB	Thyroid functions		
Sala, 1999				
Catalonia, Spain Areas with high atmospheric HCB levels 1800 Residents of villages around an electrochemical plant including employees of the plant Average serum HCB level (ng/ml) of 608 residents: 54.6 for current male employees 27.1 for male ex-employees 9.0 for men without employment history 14.9 for current female employees 22.2 for female ex-employees 13.5 for women without employment history	HCB	Hypothyroidism Others	Women: With employment history 1/62, never employed 17/952 Men: With employment history 1/445, never employed 0/341 Natural miscarriage: With employment history 8/60, never employed 143/396 Low body weight of newborn: With employment history 2/46, never employed 51/719 Congenital malformation: With employment history 1/46, never employed 26/719	
Guo, 1999				
Taiwan Yusho patients studied 13 years after onset		Thyroid adenoma	High frequency (20%)	