

PREVALENCE OF PREGNANCY OUTCOMES IN CONTAMINATED AREAS IN ESTUARY OF SANTOS AND SÃO VICENTE, SÃO PAULO STATE, BRAZIL

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Background and Aims: The Estuary region hosts a large number of industries, based on petrochemical, steel and production of fertilizers since the 1950s. Epidemiology provides evidence that fetus and infants are probably more susceptible to environmental toxic substances than adults. Therefore, the aim of this study was to evaluate the occurrence of adverse pregnancy outcomes in these contaminated areas comparing to a non contaminated area (control).

Methods: We adopted a cross sectional study. A structured and pre-tested questionnaire was applied to 820 families in each one of the five studied areas: four of them in the Estuary region and one in a control area without evidences of environmental contamination but with the same socioeconomic profile. We estimated the prevalence of pregnancy outcomes (abortion, prematurity, low birth weight – LBW, stillbirth, congenital malformation), controlling to important pregnancy risk factors (time of exposure in the area, occupational exposure, use of alcohol and tobacco), in those areas and tested differences among them and the control area using the Fisher's exact test and adopting a significance level of 5%. This study is part of a wide project which aims to estimate the effects to health associated to environmental contaminants exposure in the Santos and São Vicente Estuary Region.

Results: We found a higher prevalence of pregnancy outcomes in contaminated areas. A significant association was found between living in contaminated areas and increase of spontaneous abortions prevalence; Area 1 (Pilões) 14.9% (20), and Area 3 (São Vicente) 17.8% (21) compared to control area (Bertioga) 7.3% (9). There was also a significant increase in prevalence of LBW in Area 1 (Pilões) 9.2% (12) compared with the control area (Bertioga) 3.3% (4).

Conclusions: This study shows evidence in increase number of pregnancy outcomes in contaminated areas and reinforces the necessity of additional studies in these regions.