**Abstract**

Autism spectrum disorder (ASD) is a neurological and developmental disorder that begins early in childhood and lasts throughout a person's life. ASD is characterized by impairment in interaction and social communication, in addition to pro-inflammatory cytokine imbalances with chronic neuroinflammation. Environmental exposures may increase the risk of ASD. There are evidences that as the residue crosses the blood-brain barrier and placenta the fetuses can be exposed to pesticides. The purpose of this study is to summarize and discuss the relationship between autism spectrum disorder and chlordane, an organophosphate insecticide.

**Methods and Materials**

Search for articles published between the years 2000 to 2018 in the Medline, Lilacs, Web of Science, Scopus and Science Direct databases. The descriptors used, in combination, were: pesticides, agrochemicals, insecticides, herbicides, autism disorder. Were included articles describing the occurrence of autism disorder in mothers in contact with organophosphate insecticide chlordane published in English, Portuguese and Spanish. We selected a total of 235 articles and exclusion criteria, such as articles published prior to the year 2005, review articles and articles in languages other than English, Portuguese and Spanish. We lastly reviewed and selected 15 articles for use in developing the review.

**Results**

Gestational contact with chlordane interferes early neuromotor development and causes deficits in social behaviour that can lead to long-term deficits in behavior and repetitive behavior, as a routine preference. Studies have shown that the contact of Chlordane with already autistic rats increased the characteristics of this disorder in the animals. In addition, contact with chlordane causes redox imbalance, oxidative stress, mitochondrial dysfunction associated with glutathione deficiency. Studies have also shown that there is a high probability of developing imbalances in the intestinal flora. Autistic individuals may as well exhibit proinflammatory cytokine imbalances and may suffer from hyperactive or dysfunctional immune systems, with chronic neuroinflammation, including neuroglial activation in the brain, and the presence of autoantibodies to brain proteins. Thus, we can conclude that exposures to agricultural pesticides such as Chlordane, through the uterine pathway are related to autism and that there is strong evidence that contact with pesticides may influence the development of autism spectrum disorder.

**Future Directions**

Based on what was found in the studies analyzed, there is a need for further studies explaining and confirming the effects of Chlordane in pregnant women and the development of autism.

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