
Environmental Toxicants And Infertility Problems

The environment in which we live has increasingly been inundated with several types of environmental toxicants which has the tendencies of causing injuries and metabolic stress to plants, animals and humans alike (Ita et al., 2018;). Several industrial pollutants which includes crude petroleum and its allied products such as kerosene, flared gases, premium motor spirit, diesel, 3,1-dinitrobenzene or nonylphenol, methanoxyethanol, glycol ether and brake oils are known to exert testicular oxidative metabolic stress and atrophy (Samanta et al., 1997; Han et al., 2004; Gonzalez-Fletcha, 2004; Chitra et al., 2008; Adesanya et al., 2009).

One significant danger of those who are exposed to environmental toxicants is the increased risk of being infertile which has been defined as the inability of a person or couple who is sexually active and a non user of contraceptive to achieve spontaneous pregnancy within one year (WHO, 2010; Zegers et al., 2009). Ample evidences from studies reveal that most male infertility problems are a result of testicular oxidative stress which has been reported to affect seminal plasma antioxidants (Tremellen, 2008;) increased lipid peroxidation (alteration of sperm morphology (Henkel, 2011), impaired sperm motility (Macleod, 1943; Plante et al., 2011; Wright et al., 2014) and reduced sperm concentration due to DNA damage (Ita et al., 2018; Zribi et al 2011; Schutle et al., 2010).

The mechanistic defense against oxidative stress depends on the ability of the body and cells to boost the buffering capacities of antioxidants which will help in clearing of oxidative radicals generated from various metabolic processes especially when it relates with the clearance of toxicants. Today, *Vernonia amygdalina* which is a well known vegetable common to many tribes of Nigeria has been elucidated for its antioxidant buffering capacities (Egharevba et al., 2014; Fasakin et al., 2011; Fraga, 2007; Oboh et al., 2008; Ohigashi et al., 1991). *Vernonia amygdalina* is well known for its use as an alternative regimen for malaria (Challand and Wilcox, 2009; Masaba, 2000; Oliver, 1960, Kupcham, 1971). It has been used severally as a protective and ameliorative agent for the deleterious effects of many toxicants such as cyanide, carbon tetrachloride, crude petroleum and cycasin (Kadiri, 2017; Adaramoye et al., 2008; Lolodi and Erimyaremu, 2013; Adesanoye and Farombi, 2010; Achuba, 2018).

From the foregoing, there is no doubt that there exist ample evidences on the ability of crude petroleum to induce various forms of metabolic oxidative stress, there exist little or no evidence on the possible role of crude oil intoxication to induce testicular damage through a mediated food chain exposure occasioned by crude petroleum contaminated meals as well as the ability of *Vernonia amygdalina* to induce the possible restoration or control of activated metabolic stress parameters.