

31st Nano Congress for Future Advancements

&

13th Edition of International Conference on

Nanomedicine and Advanced Drug Delivery

August 29-30, 2019 London, UK

Chitosan and silver nanoparticles: Promising antitoxoplasma agents

Gaafar M.R.¹, Mady R.F.¹, Diab R.G.¹ and Shalaby Th.^{1,2}^{1,2}Alexandria University, Egypt

Toxoplasmosis is a worldwide infection caused by obligate intracellular protozoan parasite which is *Toxoplasma gondii*. Chitosan and silver nanoparticles were synthesized to be evaluated singly or combined for their antitoxoplasma effects as prophylaxis and as treatment in the experimental animals. Results were assessed through studying the parasite density, studying the ultrastructural parasite changes and estimation of serum gamma interferon. Weight of tissue silver was assessed in different organs. Results showed that silver nanoparticles used singly or combined with chitosan have promising antitoxoplasma potentials. The animals that received these compounds showed statistically significant decrease in the mean number of the parasite count in the liver and the spleen, when compared to the corresponding control group. Light microscopic examination of the peritoneal exudates of animals receiving these compounds showed stoppage of movement and deformity in shape of the tachyzoites, whereas, by Scanning Electron microscope, the organisms were mutilated. Moreover, gamma interferon was increased in the serum of animals receiving these compounds. All values of silver detected in different tissues were within the safe range. Thus, these nanoparticles proved their effectiveness against the experimental *Toxoplasma* infection.

Biography

Gaafar M.R. has completed her master and M.D. from Alexandria University. She is a professor of Medical Parasitology in Faculty of Medicine, Alexandria University. She has published more than 20 papers in reputed journals.

Notes: