

# Strategies to Protect the Brain against Oncogenic Metazoan Parasites

#### Angela Cress<sup>\*</sup>

Department of Neurological Surgery, School of Medicine, University of Missouri, Columbia, USA

# DESCRIPTION

Oncogenic brain metazoan parasite infections are a serious and potentially life-threatening health risk. While the majority of these infections are treatable, prevention is the best measure against these parasites. There are a variety of treatments and prevention strategies that can be employed to reduce the risk of infection. The most common treatment for oncogenic brain metazoan parasite infections is a combination of antibiotics and antifungals. These medications are designed to kill the parasites and reduce inflammation associated with the infection. Depending on the severity of the infection, the antibiotics and antifungals may need to be taken for several weeks or months. In addition to medications, lifestyle changes can also be effective in preventing oncogenic brain metazoan parasite infections. Avoiding contact with contaminated water and soil, as well as wearing protective clothing when outdoors, are important steps in reducing the risk of infection [1-3].

Additionally, it is important to practice good hygiene, including frequent hand washing and showering after coming into contact with soil or water. Finally, taking preventive measures to keep these parasites from spreading is also important. This includes disposing of animal waste properly and keeping pets away from contaminated areas. It is also important to keep areas around the home free of standing water and to inspect the home regularly for signs of infestation [4]. By employing a combination of lifestyle changes and medication, individuals can significantly reduce their risk of oncogenic brain metazoan parasite infections. Although these infections can be serious and potentially lifethreatening, taking the proper precautions can help to protect against them.

Oncogenic brain metazoan parasite infections can cause serious and long-term health problems. These parasites are able to enter the brain and cause a wide range of symptoms, including seizures, cognitive impairment, and even cancer. While the infection is treatable, the long-term effects of these infections can be devastating, impacting the patient's quality of life. The most common parasites that cause these infections are Angiostrongylus cantonensis, Gnathostoma spinigerum, Schistosoma spp., and Paragonimus spp. While these parasites are most commonly found in animals, humans can also be infected through contact with contaminated soil, water, or food. The infections can be hard to diagnose as the symptoms can be vague and mimic other medical conditions. Once infected, the parasites can cause a wide range of symptoms including headaches, nausea, vomiting, fever, confusion, and even seizures. The parasites can also cause serious neurological damage, including memory loss, cognitive impairments, and motor skill issues [5-8].

In some cases, the parasites can even cause cancer. Treatment for oncogenic brain metazoan parasite infections typically involves a course of antibiotics and antiparasitics. In certain cases, surgery may be necessary to remove the parasites.

However, even after treatment, the long-term effects of the infection can be severe. There is also a risk of developing cancer as a result of the infection. It is important for individuals who have been exposed to contaminated soil, water, or food to be aware of the potential for oncogenic brain metazoan parasite infections. If one experiences any of the symptoms listed above, then it is important to seek medical attention immediately. With proper and immediate treatment, the long-term effects of these infections can be minimised and the quality of life can be improved [9,10].

## CONCLUSION

Oncogenic brain metazoan parasite infections can cause significant health problems, yet they often go undetected. It is important to be aware of the signs and symptoms associated with these infections and to seek medical help if they are suspected.

Additionally, it is important to practice good hygiene and take steps to protect one from becoming infected. With proper preventive measures and early diagnosis, the effects of oncogenic brain metazoan parasite infections can be minimized and the chances of a successful recovery increases.

**Copyright:** © 2023 Cress A. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Correspondence to: Angela Cress, Department of Neurological Surgery, School of Medicine, University of Missouri, Columbia, USA, E-mail: angelacress@health.missouri.edu

**Received:** 16-Jun-2023, Manuscript No. JBP-23-22480; **Editor assigned:** 19-Jun-2023, Pre QC No. JBP-23-22480 (PQ); **Reviewed:** 03-Jul-2023, QC No. JBP-23-22480; **Revised:** 10-Jul-2023, Manuscript No. JBP-23-22480 (R); **Published:** 17-Jul-2023, DOI: 10.35248/2155-9597.23.14.474

Citation: Cress A (2023) Strategies to Protect the Brain against Oncogenic Metazoan Parasites. J Bacteriol Parasitol. 14:474.

### OPEN ORCESS Freely available online

#### Cress A

#### REFERENCES

- Spurgeon AN, Cress MC, Gabor O, Ding QQ, Tanaka T, Miller DC. Oncogenic brain metazoan parasite infection. Case Rep Neurol Med. 2013;2013:1-8.
- 2. Tardieux I. Parasitism as a lifestyle: Ultimate intimacy between Apicomplexan protozoans and metazoan hosts. Biol Cell. 2021;113(3):131-132.
- Ajetunmobi OI, Onyedibe KI, Emmanuel I. Parasites and cancer: A review of the emergence of protozoan carcinogenesis and novel molecular insights. Nigerian J Med. 2017;26(1):82-88.
- 4. Hart BL. Behavioral adaptations to pathogens and parasites: Five strategies. Neurosci Biobehav Rev. 1990;14(3):273-294.
- 5. Bi K, Chen T, He Z, Gao Z, Zhao Y, Fu Y, et al. Proto-oncogenes in a eukaryotic unicellular organism play essential roles in plasmodial growth in host cells. BMC Genomics. 2018;19(1):1-4.

- Smothers JF, von Dohlen CD, Smith Jr LH, Spall RD. Molecular evidence that the myxozoan protists are metazoans. Science. 1994;265(5179):1719-1721.
- Benamrouz S, Conseil V, Creusy C, Calderon E, Dei-Cas E, Certad G. Parasites and malignancies, a review, with emphasis on digestive cancer induced by *Cryptosporidium parvum* (Alveolata: Apicomplexa). Parasite. 2012;19(2):101.
- Freitas TC, Jung E, Pearce EJ. TGF-β signaling controls embryo development in the parasitic flatworm Schistosoma mansoni. PLoS Pathog. 2007;3(4):e52.
- 9. Alm EW. Growth regulation in the protozoan parasite *Trypanosoma brucei* : Evidence of tyrosine-specific protein kinase activity. University of Illinois at Urbana-Champaign. 1992.
- Gosline SJ, Nascimento M, McCall LI, Zilberstein D, Thomas DY, Matlashewski G, et al. Intracellular eukaryotic parasites have a distinct unfolded protein response. PloS one. 2011;6(4):e19118.