

**SERO-PREVALENCE OF NEUROCYSTICERCOSIS AMONG THE
PATIENTS VISITING NEUROLOGY DEPARTMENT OF
INSTITUTION OF MEDICINE, TEACHING HOSPITAL, TUTH,
NEPAL**



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A thesis submitted in partial fulfillment of the requirements for the award of the degree of
Master of Science in Zoology with special paper Parasitology

Submitted to

Central Department of Zoology
Institute of Science and Technology
Tribhuvan University
Kirtipur, Kathmandu, Nepal
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DECLARATION

I hereby declare that the work presented in this thesis has been done by myself, and has not been submitted elsewhere for the award of any degree. All sources of information have been specifically acknowledged by reference to the autho(s) or institution(s).

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RECOMMENDATIONS

This is to recommend that the thesis entitled “**Sero-Prevalence of Neurocysticercosis Among the Patients Visiting Neurology Department of Institution of Medicine, Teaching Hospital, TUTH, Nepal**” has been carried out by Durga Sharma Poudel for the partial fulfillment of Master's Degree of Science in Zoology with special paper Parasitology. This is her original work and has been carried out under my supervision. To the best of my knowledge, this thesis work has not been submitted for any other degree in any institutions.

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LIST OF ABBREVIATIONS

Abbreviated form		Details of abbreviations
Ab	-	Antibody
Ag	-	Antigen
CBS	-	Central Bureau of Statistics
CNS	-	Central Nervous System
CSF	-	Cerebro- Spinal Fluid
CT	-	Computed Tomography
DNA	-	Deoxyribose Nucleic Acid
EITB	-	Enzyme- Linked Immunotransfer Blot
ELISA	-	Enzyme-Linked Immuno-Sorbent Assay
FNAC	-	Fine Needle Aspiration Cytology
MRI	-	Magnetic Resonance Imaging
NBCS	-	Newborn Calf Serum
NCC	-	Neurocysticercosis
NZFHRC	-	National Zoonoses and Food Hygiene Research Centre
OD	-	Optical Density
OPD	-	Ortho-Phenylene diamine
OPD	-	Out Patient Department
PBS	-	Phosphate Buffered Saline
PCR	-	Polymerase Chain Reaction
TCA	-	Trichloroacetic acid
TUTH	-	Tribhuvan University Teaching Hospital
Tw-20	-	Tween 20
WHO	-	World Health Organization

Abstract

The infection due to larval form of either *T. solium* or *T. saginata* tapeworm in Central Nervous System is called neurocysticercosis. NCC is recognized as the main cause of epilepsy in the humans. With the objective to determine the sero-prevalence of NCC, 80 patients visiting the neurology department of Tribhuwan University Teaching hospital were screened using Ag-ELISA method. Similarly, to assess the knowledge, attitudes and practices regarding NCC and epilepsy, a questionnaire survey was carried out among the neurological patients. The overall 6.25% sero-prevalence of NCC was found among symptomatic and non-symptomatic neurological patients. Ethnically, sero-positivity was maximum among madhesi followed by janajati, and chhetri. Age and sex-wise sero-prevalence of NCC revealed maximum among males and age-group 10-30 years. The region wise scenario showed 11.5% and 4.0% prevalence in terai followed by hill with insignificant associations statistically. In general, people's knowledge and attitude showed that they are unknown and ignorant about the epilepsy and NCC. In the context of Nepal, it is a neglected, but important neurological problem. Policy at government level for the control of the disease is urgently required.