SEVERE NEUROTOXICITY OF ORAL IVERMECTIN: A SYSTEMATIC REVIEW OF CASES AND CASE SERIES

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Objective

Assess the evidence about severe neurological toxicity cases after ivermectin use.

Material and Methods

Systematic review following PRISMA recommendations

A search combining terms associated with “ivermectin” and “drug toxicity” was conducted of MEDLINE, and LILACS databases for all relevant English- and Spanish-language articles from inception through 30 September 2021

Results

Identification

Records identified through database searching (PUBMED and LILACS)
N = 266

Screening phase

Screening

Full-text articles assessed for eligibility
N = 105

Eligibility

Studies included in qualitative synthesis
N = 17

Cases N = 6

Case series N = 11

RECORDS EXCLUDED

Articles not mentioning at least minimal information on “ivermectin” or “neurotoxicity” or by language
N = 161

FULL-TEXT ARTICLES EXCLUDED

Data on paediatric, pregnant patients, intoxications, combinations, non-oral route administration or animal data.
N = 88

IVERMECTIN was used to treat strongyloidiasis, onchocerciasis, loiasis and scabies.

17 studies reported severe neurotoxicity occurrence such as CONSCIOUSNESS DISORDERS, SEIZURE or CONVULSION, ENCEPHALOPATHY and COMA.

Conclusions and relevance

Severe neurotoxicity after ivermectin use must be detected early to avoid fatal consequences.

Authors related this toxicity with Human ABCB1 nonsense mutations that allows ivermectin penetration into the central nervous system. This could be a future field of research.