



DAREMUS

Dansk Selskab for Forskning i Multipel Sklerose

Ønsker deltagelse i foredragskonkurrencen (4 abstracts udvælges): JA (); NEJ ()

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Alder: 24

1) Titel: **Zinc in Multiple Sclerosis – a Systematic Review and Meta-Analysis**

2) Forfattere: Mikkel Bredholt, prof. Jette Laurrup Frederiksen

3) Hypotese:

In the last 35 years Zinc (Zn) has been examined for its potential role in the disease multiple sclerosis (MS). This review gives an overview of the possible role of Zn in the pathogenesis of MS as well as a meta-analysis of studies having measured Zn in serum or plasma in patients with MS.

4) Metoder

Searching the databases PubMed and EMBASE as well as going through reference lists in included articles 24 studies were found measuring Zn in patients with MS. Of these, 13 met inclusion criteria and were included in the meta-analysis.

5) Resultater

The result of the meta-analysis shows a reduction in serum/plasma Zn levels in patients with MS with a 95 % CI of [-3.66, -0.93] and a P-value of 0.001 for the difference in Zn concentration in μM . One of six studies measuring cerebrospinal fluid Zn levels found a significant increase in patients with MS compared to controls. The studies measuring whole blood and erythrocyte Zn levels found up to several times higher levels of Zn in patients with MS compared to healthy controls with decreasing levels during attacks in relapsing remitting MS patients.

6) Diskussion

Future studies measuring serum or plasma Zn are encouraged to analyse their data through homogenous MS patient subgroups on especially age, sex and disease subtype since the difference in serum or plasma Zn in these subgroups have been found to be significantly different. It is hypothesized that local alterations of Zn may be actively involved in the pathogenesis of MS.