

## THESES

### CLINICAL AND IMMUNOLOGICAL CHARACTERISTICS OF SYDENHAM'S CHOREA (ABSTRACT)\*. **THESIS. BELO HORIZONTE, 2004.**

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Sydenham's chorea (SC) is one of the major criteria for the diagnosis of rheumatic fever. The clinical characteristics are neurological signs, such as choreic involuntary movements, reduced muscle tone and hypometric saccades, and behavioral abnormalities, including hyperactivity and obsessive-compulsive symptoms. Based on these signs and symptoms, we developed the UFMG Sydenham's Chorea Rating Scale (USCRS).

The initial testing of the first scale of SC indicated that USCRS is an instrument with high inter-rater reliability as well as internal consistency. We also evaluated the efficacy of methyl-prednisolone pulse-therapy in patients with severe forms of acute SC using the USCRS. Our data suggested that corticosteroid is an effective treatment of severe acute SC.

In our patients with SC, we have observed a high occurrence of drug-induced parkinsonism and migraine headache. We therefore decided to investigate the frequency of these syndromes in SC patients. We showed that 5.5% of our SC patients developed drug-induced parkinsonism during treatment with neuroleptics, while this complication was not seen in a cohort of Tourette's syndrome patients. We also demonstrated that migraine is more common in SC patients (21.8%) than in controls (8.1%).

The proposed pathogenesis of SC is immune-mediated basal ganglia dysfunction. This hypothesis is based on two main lines of evidence: the pres-

ence of anti-basal ganglia antibodies (ABGA) in serum and CSF of SC patients and the improvement of SC following immunomodulatory therapies. Antibodies could potentially damage basal ganglia directly or via the induction of central nervous system (CNS) inflammation. Then we evaluated the ability of complement-inactivated sera from SC patients and controls in altering calcium levels in PC12 neuroendocrine cells.

Incubation of PC12 cells with serum from SC patients was associated with a significant increase in calcium levels evoked by KCl ( $341.0 \pm 8.7$  % of fluorescence AU) stimulus when compared with incubation with control serum ( $313.8 \pm 8.7$  % of fluorescence AU,  $p=0.01$ ). As this effect is not mediated by complement, it may be related to the presence of ABGA in SC patients serum.

We also sought to investigate the profile of expression of chemokines in patients with SC, since chemokines seem to play a role in CNS inflammation by mediating the recruitment and/or activation of T cells and other leukocytes. Increased serum levels of MIG/CXCL9 and IP-10/CXCL10 were demonstrated in acute SC patients, suggesting that a particular group of chemokines may be involved in SC pathogenesis.

**KEY WORDS:** Sydenham's chorea, rating-scale, parkinsonism, migraine, anti-basal ganglia antibodies, chemokines.

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### CLINICAL AND DEMOGRAPHIC CHARACTERISTICS OF INSOMNIA IN THE ADULT POPULATION OF SÃO JOSE DO RIO PRETO, BRAZIL. (ABSTRACT)\*. **THESIS. SÃO JOSE DO RIO PRETO, 2004.**

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Our study has examined the prevalence of insomnia of the urban adult population ( $n=1,105$ ) in São Jose do Rio Preto, SP, Brazil, in the period from January 10 to February 28, 2001.

Using a structured questionnaire and DSM-IV and DSM III-R criteria, we found that the overall prevalence of insomnia was 32%. Among the acute cases, 46.8% presented initial insomnia, 31.9% inter-