Serum Prolactin Levels in Behçet's Disease. Is There a Relationship between Behcet's Disease and Prolactin as in Other Autoimmune Diseases?

Behçet's disease (BD) is a multi-system disorder (etiologically unknown) presenting with oral and genital aphthae, arthritis, cutaneous lesions, eye lesions and central nervous system involvement. Although found worldwide, it is mostly reported in Turkey and Japan, followed by Middle East and Mediterranean area as other regions according to its prevalence (1,2). Diagnosis is made clinically. In addition to recurrent aphthous ulceration, at least two symptoms of recurrent genital ulceration, typical eye lesions, typical dermatologic lesions, and positive pathergy test are needed for BD diagnosis. There is no specific laboratory test (3). In its etiology, many factors have been postulated, such as heredity, autoimmunity, infective agents and inflammatory mediators. BD tends to manifest in autoimmune disorders. Prolactin is a prehypophysis hormone considered to be strongly related to autoimmunity. Supported by many researches, prolactin can accompany the progress of some autoimmune diseases (systemic lupus erythematosus, uveitis, rheumatoid arthritis, multiple sclerosis, autoimmune thyroiditis, psoriatic arthritis, etc.) and it can also arise in some autoimmune diseases. In the light of these ideas, we studied whether there is a relationship between BD and serum prolactin level, and compared it with similar studies reported in the literature.

Serum prolactin levels rise in many autoimmune diseases. Prolactin levels were determined in patients in active BD stage with dermatologic diagnosis but taking no therapy for the disease, in order to demonstrate the relationship between BD, which has been increasingly defined as an autoimmune multisystem disease, and the level of serum prolactin, an immunostimulating hormone of adenohypophysis; in addition, the results obtained were compared with literature data.

The study included 43 patients, 21 female and 22 male, and 20 healthy age- and sex-matched subjects as control group. Patients in BD group were in the active stage of the disease with manifest oral aphthae, genital aphthae, erythema nodosum and positivity for pathergy. In addition, arthralgia accompanied the disease in 20 patients. BD patients had not received any treatment for the past six months. In order to obviate the effect of sleep and food, blood samples were collected in fasting state, between 8.30 and 10.30 a.m. Serum prolactin levels were measured on an Immulite 2004 device using the immunometric assay, with 3.0-20.0 ng/mL (female) and 2.5-17.0 ng/mL (male) accepted as normal values.

Study group included 43 BD patients, 21 (48.8%) female and 22 (51.2%) male. Control group had included 20 healthy subjects, 11 (55%) female and 9 (45%) male. There was no sex difference between the patient and control groups (p=0.941). The mean prolactin level was 11.63 ng/mL in BD group and 10.19 ng/mL in control group, yielding no significant between-group difference in the mean prolactin level (t=1.272; p=0.264).

The mean serum prolactin level in BD patients was 11.6 ng/mL; 9.84 ng/mL in female and 9.27 ng/mL in

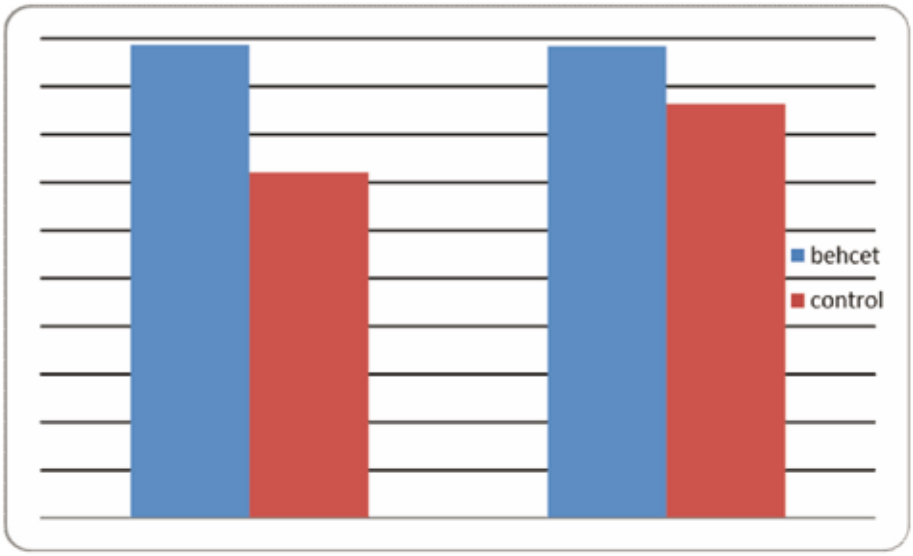

Figure 1. Serum prolactin levels in Behcet's disease and control groups.

male BD patients. The mean serum prolactin level in the healthy control group was 8.24 ng/mL; t-test produced no statistically significant difference between the BD patient group and control group. However, although there was no statistically significant difference, higher prolactin levels were measured in the group of BD patients as compared with control group. On the contrary, there are study reports on high serum prolactin levels in BD. In their study, Proença *et al*. from Portugal showed the mean serum prolactin levels to be significantly higher in BD patients as compared with control group (19.34ng/mL *vs*. 9.83 ng/mL) (4). Our results are similar to those reported in the literature. However, additional studies are needed to clarify the issue. We believe that future in-depth research should identify these differences as being significant or nonsignificant.

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Received: January 12, 2012
Accepted: November 22, 2012