

**Republic of Iraq
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College of Dentistry**



**Clinical Evaluation and Cytomorphometric
Characteristics of Buccal Mucosal Cells in Behçet's
Disease Patients with Different Treatment
Modalities**

A thesis

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Abstract

Background:

Behçet's disease is one of the systemic disorders where its etiology can not be determined. The most commonly seen manifestations are recurrent oral and genital ulceration, skin lesions with the possibility of ocular lesions, neurological as well as cardiac symptoms. There are many topical and systemic therapy for this disease. Steroid and colchicine medication have been widely used for treating Behçet's disease symptoms, especially mucocutaneous ones. Considering the diagnosis, the value of oral exfoliative cytology could be improved by the application of quantitative techniques; considering, oral cytological technique is as quick, simple, non invasive and painless.

Objectives:

The main purposes of this study are to determine the clinical characteristics of buccal mucosal cells in Behçet disease patients with different types of treatment, compared to healthy subjects.

Subjects and Method:

One hundred individuals were participated in this study. Seventy-five of them were with Behçet's disease, who performed the "International Criteria of Behçet's Disease". They were divided into three groups: twenty five new cases (prior use of treatment), twenty five were under steroid and twenty five were under colchicine medication. The rest twenty five were the healthy as control group. Each Behçet's disease patient was examined for the clinical manifestations of a specific image analysis software, the cytomorphometrical analysis was used for each stained specimen collected from normal apparent buccal mucosa of 100 volunteered subjects using papanicolaou stain to be examined under the light microscope.

Abstract

Results:

Out of the Seventy five Behçet's disease patients were studied 52 were males and 23 were females with a male-to-female ratio (2.26:1). The average age of the cases ranged between 16-60 years. Oral ulcers are a clinical manifestation in all Behçet's disease cases, taking in consideration that all of the cases were with no cardiac symptoms. The most frequently-reported clinical features in Behçets disease cases were ocular involvement, while the lowest frequently was the pulmonary manifestations.

In the new cases of Behçet's disease, there was significant smaller nuclear and cytoplasmic area keeping the nuclear to cytoplasmic ratio when compared to healthy controls. In patients under steroid and colchicine medications, there was a significant increase in cytoplasmic area compared with untreated cases of Behçet's disease. Group on steroid medication, showed a significant reduction in nuclear area. In cases of steroid and colchicine group, there was a reduction nuclear to cytoplasmic ratio compared to Behçet's disease cases without treatment.

Conclusions:

The current study found that the most commonly seen clinical features were the recurrent oral ulcers. Other manifestations, in a decreasing order of frequency, were ocular, genital, cutaneous, gastrointestinal, and pulmonary symptom. The study demonstrated that Behcet's disease process and treatment can be reflected at the cellular level, with micro-level changes may give a key for future understanding of disease treatment and its pathogenesis.