

CORRELATION OF FOLIC ACID AND HbA1C VALUES IN PATIENTS WITH HYDRADENITIS SUPURATIVA

HİDRADENİTİS SUPURATİVA HASTALARINDA FOLİK ASİT VE HbA1C DEĞERLERİNİN KORELASYONU

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Abstract

Hidradenitis supurativa (HS) is a chronic, follicular, and occlusive cutaneous disease that mainly affects the folliculopilosebaceous unit, especially in areas of skin which is rich in apocrine glands such as axillary, inguinal, perianal, genital, and inframammary regions. The pathogenesis of HS is not understood completely. Dysregulation of the immune system may contribute to HS etiology. Genetics, diet, smoking, obesity, mechanical trauma, and hormonal factors may be associated with HS (1,2). In our retrospective study, we aimed to review the data on diabetes and folic acid deficiency, which were mentioned in a few articles before, as factors accompanying HS in our patients. We found that 1/3 of 24 patients had high HbA1c levels, and folic acid levels were at the desired value in only four patients. This limited number of data seems to support the idea of further studies on this subject.

Keywords: Hydradenitis supurativa, HbA1C, Folic acid

Özet

Hidradenitis supurativa (HS) esasen folikülopilosebace üniteyi etkileyen, özellikle aksillar , inguinal , perianal, genital ve inframamarian gibi apokrin bezden zengin deri bölgelerini tutan kronik, ağrılı , folliküler, okluziv kutanöz bir hastalıktır. HS patogenezi tam olarak anlaşılamamıştır. Bağışıklık sisteminin disregülasyonu HS etyolojisine katkıda bulunabilir. Genetik, diyet, sigara kullanımı, obezite, mekanik travma ve hormonal faktörler HS ile ilişkili olabilir. Retrospektif çalışmamızda hastalarımızda HS'ye eşlik eden faktörler olarak daha önce birkaç yazıda bahsedilen diyabet ve folik asit eksikliği ile ilgili verileri gözden geçirmeyi amaçladık. Çalışmamızda 24 hastanın 1/3'ünde HbA1c seviyesinin yüksek olduğu, sadece 4 hastada folik asit seviyesinin istenilen değerde olduğu saptandı. Bu sınırlı sayıdaki veri, bu konuda daha fazla çalışma yapılması fikrini destekler niteliktedir

Anahtar Kelimeler: Hidradenitis süpurativa, HbA1C, Folik asit

1. INTRODUCTION

Hidradenitis supurativa (HS) is a chronic inflammatory skin disease. The clinical course for this disease is variable. It can be mild in the form of recurrent papules, pustules, and inflammatory nodules, as well as in severe cases presenting with fluctuating abscesses, drained sinuses, and dense fibrotic scars. HS mainly occurs in intertriginous areas (3).

A chronic, follicular, occlusive condition known as hidradenitis suppurativa (HS) is characterized by the formation of inflammatory nodules, skin tunnels, and scars, particularly in intertriginous regions. The symptoms of this condition frequently

include pain, stench, persistent drainage, and deformity. HS may significantly reduce a person's quality of life.

HS treatment is commonly given when indicated. Diminishing the development of new lesions, skin tunnels, and scarring while treating existing lesions and reducing related symptoms; and minimizing associated psychologic morbidity are the main aims of treatment in HS (4-6).

The method of treatment is influenced by the degree of HS. The severity of the disease is influenced by characteristics including the amount of skin involvement and the existence of skin tunnels or scarring. The severity of a disease is also determined by the Hurley staging method (7). There

are numerous interventions applied in the management of HS. Patient education, psychological support resources, wound care advice, and pain management are crucial aspects of treatment in addition to medical or surgical therapy to lessen disease burden and treat acute lesions (7-9).

In resistant cases, surgical intervention may be required to remove active diseases and sequela. For severe cases with the involvement of inflammatory nodules, abscesses, and skin tunnels, surgical excision should be performed, in fact total removal of the lesion should be completed with even more serious cases. Surgical techniques which are used to treat HS include punch debridement, unroofing, wide excision, incision, and drainage (10). Along with surgical treatments diet restrictions, vitamin supplements that will be mentioned, and lifestyle changes will help in controlling the prevention and the progress of this disease.

2. MATERIAL AND METHOD

Materials and method: In this study, 24 patients who were registered with the diagnosis of HS in the Dermatology and Venereal Diseases Chronic Diseases Polyclinic of Atatürk University Medical Faculty Hospital between June 2019 and December

2022 were evaluated retrospectively. Patients diagnosed with HS but with known comorbidities were not included in the study. Demographic characteristics, HbA1c and folic acid values of the patients were examined.

3. RESULTS

We found that 1/3 of 24 patients had high HbA1c levels, and folic acid levels were at the desired value in only four patients. HbA1c was studied in 12 of 24 patients who registered to our dermatology outpatient clinic and were diagnosed with HS. HbA1c elevation was detected in 8 of them. When gender distribution was examined, HbA1c was found to be high in 6 out of 9 male patients, borderline in 2, and within the normal range in 1 patient. Of the 3 female patients tested, it was detected to be high in 2 and within normal limits in 1 patient. As an outcome of retrospective studies of 24 patients diagnosed with HS for folic acid screening, folic acid deficiency was detected in 4 patients, and folic acid values were found close to the lower limit in 17. It was discovered to be low in 4 out of 18 male patients and within the lower limit in 12 of them. It was found to be at the lower limit in 5 of 6 female patients.

Figure 1: Patients with hydradenitis suppurativa



4. DISCUSSION

As a result of recent studies, it has been identified that low folic acid and high HbA1c are associated with cutaneous inflammatory skin diseases such as HS. HbA1c was studied in 12 of 24 patients who registered to our dermatology outpatient clinic and were diagnosed with HS. As a result of our retrospective studies, HbA1c elevation was detected in 8 of them. When gender distribution was examined, HbA1c was found to be high in 6 out of 9 male patients, borderline in 2, and within the normal range in 1 patient. Of the 3 female patients

tested, it was detected to be high in 2 and within normal limits in 1 patient. As shown in previous studies, HS patients were predisposed to metabolic syndrome and increased frequency of insulin resistance. However, since there are no evident studies directly related to HbA1c elevation, we are specifically focused on addressing the issue and continue our studies on this subject in our clinic. In 2018 Bui et. al. Observed that the prevalence of DM is three times higher compared to people who are not affected by HS. Disrupted level of glucose levels mostly accompanies the obesity, and

hormonal changes relative to obesity, cause follicular constriction by surplus androgen levels. Prognosis of diseases intensifies respectively, as BMI increases (11). Therefore, a relative increase in the mass of intertriginous areas, can cause friction and mechanical stress along with it. Especially around intertriginous areas the leakage of both immune system stimulants and adaptive immune antigens can cause activation of keratinocytes that take place in releasing cytokines and proinflammatory mediators, and as a result perifolliculitis develops. If sufficient repairs of follicular canals are not achieved, a rupture can occur by more inflammation and more contents being released. Disrupted glucose profiles can elevate the intensity of this disease. Weight reduction is very beneficial in treatment, indirectly by fixating the insulin profile and directly by reducing friction in patients of HS.

As an outcome of retrospective studies of 24 patients diagnosed with HS for folic acid screening, folic acid deficiency was detected in 4 patients, and folic acid values were found close to the lower limit in 17 patients. It was discovered to be low in 4 out of 18 male patients and within the lower limit in 12 of them. It was found to be at the lower limit in 5 out of 6 female patients. In studies conducted by

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5. CONCLUSION:

In conclusion, our retrospective study underlines the crucial benefits of assessment in terms of folic acid and diabetes mellitus in patients with HS. Our findings suggest that further research and study are still necessary. In the struggle to manage HS is essential to collaborate dermatology and surgery together. Although surgery aids in the treatment of this disease, however, dietary restrictions, mentioned vitamin supplements, and lifestyle changes should not be neglected along with medical treatment.

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