



Extra Digestive Helicobacter Pylori Cutaneous Manifestations Prevalence in Sudanese Diabetes Mellitus Patients

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Background

Helicobacter pylori (*H. pylori*) infection can cause extra gastric manifestations as an effect of persistent gastric infection, whose immune response may induce both local and remote lesions [1].

Objective

Our study aimed to identify the prevalence of extra digestive (gastric) *H. pylori* skin manifestations (EdHpSm) of diabetes mellitus patients so as to clarify the possible association between extra gastric cutaneous manifestations of diabetes mellitus and *H. pylori* infection in Sudanese populations, in dermatology department in Jabir Abu Eliz Diabetic Center. We used Enzyme immune assay to detect *H. pylori* antigens in patient's stools. In Sudan the only study done was about skin manifestations of *H. pylori* without specificity to diabetics [2]. But I found another study say that, there is a higher reinfection rate in diabetic patients than in normal peoples, and when occur is associated with poor glycemic control [3].

Methods

This is a cross sectional hospital based study. Seventy patients with diabetes and cutaneous manifestations were tested for *H. pylori* antigen in their stool samples, after history taking and clinical skin examination and diagnosing the skin diseases. Also we used questionnaire, all that after obtaining written consent from the patients.

Results

There was high prevalence of *H. pylori* infections in Sudanese diabetes mellitus patients with cutaneous manifestations (61.4%). The most prevalent cutaneous manifestations were eczema

(25.7%) then fungal infections (18.6%). All patients with bacterial infections, acne, chronic discoid lupus and psoriasis and most of the patients with fungal infections (92.3%) and vitiligo (71.45) were infected with *H. pylori*.

Discussion

In this study, the prevalence of *H. pylori* positive cases in diabetic Sudanese patient with skin manifestations in Jabir Abu Elez diabetic center was 61.4% out of 70 cases (Figure 1) and this is highly significant in contrast to study done in 2010 by Bashir, *et al.* [2] which done on patients with skin manifestations but not diabetics, where they found that the prevalence of the *H. pylori* positive was 20.5%. And similar to prevalence of *H. pylori* infection in patients with diabetes in study done by Quatrini M., *et al.* [4], which reveal 69% positive cases among type 2 diabetics in 2001. Also similar to Demir M., *et al.* study [5], which reveal 61.7% in 2008. But there were no similar study in Sudan and even in the entire world we could not find similar study combined diabetic with cutaneous manifestations and *H. pylori*.

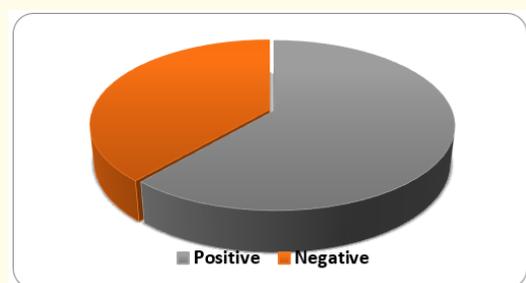


Figure 1: *H. pylori* assay results.

The most frequent cutaneous manifestation was eczema (25.7%), then fungal infections (18.6%), and then vitiligo (10%). Then urticaria (8.6%), viral and bacterial infections (4.3%) each one alone, parasitic infections, Diabetic bullae, lichen planus and acne (2.9%) each one alone. And the least frequent were chronic discoid lupus, primary cutaneous T cell lymphoma and psoriasis (1.4%) each one alone. The rest was 12.9% include other skin diseases like corn, xanthelasma, melasma, ecthyma and idiopathic hypo melanosis. This may be similar slightly to Bashir et al study, in the high prevalence of fungal infections in his study (48.8%), then bacterial infections (26.4%), eczema (17.2%), diabetic bullae (6.4%), vitiligo (5.6%) and lichen planus (4%) (Figure 2).

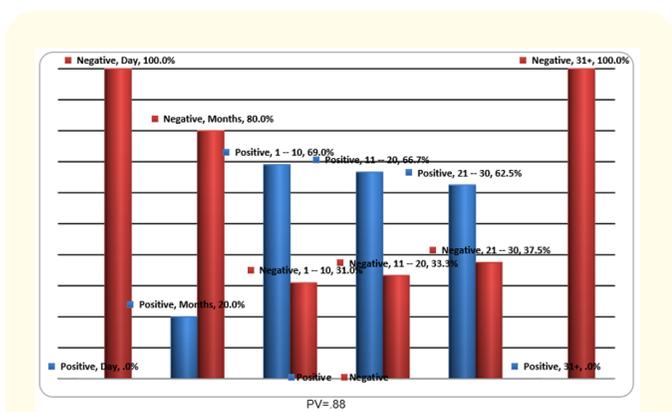


Figure 2: Relation between duration of diabetes and H pylori results.

There is no significance relation between the duration of diabetes and prevalence of H pylori infections as shown in figure 3 (PV =.88).

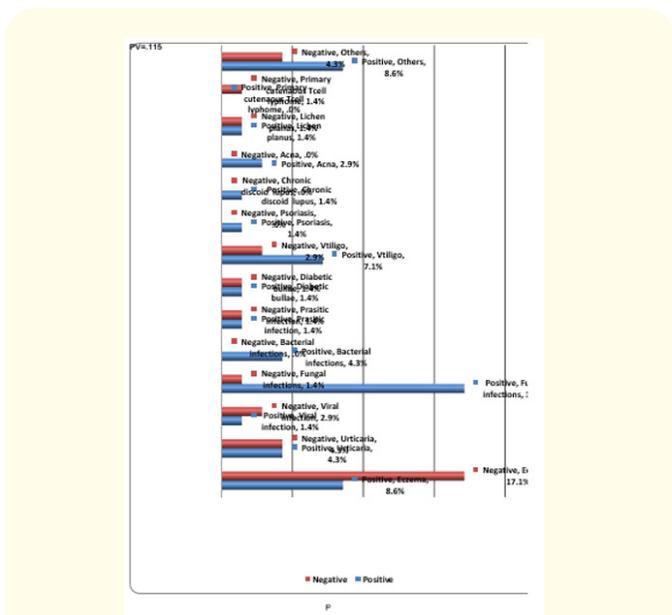


Figure 3: Relation between cutaneous manifestations and H pylori results.

Conclusion

H pylori infections were high in Sudanese diabetes mellitus with cutaneous manifestations. Eczema and fungal infections was the common cutaneous manifestations in diabetes mellitus patients. Bacterial and fungal infections and some autoimmune diseases were associated with high prevalence of H pylori infections. There is no significance relation between the duration of diabetes and prevalence of H pylori infections.

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