



Original article

# Clinical evaluation of Libyan patients with rosacea and its correlation with seropositivity to *Helicobacter pylori*

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Received 9 July 2013; accepted 23 December 2013

Available online 18 January 2014

## Abstract

**Introduction:** Rosacea is a chronic inflammatory cutaneous disorder. Its pathogenesis was unclear and controversial; *Helicobacter pylori* (*H. pylori*) infection, genetic predisposition and climatic factors are implicated as triggers of rosacea.

**Aim of the study:** To examine the epidemiological characteristics of rosacea patients, the triggered factors, and to assess the prevalence of *H. pylori* among the patients, and its relation to the subtypes and severity of rosacea.

**Patients and methods:** Thirty-six Libyan patients with rosacea were assessed with a complete history and subjected to clinical examinations. Blood samples for the detection of IgG antibodies against *H. pylori* were collected.

**Results:** Females were more frequently affected. The papulopustular subtype was seen in 61% of the patients. The precipitating factors were sun exposure seen in 63.9% and thermal stimuli in 41.7% of the patients. Serum IgG to *H. pylori* was positive in 58.3% of the patients, moreover, it was significantly higher in severe rosacea ( $P < 0.05$ ) regardless of the type of the disease.

**Conclusions:** The papulopustular subtype of rosacea was the most common, moreover, many patients also had other subtypes of rosacea simultaneously. Sun exposure plays a critical role in its etiology. *H. pylori* represents a significant cofactor that may contribute to the severity of the disease.

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**Keywords:** Rosacea; Risk factors; Subtypes; *Helicobacter pylori*

## 1. Introduction

Rosacea is a chronically relapsing inflammatory skin disease that affects mostly middle aged adults. Females are affected more frequently than males (Lazaridou et al., 2010). According to the NRSEC standard classification

rosacea is divided into four subtypes and one variant: 1/ erythematotelangiectatic rosacea (ET), 2/papulopustular rosacea (PPR), 3/phymatous rosacea (PR), 4/ocular rosacea, and a granulomatous variant (Wilkin et al., 2002, 2004).

Although the etiology of rosacea remains unknown, various factors that initiate flushing may contribute to this condition (Abram et al., 2010; Bae et al., 2009). It is well known that *Helicobacter pylori* (*H. pylori*) plays the key role in the development of gastritis, peptic ulcer, and even gastric cancer (Szlachcic, 2002). In recent years, a possible correlation was suggested between *H. pylori* infection and dermatological diseases such as rosacea, chronic urticaria and alopecia areata (Leontiadis et al., 1999).

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Peer review under responsibility of King Saud University.



1.1. Aim of the study

- To assess the clinical subtypes of rosacea among Libya patients and the associated risk factors.
- To evaluate the prevalence of *H. pylori* in subjects with rosacea and its correlation with rosacea subtypes and severity.

2. Patients and methods

Thirty-six Libyan patients with rosacea were included in the study. Each patient was assessed with a detailed medical history and subjected to clinical examinations. The staging and grading of rosacea were made according to the standard classification and grading systems of rosacea reported by the NRSEC (Wilkin et al., 2002, 2004). Blood samples for the detection of serum immunoglobulin G (IgG) antibodies against *H. pylori* were obtained from all the patients. Data were analyzed using a statistical package for social science (SPSS) version 10.0. A *p*-value of <0.05 was considered statistically significant.

3. Results

Thirty-six rosacea patients were included in the study, 77.8% were females and 22.2% were males, with female to male ratio of 3.5:1. Their mean age ± SD was 37.8 ± 6.6 years.

According to the NRSEC standard classification of rosacea, 61.1% of the patients presented with the PPR (Fig. 1), whereas 30.6% and 8.3% of the patients were classified into the ET and phymatous rosacea subtypes, respectively (Figs. 2 and 3). Phymatous changes seen in our patients were in the nose (rhinophyma), only one patient had nodularity in the forehead (metophyma) (Fig. 3). Ocular rosacea was noted in 44.4% of the patients (Fig. 4). All patients with ocular rosacea have overlapped with other rosacea subtypes, mostly with ET rosacea (*P* < 0.05). However, there was no statistically significant correlation

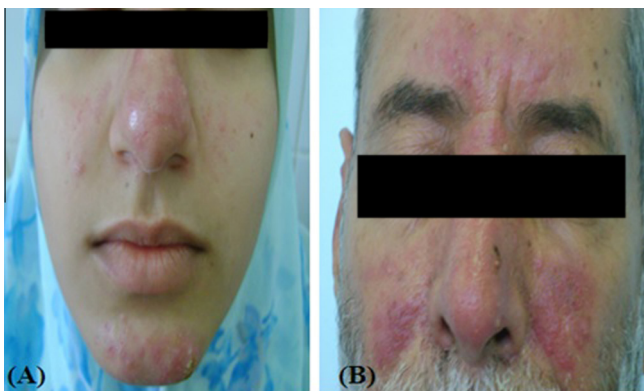


Fig. 1. PPR with mild (A), and moderate (B) severity.



Fig. 2. ETR with mild (A) and (B) moderate presentation.



Fig. 3. Phymatous rosacea with rhinophyma and metophyma.



Fig. 4. Blepharitis in patient with ocular rosacea and ETR.

between the ocular presentations and the severity of the rosacea.

Moreover, ET rosacea presented mostly in the younger age group while phymatous rosacea has been seen only in patients aged >50 years (*P* = 0.00). There was a statistically significant difference in ET and phymatous rosacea subtypes between both genders (Fig. 5). Furthermore, about 50% of the female patients had mild disease presentation.

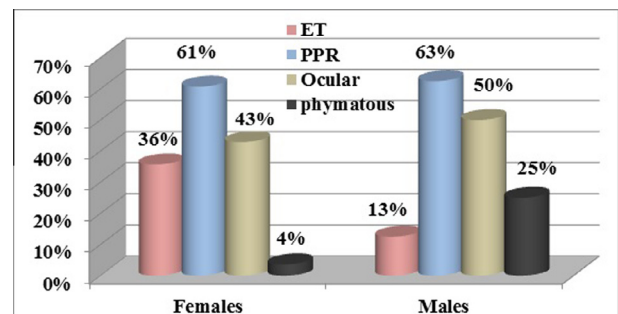


Fig. 5. Distribution of rosacea patients according to gender.

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