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Prevalence and Risk Factors of *Helicobacter pylori* Infection among Obese and Non- Obese Subjects

Abdurrazag Nami*[1,2], Abdulfattah Fitouri[3] and Salah Fagih[3]

[1] Biology Dept. Faculty of Arts and Science, Qasr Khiar, Al-Mergib University, Libya
[2] Libyan Helicobacter Research Laboratory, Tripoli, Libya
[3]Department of Medicine. Tripoli Central Hospital, Tripoli, Libya

Abstract

Helicobacter pylori and Obesity remains a major public health problem because of their high prevalence. In Libya no data available regarding H. *pylori* infection & its associated risk factors in the obese subjects. Objectives: To explore prevalence of *H. pylori* infection, & its associated risk factors in obese & Non–obese subjects. Materials: - Blood samples from (44) Obese and group (60) non-obese–healthy adults were collected. Specific anti-*H. pylori* IgG test, and questionnaire covering sociodemographic variables were administered and completed by interview. Results: - Overall, seroprevalence of *H. pylori* was determined 71% in all study population, in Obese was 66%, & non-Obese 75%. In both groups, there was a gradual increase with age, Females showed higher prevalence of *H. pylori* infection 55% than males 45%. The seropositivity was high in the middle 50% and low family income 45%, prevalence was higher for those who had family members 0f 3-5 persons 65%. However, the prevalence did not significantly differ by Blood group, abdominal pain, drinking Coffee or Tea. Conclusions: - this study determined that *H. pylori* prevalence is high among asymptomatic obese &Non-obese subjects in Tripoli region ~~of~~ aged 30-35years. This might be related to socioeconomic status, living conditions, dietary habits and lifestyle, as a major risk factors for *H. pylori* infection. A correct nutritional education plan is required in order to improve the dietary and health related living habits. However, further studies involving large sample should be conducted to ascertain the observed findings.

Keywords: *Helicobacter pylori*, Epidemiology, Obesity, Asymptomatic.

*Corresponding Author: abdnami@gmail.com +218917276027

Introduction

Helicobacter pylori (*H. pylori*) is a human pathogenic bacteria that infects more than half the world's population. It is closely related with a wide range of gastrointestinal diseases. Among individuals infected with *H. pylori*, the host susceptibility, the environmental factors, and the bacterial pathogenicity have been demonstrated to be predictors of gastric pathologies (Rana et al, 2017). Most *H. pylori* transmission occurs in childhood, and in some countries up to 90% of children become infected by the age of 10 years, with reports of infection as early as the first months of life (Glynn et al., 2002; Dattoli et al., 2010; Remi et al., 2015).

The obesity is a major public health concern affecting more than half a billion people worldwide representing 10–14% of the world's population (Mascie-Taylor and Karim, 2003). The prevalence of obesity is increasing in both developing and developed countries. Obesity is a major reason for increased morbidity and mortality through its multiple effects on nearly every human being (Prentice, 2006). WHO described obesity as the worst non-infectious epidemic in history (WHO, 2013).

Seroepidemiological investigations represent the most rapid and convenient way of obtaining a picture of the prevalence of *H. pylori* infection in a population (Apan et al., 2008). A majority of serological studies from developing countries are now conducted with commercial kits which are inexpensive, simple, and available in the local market (The EUROGAST Study Group, 1993).

In Libya, like many developing countries, *H. pylori* infection is highly prevalent, and the obesity as a consequence of Nutrition transition is increasing rapidly and important regional differences are likely to occur. Nevertheless, no local data are available on the epidemiology of *H. pylori* infection; therefore, the primary aim of this study was to determine the incidence of seropositivity *H. pylori* infection among obese group and non- obese as a control group of asymptomatic adults. The secondary aim was to find correlation with the risk factors in such healthy individuals in Tripoli city.

Materials and Methods

1. Study design and participants

A cross-sectional seroprevalence study was conducted from August to November 2019 among healthy obese and Non-obese subjects living in Tripoli city. Based on the questionnaire data, with a history of gastro duodenal ulcer, current chronic complaints of the upper digestive tract for more than two months (nausea, vomiting, heartburn, pyrosis or indigestion) or those currently using anti-acid or anti- ulcer medications were excluded from the study.–A written consent was obtained, and the purpose and procedures of the study were explained. A standard questionnaire was completed by direct interview to obtain individual lifestyle habits and socio-demographic data regarding each participant (age, gender, number of family members, blood group, coffee & tea consumption, eating habits, eating outside, monthly family income, abdominal Pain, and family history of gastric ulcer or gastric cancer). Health status, local of residence and medication taken one month before the interview (particularly proton pump inhibitor and antibiotics) were also recorded.

2. The Collection of Blood Samples

A Blood sample (5 mL) was collected from each participant by peripheral venepuncture under aseptic conditions. Samples were refrigerated on ice during transport to the

laboratory. After separation, 250µl serum samples were labelled and frozen at -20ºC until analysis.

3. Anthropometric measurements

For each participant, weight (kg) and height (cm) were measured, and body mass index (BMI) was calculated as weight in kilograms divided by height in metres squared (kg/m^2). According to the reference curves of WHO, BMI was classified into four categories: underweight (<18.5), normal weight (18.5–24.9), overweight (25.0–29.9), & obese (>30.0).

4. Determination of anti-*H. pylori* IgG

For the diagnosis of infection with *H. pylori*, one hundred and four (104) serum samples were collected and tested for immunoglobulin G (IgG) antibodies against *H. pylori* by using the commercial enzyme- linked immunosorbent assay (EUROIMMUN Anti-*Helicobacter pylori* ELISA(IgG), Germany). The serum concentration of anti-*H. pylori* IgG was expressed in relative units (RU/mL) as no international standard is available. According to the manufacturer's instructions the sensitivity of the kit was amounted to 100%, and the value of 5 RU/ mL was used to discriminate the negative from positive samples.

5. Statistical analysis

The data obtained were analysed using SPSS (Statistical Package for Social Science, Version 20.0), chi-square test to determine the prevalence of *H. pylori* infection in the study subjects, and the difference in the prevalence across the different parameters, the level of significance was considered when $p< 0.05$.

Results and Disscusions

During the study recruitment period from August to November 2019, there were (104) eligible subjects enrolled in the study, (44) Obese adult group (22 Female, 22 Male) and another group of (60) non-obese adult (35 Female, 25 Male). Overall, serological testing revealed that71% (74/ 104) of adult obese and non-obese individuals were positive for anti- *H pylori* IgG, (Table 1).

Table (1). Prevalence of *H. pylori* infection in obese and non-obese Subjects.

Group	*H. pylori* Positive	*H. pylori* Negative	Total &%	*P*
Obese	29 (66%)	15 (34%)	44 (42.4%)	0.341
Non- Obese	45 (75%)	15 (25%)	60 (57.6%)	
Total	74 (71 %)	30 (32.6%)	104 (100%)	

Among the seropositive *H. pylori* participants, no statistically significant difference was found in *H. pylori* IgG between genders. There was a gradual increase with age, and the prevalence of *H. pylori* infection in the age group 0f 30-35years was higher than as compared to other age groups (Table 2).

Table (2). *H. pylori* infection in relation to age group of obese & non-obese.

Age Group	*H. pylori* positive	*H. pylori* negative	Total &%
18-22	3(4%)	2(7%)	5(5%)
23-27	4(5%)	5(17%)	9(9%)
28-32	25 (34%)	13 (43%)	38 (37%)
33-37	32 (43%)	5 (17%)	37 (36%)
38 -42	5 (7%)	3 (10%)	8 (7%)
42 and over	5(7%)	2 (7%)	7(6%)
Total	74 (71.0%)	30 (29.0%)	104 (100.0%)

Regarding the Blood group, the results showed in the obese and non-obese subjects that IgG anti-*H. pylori* was positive in 38 (37%),15 (18%), 4 (4%), and 47(42%) of the A, B, AB, and O blood group respectively, (Figure 1).

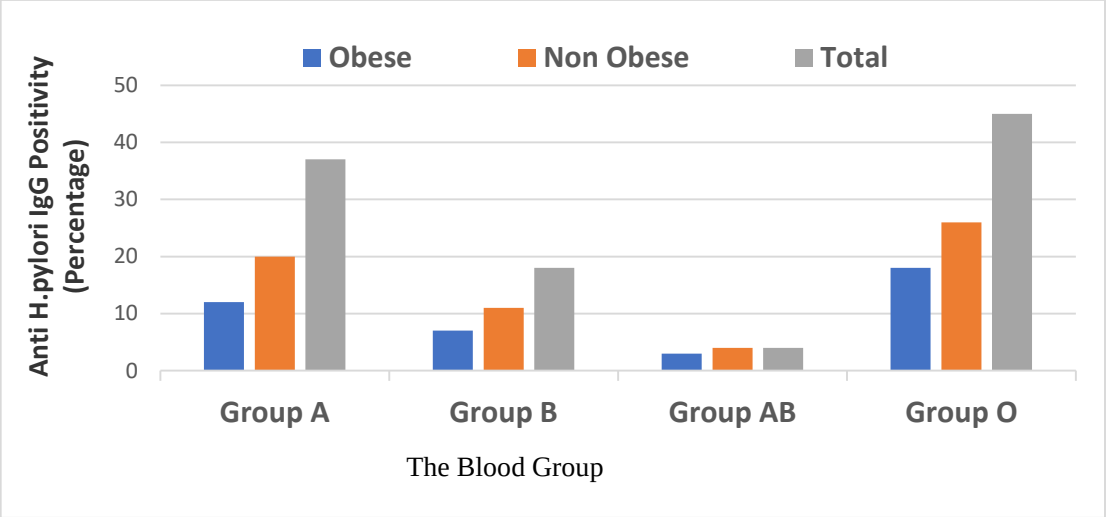

Figure (1): Seroprevalence of anti *H. pylori* IgG among Obese & Non- Obese according to Blood Group.

The possible relation of *H. pylori* infection prevalence and the number of family members; positive-results were found in (65%) for those who had family members 0f 3-5 persons, and (27%) of six and more members compared to (8%) of two persons. The results showed that, for the obese and non-obese group individuals, there was no statistically significant difference between *H. pylori* seropositivity and the education level, smoking, the social status as well as the type of work. Also; the results showed that, there was no relation between, the prevalence of *H. pylori* infection and abdominal pain during the last three weeks prior to the study. In addition, when *H. pylori* seropositivity was compared with, coffee and tea consumption, and eating outdoors, no statistically significant differences were found (Table 3).

Table (3). Prevalence of *H. pylori* infection in relation to eating outdoors, drinking tea and coffee, and abdominal pain among obese and non- obese

Risk Factor	Obese Group (n=44)		Non- obese Group (n=60)		
	H. pyl > 2000 was	*H. pylori* Negative	*H. pylori* Positive	*H. pylori* Negative	*P* value
Eating outdoors	27(93%)	12(80%)	39(87%)	11(73%)	0.171
Coffee and Tea consumption	25(86%)	11(73%)	42(93%)	13(87%)	0.179
Abdominal Pain	22(76%)	9(60%)	37(82%)	10(67%)	0.201

The Obese and Non- Obese subjects were categorized into three groups with respect to monthly family income. The prevalence of *H. pylori* infection among the group of monthly family income < 1000 LD was 34%, and those with monthly family income of 1000-2000 LD was 59% and those with monthly family income > 2000 was 7% and the differences were insignificant (p= 0.410).

This study was aimed to assess (to the best of our Knowledge) for the first time, the seroprevalence of *H. pylori* infection and its associated risk factors among Obese subjects living in Tripoli city. Infection with *H. pylori* is not a disease by itself but a condition associated with a number of disorders of the upper gastrointestinal tract (Kusters et al., 2006). The serological testing for *H. pylori* antibody helps in early detection of "silent" peptic ulcer (Vaira et al., 1994). The results demonstrate that the prevalence of (71%) of asymptomatic obese and non- obese individuals was high in Tripoli city and the area surround it. These results are similar to the results found in Benghazi; Libya where (71.4%) were found infected with *H. pylori* among healthy individuals (Mohammad et al., 2011). However, five years later other study from Benghazi found (56.5%) to the use of antibiotics during the last few years. In Al-Komes region, an epidemiological study found that (65%) of asymptomatic subjects were infected with *H. pylori* (Lragaa et al., 2014; Nami et al., 2017). In this study, the seroprevalence of IgG of anti- *H. pylori* increased with age and was highest when the subjects were aged 30s (43%). For both groups of obese and non- obese healthy subjects, the characteristic feature of this study was that the *H. pylori* infection rate was steeply increased in two age groups 28–32 years old (34%), 33–37 years old (43%). Similar to many previous reports, the results in this study are similar to other developing countries where (69%) to (82%) of adults are infected by 10 years of age. In a rural area in Brazil the antibodies to *H. pylori* were detected in the serum of (84.7 %) adults (Souto et al., 1998). In Kosovo, the seropositivity of *H. pylori* is moderately high (56.9%) among healthy blood donors (Zhubi et al., 2011). In Kenya (93%) of (14) asymptomatic volunteers were found to have *H. pylori* infection (Lachlan et al., 1989). In Iraq, a study concluded that *H.pylori* is highly prevalent (55.8%) among university students in Erbil region, higher prevalence was found in older students and those from low social class (Hussen et al., 2013).The results in this study indicate that the seroprevalence of *H.pylori* is increasing with the age, which is similar to other study such as among the Algerians where the seropositivity of *H. pylori* was (43%) , and the prevalence rose steadily with age, reaching a peak of (92%) between the ages of 40 and 49 years (Megraud et al., 1989). An age specific increase in the prevalence of *H. pylori* infection was observed in Ivory Coast and Ghana, where the seroprevalence of *H. pylori* was

(54%) rising gradually to a plateau of (70% - 80%) throughout adulthood (Lachlan et al., 1989; Awuku.et al., 2017).

The association between ABO blood groups and *H. pylori* infection remains unclear because of discordant results. In this study, regarding the blood group, it was found in the obese and non-obese subjects that IgG anti-*H. pylori* was present in 47 (42%) of participants of Blood group O and 38 (37%), of blood group A, while individuals with B and AB blood group were less likely to be infected with *H. pylori*, which is in contrary to (Jafarzadeh et al., 2007) findings, in agreement with others (Klaamas et al., 1997; Majeed and Khoshnaw, 2020). The results of the present study, related to the high prevalence of *H.pylori* among individuals of blood group O and A is of great importance because for many years, blood group O was reported to be associated with duodenal ulcer disease, while gastric ulcer and gastric carcinoma were associated with blood group A (Lin et al., 1998; Murakami et al., 2006; Chakrani et al., 2018). The association between Body Mass Index (BMI), obesity and *H. pylori* infection is controversial in the literature. A Chinese study showed that BMI was significantly and positively associated with *H. pylori* infection, and a high BMI was associated with an increased risk of the infection (Xu et al., 2014). In a Turkish study with a total of (214) subjects, aimed to find out the prevalence of *H. pylori* infection and the relationship between obesity and *H. pylori* in (103) obese and (111) control normal weight subjects, *H. pylori* prevalence was determined at (57.2%) (59/103) in obese group and (27%) (30/111) in control group, they considered that obesity can be a risk factor for *H. pylori* infection (Arslan et al., 2009). Other study, aimed to determine the possible risk factors affecting the acquisition of *H.pylori* infection and to investigate whether the incidence of infection is higher among obese and overweight versus normal-weight young adults in Greece (Kyriazanos et al., 2002), their results showed that The presence of obesity (body mass index > or =25 kg/m^2) remained unrelated to the *H.pylori* status of the individuals, and suggest that the risk of *H.pylori* infection does not increase in overweight young persons. Sharing the same bedroom with more than one sibling during childhood is an important determinant in acquiring *H. pylori* infection. Increased fast food consumption outside home could be an important source of *H. pylori* infection. In this study in Tripoli city, the overall seroprevalence was high (71%), and no statistically different *H. pylori* prevalence between the asymptomatic obese (66%) and non-obese adult groups (75%). To elucidate the association between *H. pylori* colonisation and the prevalence of overweight and obesity in developed countries; data from 10 European countries, Japan, US and Australia concluded the presence of–an inverse correlation between *H. pylori* prevalence and rate of overweight – obesity. (Lender et al., 2014). Thus, the gradual decrease of the *H. pylori* colonisation that has been observed in recent decades could be related to the obesity endemic observed in the Western world. According to the numerous worldwide studies; a significant difference in *H. pylori* incidence, socioeconomic status, life style, and education level of a particular population can be observed. In Tripoli city, the present study analyzed the prevalence of *H. pylori* infection and its association with the risk factors such as, eating outdoors, Coffee and Tea consumption and Abdominal pain among obese and non- obese, the results showed a high anti IgG *H. pylori* in the both population subjects, which might be related to the environmental factors such as household hygiene, host Immune system and *H.pylori* genotype (Salih, 2009). Epidemiologic studies indicate that in different population when the educational level of society increases, life style and sanitation condition, a good medical care services, better hygienic, and socioeconomic condition could be reasons for the reduction of the *H. pylori* prevalence

in the society population studied (Agreus et al.,1995; Ahmed et al., 2007; Nami et al., 2019).

Conclusions

From this study, the high prevalence of *H. pylori* positivity (71%) found in adult obese and Non-obese healthy population, indicates that infection with this gastric gram-negative bacterium pathogen is still a common health problem among Libyan population. Also; a relation between *H. pylori* seropositivity and, the number of family members, and living in a crowded condition, are risk factors among obese and non-obese healthy population. These data support the finding that personal and environmental conditions do affect *H. pylori* infectivity in asymptomatic subjects living in Tripoli region. The data of this study indicate that, testing for *H. pylori* using molecular methods should be done as a routine test, and knowledge about the reservoirs and modes of transmission could help to explain the high prevalence rates found for *H. pylori* in the developing countries. The current study may be helpful in defining the high-risk individuals living in Libyan population and it is the first step to demonstrate the prevalence of *H. pylori* and identify its associated risk factors to reduce gastrointestinal diseases related to the *H. pylori*. However, further studies involving large sample size in other cities of Libya should be conducted to support the observed findings.

References

Agreus, I., Engstrand, L., Svardsudd K., Nyren C., Tibblin G. 1995. *Helicobacter pylori* Seropositivity among Swedish adults with and without abdominal symptoms- a population -based epidemiologic study. *Scand J Gastroenterol* 30:752-757.

Almehdawi, K. A., and Ali, R.H. 2016. The prevalence of *Helicobacter pylori* Infection in Benghazi, Libya. IOSR *Journal of Dental and Medical Sciences* 15, 73-77.

Apan, T. Z., Iseri L., Aksoy, A., Guliter S.2008. The antibody response to *Helicobacter pylori* in the sera from a rural population in the central Anatolia region of Turkey. *The Journal of Health Sciences* 54, 671-674.

Arslan E., Atılgan H., Yavaşoğlu I. 2009. The prevalence of *Helicobacter pylori* in obese subjects. *European Journal of Internal Medicine* 20, 695-697.

Awuku, Y. A., Simpong, D. L, Alhassan IK., Tuoyire DA., Afaa T., Adu P. 2017. Prevalence of *Helicobacter pylori* infection among children living in a rural setting in Sub-Saharan Africa. *BMC Public Health* 17, 360-365.

Chakrani Z., Robinson K., Taye B. 2018. Association Between ABO Blood Groups and *Helicobacter pylori* Infection: A Meta-Analysis. Scientific Reports 8:1-11.

Dattoli, V.C.C, Veiga R.V., Da Cunha S.S., Pontes-De-Carvalho L. C., Barreto M.L., Alcantara-Neves N.M. 2010. Seroprevalence and potential risk factors for *helicobacter pylori* infection in Brazilian children. *Helicobacter* 15,273–278.

Glynn M.K, Friedman C.R., Gold B.D., Khanna B., Hutwagner L., Lihoshi N., Revollo C., Quick R. 2002. Seroincidence of *Helicobacter pylori* Infection in a Cohort of Rural Bolivian Children: Acquisition and Analysis of Possible Risk Factors. *Clinical Infectious Diseases* 35, 1059-1065.

Hussen, B.M., Qader S.S., Ahmed H.F., Ahmed S.H. 2013. The Prevalence of *Helicobacter pylori* among University Students in Iraq. *Indian Journal of Science and Technology* 6,5019-5023.

Jafarzadeh A., Ahmedi-Kahanali .J, Bahrami M., Taghipour Z. 2007. Seroprevalence of anti-*Helicobacter pylori* and anti-CagA antibodies among healthy children according to age, sex, ABO blood groups and Rh status in south-east of Iran. *Turkish Journal of Gastroenterology*18,165–171.

Klaamas K., Kurtenkov O., Ellamaa M. 1997. The *Helicobacter pylori* seroprevalence in blood donors related to Lewis (a,b) histo-blood group phenotype. *European Journal of Gastroenterology and Hepatology*9,367–370.

Kusters L., van Vliet A., Kuipers E.J. 2006. Pathogenesis of *Helicobacter pylori* Infection. *Clinical Microbiology Reviews* 19, 449-490.

Kyriazanos I.D., Sfiniadakis .I, Gizaris V., Hountis P., Hatziveis K., Dafnopoulou A., Datsakis K. 2002. The Incidence of *Helicobacter Pylori* Infection Is Not Increased Among Obese Young Individuals in Greece. *Journal of Clinical Gastroenterology* 34,541-546.

Lachlan G.W., Gilmour H.M., Jass JJ. 1989. *Campylobacter pylori* in Central Africa. *British Medical Journal* 296, 66-70.

Lender N., Talley N.J., Enck P., Haag S., Zipfel S., Morrison M., Holtmann. G.J. 2014. Review Article: Associations Between *Helicobacter Pylori* and Obesity--An Ecological Study. *Alimentary Pharmacology and Therapeutics* 40,24-31.

Lin C.W., Chang Y.S., Wu S.C., Cheng K.S. 1998. *Helicobacter ₱ pylori* in Gastric Biopsies of Taiwanese Patients with Gastroduodenal Diseases. *Japanese Journal of Medical Science and Biology* 51, 13-23.

Lragaa K., Dedeh A., Nami A. 2014. Frequency and risk factors of *Helicobacter pylori* among diabetic Patients in Al-komes Central Hospital, Libya; Preliminary results, 11thInternational Workshop on Pathogenesis and Host Response in Helicobacter Infections, Helsingor, Denmark, 2-5 July [Abstract].

Majeed P.D., Khoshnaw K.J.S. 2020. Seroprevalence of *Helicobacter Pylori* Infection among Patients with Gastroduodenal Disorders in Erbil City**.** *Diyala Journal of Medicine* 18, 91-101.

Mascie-Taylor C.G., Karim E. 2003.The burden of chronic disease. *Science* 302: 1921–1922.

Megraud F, Brassens-Rabbe M P, DenisF, Belbouri A, Hoa D Q. 1989. Seroepidemiology of *Campylobacter pylori* infection in various populations. *Journal of Clinical Microbiology* 27,1870–1873

Mohammad, M.A., Altayar M., Toboli, A.B., Bakka A. 2011. Characteristics of *Helicobacter pylori* infection in Libyan Healthy peoples in two teaching Hospitals in Benghazi. *Medical Journal of Islamic World Academy of Sciences* 19,27-32.

Murakami. K., Kodama M., Fujioka T. 2006. Latest Insights into the Effects of *Helicobacter ₱pylori* Infection on Gastric Carcinogenesis. *World J Gastroenterology* 12, 2713-2720.

Nami, A., Alagaali M., Abushnag D., Bader R., Algalal R., Qendeela J. 2017. Prevalence of *Helicobacter pylori* infection in asymptomatic Libyan children and adults. *Helicobacter* 22 (Supplement 1) 98. [Abstract].

Nami, A., Grima N., Almadni M., Huwiage G., Shahlol A., Khalifallah H. 2019. *Helicobacter pylori* Infection in Healthy and Dyspeptic Adult populations Resident

in Tripoli and Sabha of Libyan cities: A Seroepidemiologic Study. *Journal of Pure Science & Applied Sciences* 18, 206 - 209.

Prentice A.M. 2006. The emerging epidemic of obesity in developing countries. *International Journal of Epidemiology* 35, 93–99.

Rana R., Wang S.L., Li J., Wang Y.X., Rao Q.W., Yang C.Q. 2017. *Helicobacter pylori* infection: A recent approach to diagnosis and management. *Journal of Biomedicine* 2, 45-56.

Remi, Q., Olufemi F.O, Odedara O.O., Bamiro S.A. 2015. Seroprevalence of *Helicobacter pylori* Infection among Asymptomatic Children in Lagos, Nigeria. *British Journal of Medicine & Medical Research* 9, 1-7.

Salih B. 2009. *Helicobacter pylori* infection in developing countries: The burden for how long? *Saudi Journal of Gastroenterology* 15, 201–207.

Souto, F.J.D., Fontes C.J.F, Rocha, G.A., Oliveira A.M.R, Mendes E.N., Queiroz D.M.M. 1998. Prevalence of *Helicobacter pylori* Infection in a rural Area of the State of Mato Grosso, Brazil. *Mem. Institute of Oswaldo Cruz, Rio de Janaeiro* 93, 171-174.

The EUROGAST Study Group. 1993. Epidemiology of, and risk factors for, *Helicobacter pylori* infection among 3194 asymptomatic subjects in 17 populations. *Gut* 34, 1672-1676.

Vaira D., Miglioli M., Mule P., Holton J., Menegatti M., Vergura M. 1994. Prevalence of peptic ulcer in *Helicobacter pylori* positive blood donors. *Gut* 35, 309-312.

World health statistics: 2013. A wealth of information on global public health. Geneva: World Health Organization.

Xu C., Yan M., Sun Y., Joo J., Wan X., Yu C., Wang Q., Shen C., Chen P., Li Y., William G.W., Jr C. 2014. Prevalence of *Helicobacter pylori* Infection and its Relation with Body Mass Index in a Chinese Population. *Helicobacter* , 437-442.

Zhubi B., Baruti-Gafurri Z., Mekaj Y., Zhubi M., Merovci I., Bunjaku L., Topciu V., Devoli-Disha E. 2011. *Helicobacter pylori* infection according to ABO blood group among blood donors in Kosovo, *J Health Sciences* 1, 83-89.

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الإصابة ببكتيريا المعدة الحلزونية بين الأشخاص البدناء وغير البدناء، معدل الانتشار وعوامل الخطورة

عبد الرزاق النعمي*[2،1]، عبد الفتاح الفيتوري[3] وصلاح الفقيه[3]

[1]قسم علوم الحياة، كلية الآداب والعلوم، قصر الاخيار، جامعة المرقب، ليبيا

[2]المختبر الليبي لأبحاث بكتيريا المعدة، طرابلس، ليبيا

[3]قسم الباطنة، مستشفى طرابلس المركزي، طرابلس، ليبيا

المستخلص

بكتيريا المعدة الحلزونية والسمنة مشكلة صحية عامة بسبب انتشارهما المرتفع. في ليبيا ولا توجد بيانات متاحة بشـأن انتشـار عدوى البكتيريا لدى البالغين البدناء. هدفت الدراسـة معرفة معدل انتشـار عدوى بكتيريا المعدة وعوامل الخطورة المصـاحبة لها في الأشـخاص الذين يعانون من السـمنة بمنطقة طرابلس. جمعت عينات دم من مغموعة أشـخاص بالغين عددهم (44) يعانون من السـمنة ومغموعة من (60) لا يعانون من السـمنة، وتم اجراء الاختبار المصـلى (اليزاء) للتحري على وجود الأجسام المضـادة ضـد بكتيريا المعدة وتمت تعبئة استبيان يغطي المتغيرات الاجتماعية والديموغرافية. بشكل عام كان معدل الأجسام المضادة 71%، أظهرت نسبة 75% موجبة بين البدناء و66% بين المغموعة غير البدينة. في كلتا المغموعتين، كانت هناك زيادة تدريجية بمعدل الاصابة مع التقدم في العمر، وكانت عند الإناث أعلى انتشارًا 55% من الذكور 45%. وكان معدل الانتشـار أعلى بالنسـبة لأولئك الذين لديهم أفراد من العائلة من 3–5 أشـخاص 65%. كان معدل انتشـار بكتريا المعدة عند الاسـر ذوي الدخل المتوسـط 50%. أظهرت النتائج بأن عوامل الخطورة الأخرى مثل فصيلة الدم، غسل اليدين، آلام البطن، وشرب الشـاي أو القهوة لم يختلف معدل انتشـار البكتيريا بشـكل كبير بين الأشـخاص البدناء وغير البدناء. أكدت الدراسـة أن بكتيريا المعدة ذات معدل عالي بين الاشـخاص البالغين البدناء وغير البدناء المقيمين بمدنية طرابلس والذين تتراوح أعمارهم بين 30–35 عامًا، والتي قد تكون مرتبطة بالحالة الاجتماعية والاقتصـادية وظروف المعيشـة والعادات الغذائية وأسـلوب الحياة، كعوامل خطورة رئيسية لعدوى الاصابة ببكتيريا المعدة. ومع ذلك، ينبغي إجراء المزيد من الدراسات التي تشـمل على عدد عينات أكبر، وفي مدن أخرى من ليبيا للتأكد من النتائج المرصـودة في هذه الدراسة.

الكلمات المفتاحية: بكتيريا المعدة الحلزونية، الوبائيات، السمنة، الأعراض غير الظاهرة.

*للمراسلة: abdnami@gmail.com +218917276027