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Research Article

PEPTIC ULCER DISEASE AMONG ADULT MALE AND FEMALE PATIENTS AT KING KHALID HOSPITAL FROM 4-7/1434

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Abstract:

Background: peptic ulcer disease [PUD] is open sores or erosions equal to or greater than 0.5 cm that develop in the lining mucosa of the esophagus, stomach and the upper portion of small intestine.

Aim: detection the relationship between the different risk factors and the development of peptic ulcer among male and female patients from 25 – 55 years.

Methods: This study is a cross-sectional questionnaire-based study that was conducted on 50 patients of peptic ulcer disease in outpatient department in King Khalid hospital and all of patients were diagnosed by endoscopy. The data was collected through a Questionnaire, by primary data from the patients.

Results:

Our research results showed that females who have peptic ulcer are more than males where ratio is 3:2. *H. pylori* is the most common risk factor, it induced peptic ulcer in 60 % of patients. Stress induced PUD in 48 % of total patients. Using NSAIDs regularly induce peptic ulcer in 40 % of patients. Smoking comes at the last by 24 % in males and 0% in females. Most of male smoker patients were smoking for more than 10 years and represent 83.3 % of patients while 16.7 % from male smokers were smoking for 5-10 years. No cases of peptic ulcer observed and smoked less than 5 years smoking.

Conclusion:

Peptic ulcer disease more common in females than males in this study and this may attributed to life style which makes women expose to physical and psychological stress. The *H. pylori*, NSAIDs and stress are most causes of the PUD in najran.

Keywords: peptic ulcer, risk factors, *H.pylori*, duodenal ulcer

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INTRODUCTION:

Peptic ulcers are open sores that develop on the inner lining of your esophagus, stomach and the upper portion of your small intestine. The most common symptom of peptic ulcer is abdominal pain. It may be gastric, esophageal or duodenal ulcers. [1]

Incidence Rate for Peptic Ulcer: approx. 1 in 73 or 1.36% or 3.7 million people in USA, while in Saudi Arabia it affects about 350,900 patient from 25,795,938 person that's means 1.36 %.[2]

Peptic ulcers are classified according to Modified Johnson into:

- Type I: Ulcer along the body of the stomach, most often along the lesser curve at incisura angularis along the locus minoris resistentiae.
- Type II: Ulcer in the body of stomach in combination with duodenal ulcers, associated with acid over-secretion.
- Type III: ulcer in the pyloric channel within 3 cm from the pylorus, associated with acid over-secretion.
- Type IV: Proximal gastro esophageal ulcer
- Type V: Can occur throughout the stomach. Associated with chronic NSAID use [such as aspirin].[3]

H. pylori infection and the use of nonsteroidal anti-inflammatory drugs [NSAIDs] are the predominant causes of peptic ulcer disease in the United States, accounting for 48 and 24 percent of cases, respectively .A variety of other infections and comorbidities are associated with a greater risk of peptic ulcer disease [e.g., cytomegalovirus, tuberculosis, Crohn's disease, hepatic cirrhosis, chronic renal failure, sarcoidosis, myeloproliferative disorder]. [4]

Critical illness, surgery, or hypovolemia leading to splanchnic hypo perfusion may result in gastro duodenal erosions or ulcers [stress ulcers]; these may be silent or manifest with bleeding or perforation. Smoking increases the risk of ulcer recurrence and slows healing. [5]

Also hyper secretory states may cause PUD such as: Gastrinoma [Zollinger-Ellison syndrome] or multiple endocrine neoplasia type I [MEN-I], Antral G cell hyperplasia, Systemic mastocytosis, Basophilic leukemias, Cystic fibrosis, Short bowel syndrome and Hyperparathyroidism. Also genetic factors may play a role in the

development of peptic ulcer. [6]

Ulcers do not always cause symptoms. Sometimes, a serious complication such as bleeding is the first sign of an ulcer. The most common symptom of peptic ulcers is abdominal pain which is usually in the upper middle part of the abdomen, above the belly button [navel] and below the breastbone. It is felt as burning or gnawing, and it may go through to the back. It lasts for several hours after a meal when the stomach is empty and it may be relieved by food, antacids, or vomiting. [7]

Other symptoms of peptic ulcers include nausea, vomiting, loss of appetite, loss of weight or hematemesis and melena. [8]

Peptic ulcers may be associated with serious, potentially life-threatening complications as Bleeding, gut Perforation or gastric outlet obstruction. [9]

The diagnosis of peptic ulcer disease is usually based on clinical features and specific testing as Upper GI series [UGI] which is a type of x-ray, Endoscopy [EGD] which is indicated in patients with evidence of bleeding, weight loss, chronicity, or persistent vomiting and those whose symptoms do not respond to medications. [10]

Also tests for detection of *H.pylori* infection are required as Serologic ELISA, Urea breath test, Stool antigen test and Endoscopic biopsy and Tissue tests. [11]

Its treatment include:

- medical treatment by H2-receptor antagonists as Cimetidine and Ranitidine or proton pump inhibitors as Omeprazole and Lansoprazole or Prostaglandin analogues as Misoprostol or Antacids as Maalox and Mylanta.[12]
- Eradication of *H. pylori* infection by Triple Therapy which is formed of Omeprazole / Lansoprazole ,Clarithromycin and Amoxicillin / Metronidazole given for 14 days followed by P.P.I for 4 – 6 weeks. Short regimens for 7 – 10 days not very effective.[13]

Also quadruple therapy may be used which is formed of Bismuth subsalicylate, Metronidazole, Tetracycline, Omeprazole / Lansoprazole administered for a 2-week course. [14]

- surgery: Vagotomy, Antrectomy or Pyloroplasty.[15]

Peptic ulcers can be prevented by avoiding factors that break down the stomach's protective barrier and increase stomach acid secretion. These include alcohol, smoking, aspirin, nonsteroidal anti-inflammatory drugs and caffeine. Preventing infection with *H pylori* is a matter of avoiding contaminated food and water and adhering to strict standards of personal hygiene. Washing hands carefully with warm water and soap every time the bathroom is used, diaper changed, and before and after preparing food. [16]

If you need to take pain relievers aspirin or NSAID, you can reduce your risk of ulcers by trying the following:

- Try a different NSAID, one that has mild effect on the stomach.
- Reduce the dose or the number of times you take the medication.
- Substitute it with another medication, such as acetaminophen [Tylenol].
- Talk to your health care professional about how you can protect yourself.[17]

PATIENTS AND METHODS:

It is a prospective questionnaire-based cross sectional study.

Study population, sample and site: It included 50 male and female patients with peptic ulcer from Kink

Khaled hospital outpatient clinic, in Najran region in Kingdom of Saudi Arabia who their age range from 25 years to 55 years with exclusion for those who has other ages. They were selected randomly according to the selective age and period.

Method of data collection: The data was collected through a Questionnaire which is composed of 10 questions. The questions are group of information that can help us to find some relationships like age , gender , level of education , smoking , kinds of food that cause pain and life style.

Data Processing: Collected data were entered to Excel program and analyzed using standardized program [SPSS].

Ethical Aspects of conducting a field survey: The research have no ethical problem, verbal consent was taken from the patient and privacy was be granted.

RESULTS:

All of 50 patients are diagnosed by endoscopy.

As shown in table 1and figure1, the age has a relationship with the peptic ulcer disease as it occurs in adult patient from age 25-32 years more than others representing 36 % of patients samples. Then the age from 40-48 years old representing 28 %, then from 49-55 years old representing 20 %, at the least the age from 33-39 years representing 16 % of total patients.

Most of patients have the disease for <1 year representing 56 % of total cases, and about 28 % have PUS from 1-3 years, and only 16 % have it for more than 3 years.

Table 1: Relationship between age and peptic ulcer.

Age	NO. of patient	%
25-32	18	36
33-39	8	16
40-48	14	28
49-55	10	20
Total 50	50	100

Results in table 2 and figure 2 show the relationship between PUD and the gender according to this study, females are affected by peptic ulcer more than males where ratio is 3:2.

Table 2: Relationship between gender and peptic ulcer:

Gender	NO. of patient	%
Male	20	40
Female	30	60
Total	50	100

The results in table 3 and figure 3 show the relationship between PUD and its risk factors

Where the most common risk factor is the infection especially by H.pylori representing 60 %. This study showed that stress induced PUD in 48 % of total patients. Regular use of NSAIDs induced peptic ulcer in 40 % of patients while smoking comes at the end representing 24 % in males and 0 % in females.

12 patients are smokers. Most of smoker patients were smoking for more than 10 years representing 83.3 % and 16.7 % were smoking from 5-10 years. No cases less than 5 years smoking are observed.

Spicy foods are the most common type of food inducing peptic ulcer representing 47% as shown in figure 4. While acidic foods represent 39%.

Table 3: Relationship between risk factors and peptic ulcer:

Risk factor	NO. of patient	%
H. pylori infection	30	60
NSAIDs	20	40
Smoking	12	24
Stress	24	48

Figure 1: Relationship between age and peptic ulcer:

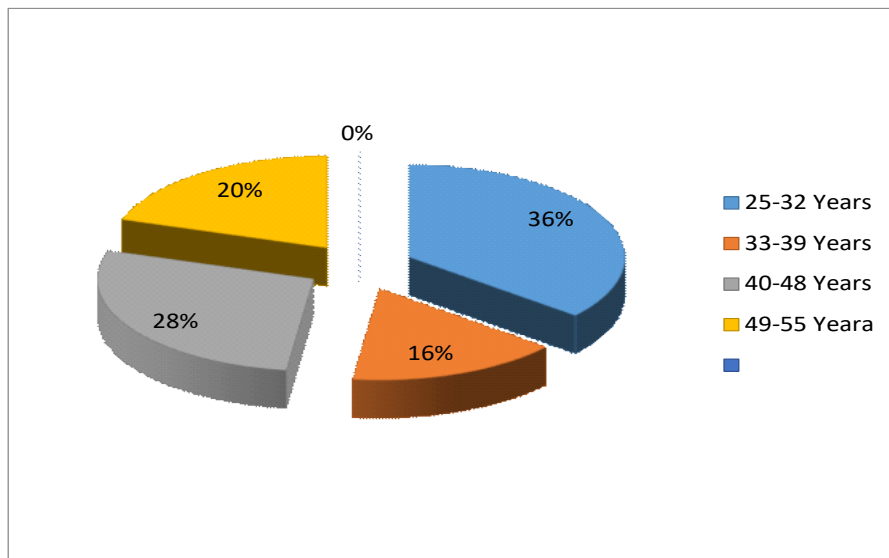


Figure 2: Relationship between gender and peptic ulcer:

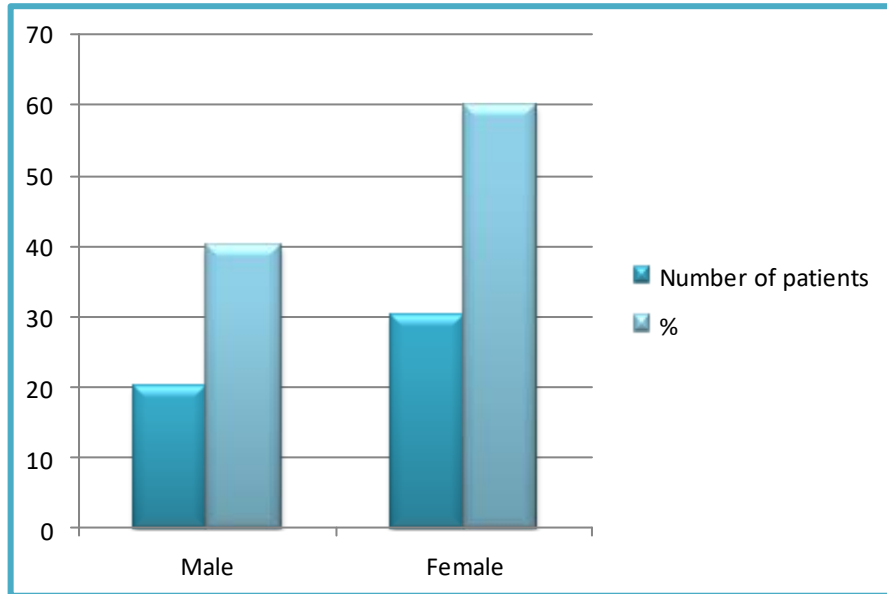


Figure 3: Relationship between risk factors and peptic ulcer:

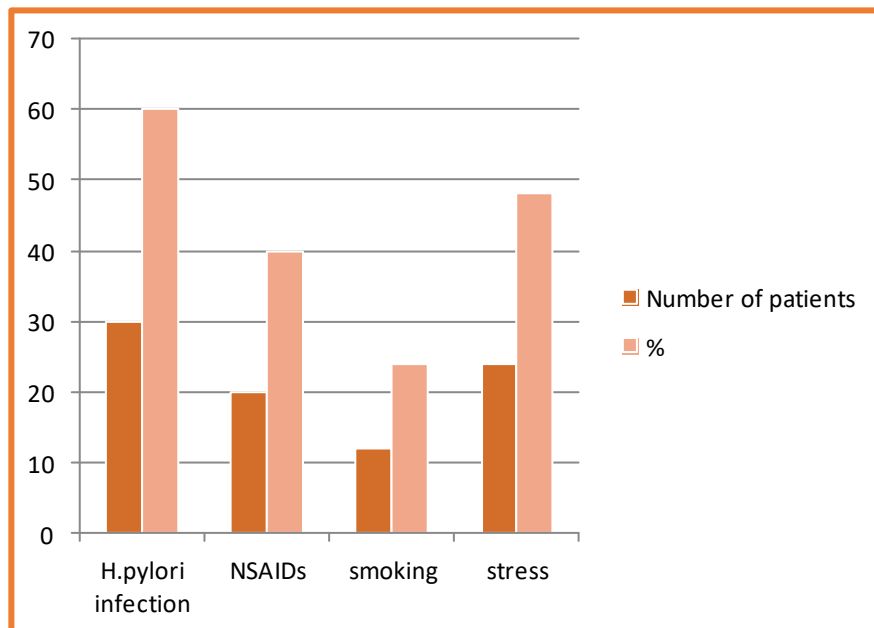
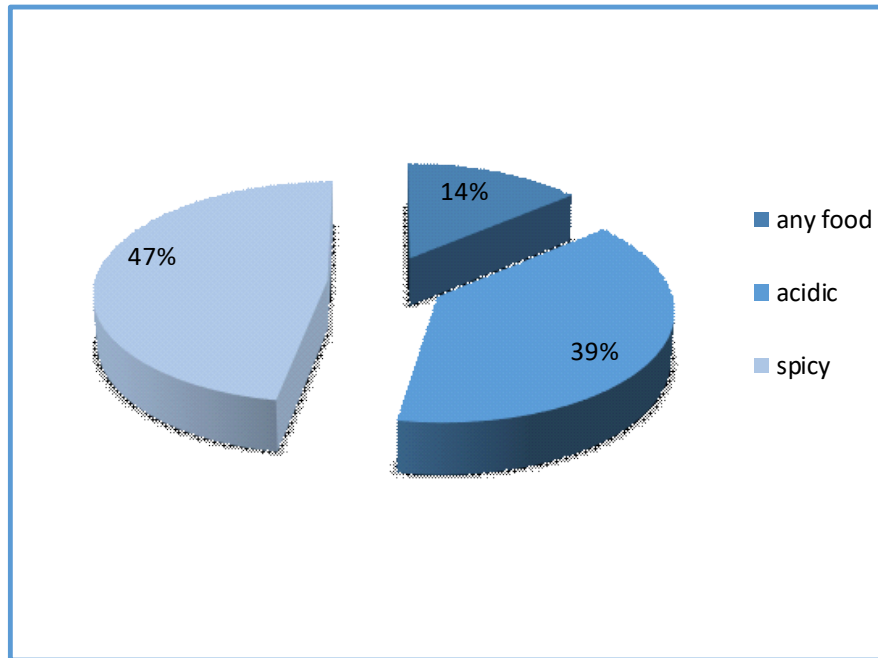


Figure 4: Types of foods that's increase pain of peptic ulcer**DISCUSSION:**

After studying 50 patients with peptic ulcer all of them were diagnosed by endoscopy, we noted that 30% of the patients were females whereas males were 20%.

Most of patients recorded age was between 25-32 years old represented 36% whereas the least age was between 33-39 represented by 16 %.

The most common risk factor for peptic ulcer is H. pylori infection representing 60% and the least common risk factor is smoking representing 24 %.

Stress has a large rule in inducing PUD represented by 48% of the total patients and it affects the women more than men where the ratio is 1.4: 1.

In Addition, about 24 %of patients have a previous gastric disease as gastritis, diverticulum, hormonal disturbance or partial gastrectomy and that's increase risk of ulceration

CONCLUSIONS:

Peptic ulcer disease is more common in females than males in this study and this may attributed to the life style which makes the women expose to physical and psychological stress or to decreased following up of the previous diseases.

The H. pylori and NSAIDs and stress are most

causes of the PUD in najran.

Spicy and acidic foods increase the pain in the most patients. Most of elder patients Illiterate or with no level of education especially in women.

RECOMMENDATIONS:

The early diagnosis and good treatment of previous gastric diseases helps prevent of peptic Ulcer. People with symptoms of PUD should RECEIVE good medical treatment with the first appearance of symptoms.

Cessation of smoking is important to reduce the incidence of peptic ulcer and helps its healing. Patients who are under stress, should avoid it to reduce the incidence of peptic ulcer occurrence. Patient who take NSAIDs are at risk of developing PUD and should receive another type pain killers or stop it if possible.

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peptic ulcer Questionnaire

Name of patient : File number:.....

Sex : Male Female Age : Dete : /

1- What's your level of education?	<input type="checkbox"/> None <input type="checkbox"/> school <input type="checkbox"/> graduated
2- Are you smoker? From ?	<input type="checkbox"/> yes No <input type="checkbox"/> <input type="checkbox"/> >5years <input type="checkbox"/> 5—10years <input type="checkbox"/> >10years
3- What Is the kind of food increasing the pain? Spicy ?	<input type="checkbox"/> Any food <input type="checkbox"/> acidic food <input type="checkbox"/> spicy food others
4- Are you have any previous gastric disease or infections?	<input type="checkbox"/> yes <input type="checkbox"/> No
5- Do you use regularly any paine killer medicatins?	<input type="checkbox"/> yes <input type="checkbox"/> No
6- Whats your job?	
7- Do you have stress in your work ? House ? psychologior physic stress?	<input type="checkbox"/> yes <input type="checkbox"/> No
8- Have you did and endoscopy be for	<input type="checkbox"/> yes <input type="checkbox"/> No
9- What is the duration of the disease	<input type="checkbox"/> >1 year <input type="checkbox"/> —3 years <input type="checkbox"/> > 3 years
10- H. pylory infection or not?	<input type="checkbox"/> yes <input type="checkbox"/> No

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Notes.....

Proposer name

Signature & date