

EFFECTIVENESS OF LIFE STYLE EDUCATION IN PEPTIC ULCER PATIENT

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ABSTRACT

A peptic ulcer is a defect in the lining of the stomach or the first part of the small intestine, an area called the duodenum. A peptic ulcer in the stomach is called a gastric ulcer. An ulcer in the duodenum is called a duodenal ulcer. A total of 178 peptic ulcer patients participated in a cross sectional study, effect of short and verbal education will be analysed in peptic ulcer patients who visited the outpatient department of MVJ Medical College and Research Hospital. The education is about different factors which cause peptic ulcer or its recurrence. Maximum number 125 (69.45%) of participants were in the age group 40-59 years and composed of 76.8% males and 23.2% females. It observed that significant number of patients discontinue use of factors which cause peptic ulcer after education. After educating patients, we can see the significant decrease in use of NSAIDs specially for early

adulthood, number of participant in this group who never use NSAIDs increase from 3 to 30 patients.

Keywords: Peptic ulcer, Education, Risk factors, Non Steroidal Anti Inflammatory drugs, Life style.

INTRODUCTION

A peptic ulcer, also known as peptic ulcer disease (PUD), is the most common ulcer of an area of the gastrointestinal tract that is usually acidic and thus extremely painful. It is defined as mucosal erosions equal to or greater than 0.5 cm. ¹ The relation between infection with *Helicobacter pylori* and use of non-steroidal anti-inflammatory drugs (NSAIDs) in the pathogenesis of peptic-ulcer disease is controversial, because studies examining these two

risk factors in this disorder have had conflicting results.^{2,3,4} From conventional thinking, the presence of both these well-established risk factors for peptic-ulcer disease would be expected to increase the risk of the disease. However, this was not the case in several observational studies of patients taking NSAIDs, in which peptic-ulcer disease was less frequently diagnosed when *H. pylori* infection was present than in patients without the infection.^{4, 5} Conflicting results have also been reported from randomised controlled clinical trials on whether eradication of *H. pylori* infection retards ulcer healing or reduces the risk of developing peptic-ulcer disease in NSAID takers.^{6, 7} Effective pharmacologic suppression of gastric acid secretion began with the introduction of histamine H₂-receptor antagonists (H₂RAs) in the 1970s, which greatly improved clinical outcomes. During the 1980s elective peptic ulcer surgery declined by 85%, which can be mainly attributed to the use of the H₂RAs cimetidine and ranitidine.^{8,9} The development of proton-pump inhibitors (PPIs) further improved inhibition of gastric acid secretion, and the lack of tachyphylaxis to PPI therapy ensures very high healing rates for duodenal and gastric ulcers.⁹ life style change is very important in case peptic ulcer management. A diet rich in fiber may cut the risk of developing ulcers in half and speed the healing of existing ulcers. Fiber found in fruits and vegetables is particularly protective; vitamin A contained in many of these foods may increase the benefit.¹⁰ Studies show smoking increases the chances of getting an ulcer, slows the healing process of existing ulcers, and contributes to ulcer recurrence. This is yet another health-related reason for children and teenagers who smoke to quit.¹¹ Coffee and Carbonated Beverages. Coffee (both caffeinated and decaffeinated), soft drinks, and fruit juices with citric acid increase stomach acid production. Although no studies have proven that any of these drinks contribute to ulcers, consuming more than 3 cups of coffee per day may increase susceptibility to *H. pylori* infection.¹² emotional stress is no longer thought to be a cause of ulcers, people with ulcers often report that emotional stress increases ulcer pain. Physical stress, however, may increase the risk of developing ulcers, particularly in the stomach. For example, people with injuries (such as severe alburns) and people undergoing major surgery often require rigorous treatment to prevent ulcers and ulcer complications.¹³ Studies conducted on spices and peppers have yielded conflicting results. The rule of thumb is to use these substances moderately, and to avoid them if they irritate the stomach.¹⁰ Some studies suggest that high amounts of garlic may have some protective properties against stomach cancer, although a recent study concluded that garlic offered no benefits against *H. pylori* and, in large amounts, can cause considerable GI distress.¹⁴ Milk actually encourages the

production of acid in the stomach, although moderate amounts (2 - 3 cups a day) appear to do no harm.¹⁵

METHOD

This cross-sectional study was conducted in outpatient department of MVJ hospital in Hoskote area, Bangalore, India. A total of 178 peptic ulcer patients regardless of the types of ulcer (duodenal ulcer, esophageal ulcer, gastric ulcer) were randomly selected. Subjects age more 20 and less than 60 years, either newly diagnosed or having medical history of peptic ulcer were selected. Another inclusion criteria was the patients live in Hoskote (near by hospital) and are permanent resident, so the follow up will be easier and patients are accessible easily. Peptic ulcer patients were interviewed through a predesigned questionnaire. A team of workers trained in psycho-social surveys were given orientation training and they conducted the validation of the questionnaire and also a pilot study with the final questionnaires. The questionnaires were pre-tested in 10 subjects with peptic ulcer. Based on the responses, the questionnaires were modified and the coding for the responses were finalized. Participation was voluntary and verbal consent was acquired from each participant before administering the questionnaire. If the participants could not understand the questions due to language problems, interview was carried out in the language of the patient (Telugu, Kannada and Hindi). The questions were designed to elicit details of age, gender, address and phone number of patient and their life style in detail (smoking habit, drinking of alcohol, Coffee and Carbonated Beverages, Milk, consumption of fruits and vegetables, Spices and Peppers, Garlic and use of non-steroidal anti-inflammatory drugs)^{16,17,18}. Each participant in the study received a single 20 min education session individually. The mode of the intervention was face-to-face. All 178 participants were interviewed again after 7 months with the same questionnaire to find out effectiveness of education. The data collected from all the participants was recorded in a spread sheet format and analysed using the software JMP 8®™ academic license from SAS® Inc. for any statistical significance.

RESULT AND DISCUSSION

With a response rate of 100%, all 180 patients which included 130 (72.22%) males and 50 (27.78%) females, participated in the study. Maximum number 125 (69.45%) of participants were in the age group 40-59 years and composed of 76.8% males and 23.2% females. Non Steroidal Anti Inflammatory drugs (NSAID) (such as aspirin, ibuprofen, and naproxen sodium) is one of the important factor causing ulcer. In early adulthood participant take

NSAIDs most of the time. (Sometimes=30 and always=40) (**Fig. 1**) but in middle age group most of the patients always use NSAIDs (64 patients). (**Fig. 2**)

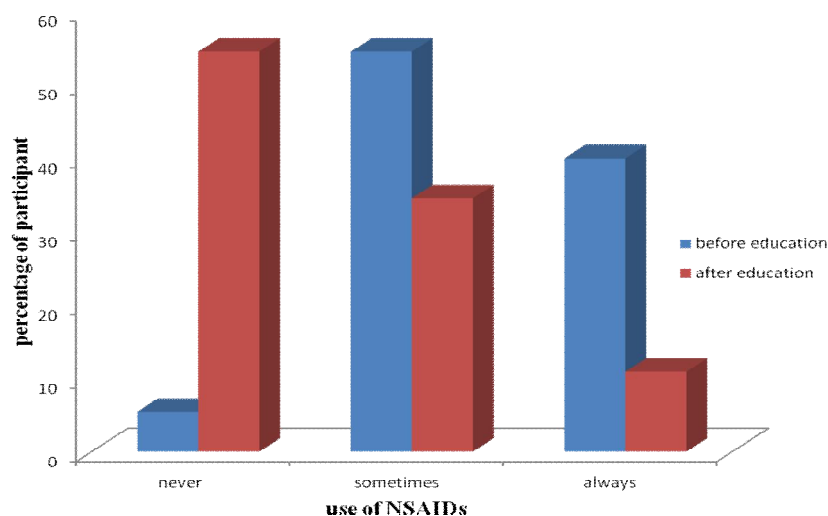


Fig. 1 Effect of education in use of NSAIDs in early adulthood

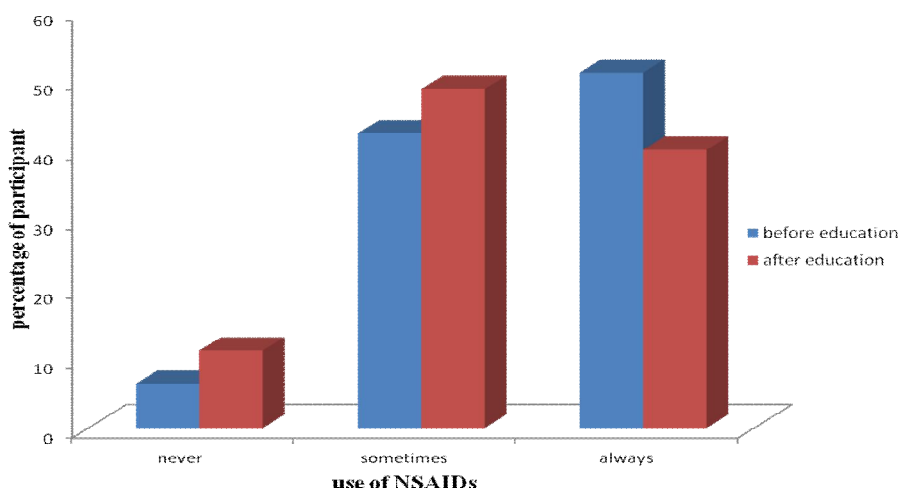


Fig. 2 Effect of education in use of NSAIDs in middle adulthood

After educating patients, we can see the significant decrease in use of NSAIDs specially for early adulthood, number of participant in this group who never use NSAIDs increase from 3 to 30 patients. As per the research already done, diet rich in fiber (fiber in fruit and vegetable) may cut the risk of developing ulcers in half and speed the healing of existing ulcers.^{19,20} In our study we found that only 11 peptic ulcer patients always consume fruit (**Fig. 3**) this number noticeably raised to 99 patients after education. (**Fig. 4**)

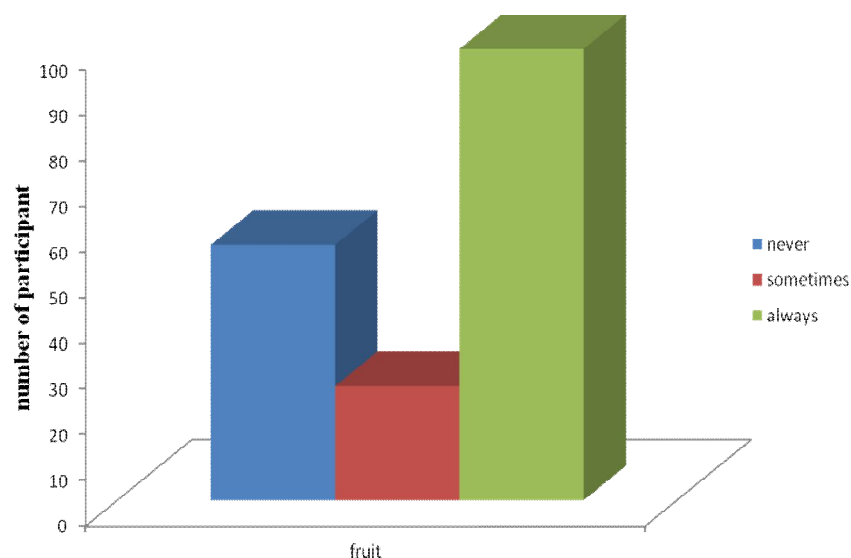


Fig. 3 How often participant take fruit before education

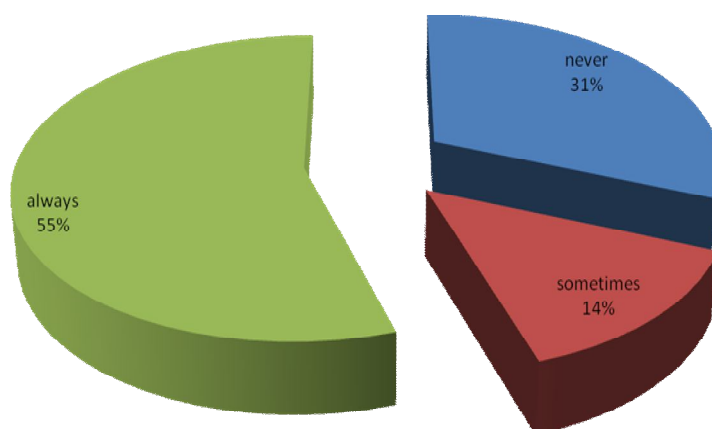


Fig. 4 How often participant take fruit after education

Studies show smoking increases the chances of getting an ulcer, slows the healing process of existing ulcers, and contributes to ulcer recurrence ¹⁷. The number of patients who always smoked in our study moderately decrease from 26.66% to 18% after education. Alcohol is another factor which irritate stomach even a little, makes your stomach produce more acid than usual, which can in turn cause gastritis. The percentage participant who always take alcohol and suffering from peptic ulcer dropped after education (From 71 to 44 patients). Coffee (both caffeinated and decaffeinated), soft drinks, and fruit juices with citric acid increase stomach acid production, more than 3 cups of coffee per day may increase

susceptibility to *H. pylori* infection^{18, 19}. 82.77% of participants never take more than three cups of coffee per day and this number slightly grow by 0.56% after education. Milk actually encourages the production of acid in the stomach; although moderate amounts (2 - 3 cups a day) appear to do no harm¹⁸. 89 patients drink more than 3 cups on all occasions this number reduced dramatically to 31 patients after education. Spices, in particular black pepper, red pepper, and chili powder, may produce dyspepsia²¹. After education significant reduction in number of patients who always consuming spicy food observed (from 136 patients to 38 patients). (Table 1)

Table 1 effect of education in lifestyle of peptic ulcer patients

Causes of peptic ulcer	NEVER		SOMETIMES		ALWAYS	
	Before Education (%)	After Education (%)	Before Education (%)	After Education (%)	Before Education (%)	After Education (%)
smoking	10.55	21.11	62.77	68.88	26.66	10
alcohol	17.22	26.11	43.33	49.44	39.44	24.44
coffee(> 3 cups)	82.77	83.33	7.77	8.88	9.44	7.77
milk(>3 cups a day)	18.33	38.88	32.22	43.88	49.44	17.22
spices	5.55	8.88	18.88	70	75.55	21.11

CONCLUSION AND SUGGESTION

Our study showed that educating patients face to face even for short time (approximately 20 min) can significantly increase awareness of them about peptic ulcer risk factors. We observed that participant discontinue consumption of most of peptic ulcer risk factors specially in case of use of NSAIDs, patients totally stop or decrease the number or frequency of consumption of such drugs. We also suggest: 1. Physicians treating peptic ulcer patients should also give equal importance to patient education about risk factors for successful management of peptic ulcer. 2. Peptic ulcer health education programs should be developed on a community level to increase awareness

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