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Research Article

**IMPACTS OF DOMPERIDONE IN AMALGAMATION WITH  
OMEPRAZOLE IN THERAPY OF CHRONIC SUPERFICIAL  
GASTRITIS****Dr Muhammad Faisal Shahzad, Dr Muhammad Awais Watoo, Dr Hafiz Rahil Asif  
BVH Bahawalpur****Article Received:** November 2019**Accepted:** December 2019**Published:** January 2020**Abstract:**

**Objective:** This research work aimed to determine the impacts of domperidone with combination of omeprazole while treating the CSG (Chronic Superficial Gastritis).

**Methodology:** Total 94 patients who were suffering from CSG and obtained treatment from Doctors Hospital, Lahore from August 2018 to August 2019 were the participants of this research work. We divided the patients into control and test group with forty-eight patients in each group with the utilization of the double blind procedure. We treated the patients of control group by omeprazole, whereas we treated the patients of test group by domperidone in collaboration with the omeprazole. We analyzed and observed the clinical impacts of the patients of both groups.

**Results:** The symptoms scores were not different between the patients of both groups before the treatment. We saw the improvement of symptoms scores in the patients of test group superior as compared to the patients of control group after treatment ( $P < 0.050$ ). We observed the overall response rate in the patients of test group as 97.920% (47 out of total 48) which was much higher as compared to the patients in control group (75%). After complete therapy, the repair impact of the gastric mucosa and recurrence rate after surgical intervention in the patients of test group was much high as compared to those present in the group of controls ( $P < 0.050$ ).

**Conclusion:** Domperidone in collaboration with omeprazole can attain ideal impacts in the therapy of chronic superficial gastritis. This is much important for the treatment and early prognosis of the patients.

**Keywords:** CSG, methodology, prognosis, omeprazole, therapy, control.

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**INTRODUCTION:**

CSG is very common gastritis disease of digestive system with high rate of incidence. Its induction normally caused by the chronic inflammatory abrasions resulted under the recurring actions of pathogenic features like microorganism, bile regurgitation and drugs on the gastric mucosa epithelium. Symptoms related to this complication like bloating, dyspepsia, belching, stomachache, emesis and nausea can produce the serious influences on the living quality and the physical health [1, 2]. Epidemiological examination showed that there is very prevalence rate of CSG among all the gastrointestinal complications, which was from 51.70% to 85.44% that of the chronic gastritis; the rate of prevalence enhanced with the rise of age; it might grow to the atrophic gastritis if the treatment of this issue does not carry out timely [3-5].

A research work showed that from 50.0% to 80.0% patients who developed the complication of CSG always had the infection due to helicobacter pylori [6]. Now a days, the treatment of the CSG with the omeprazole is very common treatment in medical field. Omeprazole reacting as proton pump inhibitor can create selective impact on the wall cells of gastric mucosa, efficiently inhibit the tubular bubble inside the cytoplasm and activity of the enzymes secretion by the gastric wall cells and lastly it restrict the secretion of the gastric acid; but the impact of this treatment in no quite effective [7, 8]. A current research work showed that combination of omeprazole with the domperidone was very effectual in the treatment of CSG patients but this finding is not clear yet [9]. This research work carried out to check the effectiveness of the combine treatment of omeprazole and domperidone for CSG patients.

**METHODOLOGY:**

Total 96 patients suffering from CSG who got treatment in General Hospital, Lahore from August 2018 to August 2019 with confirmed diagnostic standard were the part of this research work. We diagnosed all the patients with pathological changes and gastroscopic examination. We separated the patients into test and control group with forty eight participants in each group. In the group of controls, there were thirty male and eighteen female patients with a mean age of  $42.80 \pm 2.70$  years and the average

course of disease was  $1.20 \pm 0.20$ . In test group, twenty seven were female and twenty one male patients with a mean age of  $42.70 \pm 2.60$  years and mean course of disease among them was  $1.40 \pm 0.40$  years. There was no remarkable difference in both groups regarding sex, course of disease and age ( $P > 0.050$ ).

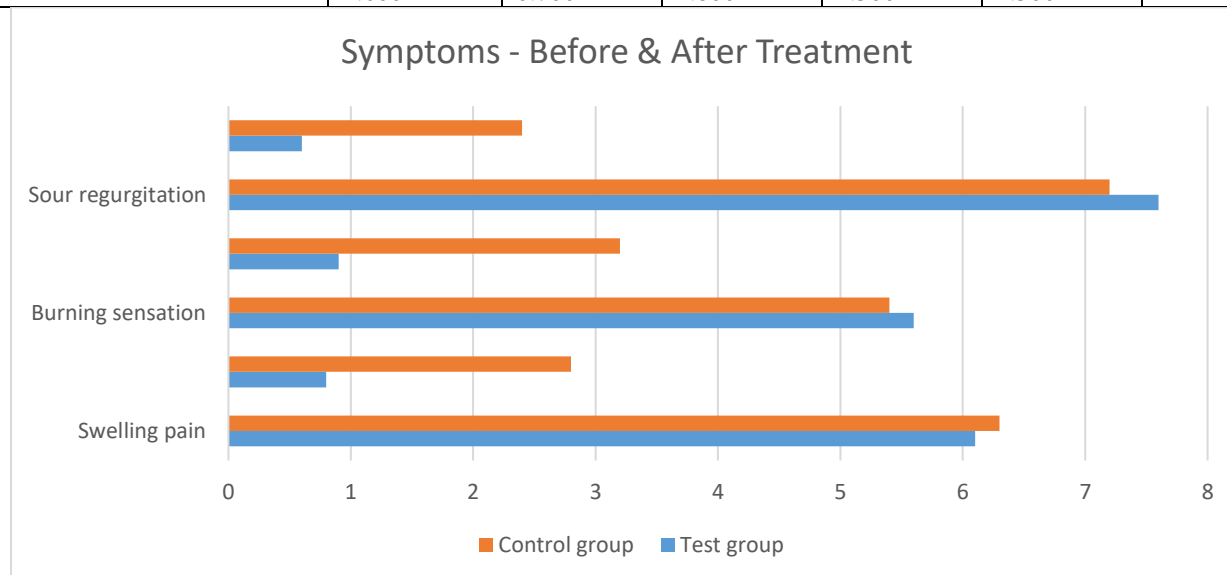
All the patients were present with the disorders of digestive system and dyspepsia. We took the written consent from all the patients after describing them the rationale of this research work. We restrict all the patients to leave all drugs before fourteen days of this test. Patients suffering from other serious complications were not the part of this research work. We treated the patients of test group with omeprazole and domperidone. We administered the domperidone orally in a dose of ten milligrams every time thirty minutes before every meal time and we also administered omeprazole in a dose of twenty milligram every time two time daily in fasting state of patients. We regarded the 3 weeks as single course [10]. We gave the patients of control group omeprazole orally twenty milligram every time 2 times in fasting state of patients. We also continued this treatment for three weeks. We followed up and tested patients every week in accordance with procedure. We also recorded the scores of symptoms and analyzed them. We determined the scores from 1 to 3 points as mild symptoms, medium from 4 to 7 points and severe from 8 to 10 points. We also compared the response rate of the patients of both group. We considered the treatment effective if there was no increase in symptoms. SPSS V. 22 was in use for the statistical analysis of the collected information. We expressed the measurement information in averages and standard deviations. We present the numerical information in percentage. P value of less than 0.050 was the significant one.

**RESULTS:**

There was no remarkable difference in the symptoms scores between the patients of both groups before the start of treatment ( $P > 0.050$ ). The symptoms scores as pain, burning sensation, swelling and sour regurgitation in the upper abdomen displayed a remarkable improvement in the patients of test group as compared to the patients of control group ( $P < 0.050$ ) (Table-1).

**Table-I: Comparison of symptom scores of the two groups before and after treatment.**

Group	Swelling pain		Burning sensation		Sour regurgitation	
	Before	After	Before	After	Before	After
Test group	6.10 ± 1.50	0.80 ± 0.30	5.60 ± 1.60	0.90 ± 0.40	7.60 ± 1.400	0.600 ± 0.30
Control group	6.300 ± 1.600	2.80 ± 0.700	5.40 ± 1.800	3.20 ± 1.300	7.20 ± 1.300	2.40 ± 0.500

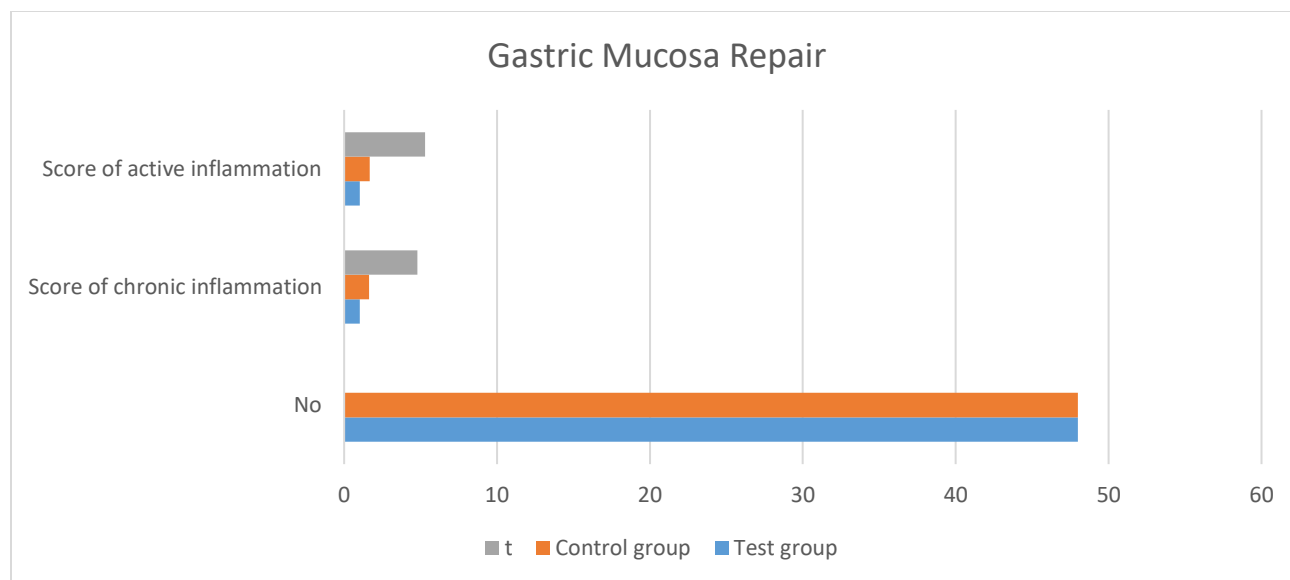


The effectivity rate in the patients of test group and controls group was 97.920% & 75.0% correspondingly, and we found a significant disparity among both groups ( $P < 0.050$ ). After the complete therapy, scores of chronic and active inflammation of the patients of test group were very high as compared to the patients of group of controls with an obvious disparity ( $P < 0.050$ ) (Table-2), showing better repair of gastric mucosa in the test group as compared to the group of controls. This finding showed that, the treatment of the test group was more effective as compared to the group of controls.

During the course of treatment, symptoms of deficiency in strength & dizziness in appeared in 2 patients of control group (4.18%) but there was no adverse reaction in the test group. The prevalence rate of the poor reactions between 2 groups displayed no significant difference statistically ( $P > 0.050$ ). We followed up the patients in both groups for complete 6 months. There was recurrence in one patient of test and 9 patients of control group (2.07% vs 18.76%). This finding was also present with statistically significant difference ( $P < 0.050$ ).

**Table-II: Comparison of gastric mucosa repair between the two groups after treatment.**

Group	No	Score of chronic inflammation	Score of active inflammation
Test group	48	1.020 ± 0.130	1.030 ± 0.220
Control group	48	1.630 ± 0.440	1.680 ± 0.370
t	-	4.8720	5.2730
P	-	<0.0500	<0.0500



### DISCUSSION:

The symptoms of CSG normally recur after the treatment. Toxin, drugs, microorganism and bile regurgitation are the main pathogenic features of CSG. It is very difficult to identify these pathogenic factors accurately which makes the diagnosis of CSG very hard [11]. There is very significant role of the impact of gastric acid in the prevalence of the CSG. Omeprazole has the ability to decrease the enzymes activity like APT, H<sup>+</sup> & K<sup>+</sup>, prevent the release of the gastric acid as well as inhibit the bacterial infection. Omeprazole normally restricts the proton pump's activity to inhibit the release of gastric acid [12]. In the procedure of inhibition of the secretion of gastric acid, it can decrease the evacuation of drugs, promote the utilization rate of drug and efficiently relieve the patients from symptoms. It has its extensive application in treatment field of chronic gastritis. Additionally, omeprazole in combination with urease to prevent the activity of urease and finish Hp by entering into mucous layer & surface of Hp [13]. Therefore, it is very frequent in use for the treatment of the CG.

One research work stated that CSG treatment can be carried out by omeprazole but the impact of this drug is not remarkable [14]. The findings of this research work showed that twelve patients out of forty eight patients of group of controls gave no response to the therapy with the utilization of omeprazole, with a rate of efficacy of 75.0% which is similar to that finding. Domperidone has the ability to inhibit the emesis. It has no ability to create adverse impacts on CNS (Central Nervous System). It has the ability to selectively block the dopamine-2 and have reaction on PNS (Peripheral Nervous System) [15]. Domperidone

also has the ability to promote the power of the digestion tract [16]. There is very extensive application of the domperidone with much safety. All the findings of this research work showed that this combine treatment has very effective impacts.

### CONCLUSION:

The findings of this research work showed that the combination of omeprazole and domperidone in the treatment of CSG is much effective and secure. It increases the curing rate and relieves the patients from symptoms of disease. It can be regarded as the significant procedure for the treatment of CSG patients in medical field.

### REFERENCES:

1. Peng YC, Huang LR, Shyu CL, Cheng CC, Ho SP. Interaction of omeprazole and Helicobacter pylori-induced nuclear factor- $\kappa$ B activation and mediators in gastric epithelial cells. *J Chin Med Assoc.* 2014;77(11):567-572. doi: 10.1016/j.jcma.2014.07.006
2. Ding Y. Observation of curative effect of omeprazole in combination with domperidone in the treatment of chronic superficial gastritis. *Chin J Clin Rational Drug Use.* 2010;03(11):46-47.
3. Qiao CF. The observation of effect of domperidone in combination with omeprazole in the treatment of chronic superficial gastritis. *Chin Foreign Med Res.* 2013;11(26):41- 42. doi: 10.3969/j.issn.1674-6805.2013.26.029
4. Kihara M. Pepsin-like protease activity and the gastric digestion within ex vivo Pacific bluefin tuna *Thunnus orientalis* stomachs, as a gastric digestion model. *Animal Feed Sci Technol.* 2015;206: 87-99.

5. Wu JC, Long EW, Chen ZY. Comparison of effectiveness of omeprazole and teprenone in treatment of chronic superficial gastritis. *Sichuan Med J*. 2014;3:331-333.
6. Fan XT. Comparison of effects of omeprazole triplex methods in eliminating helicobacter pylori infection. *Chin J Mod Drug Appl*. 2011;5(1):134. doi: 10.3969/j.issn.1673- 9523.2011.01.124
7. Wang HB. Comparison of effects of proton pump inhibitors and ranitidine in the treatment of dodecadactylon ball headquarter ulcer. *China Pract Med*. 2012;35:158-159.
8. Ortiz A, Cooper CJ, Alvarez A, Gomez Y, Sarosiek I, McCallum RW. Cardiovascular safety profile and clinical experience with high-dose domperidone therapy for nausea and vomiting. *Am J Med Sci*. 2015;349(5):421-424. doi:10.1097/MAJ.0000000000000439
9. Ngoenmak T, Treepongkaruna S, Buddharaksa Y, Khositseth A. Effects of domperidone on QT interval in children with gastroesophageal reflux disease. *Pediat Neonatol*. 2016;57(1):60-64. doi: 10.1016/j.pedneo.2015.03.015.
10. Zhao ZT, Li Y, Zhang XL. Fourteen cases of chronic gastritis with stomach cold treated by long snake moxibustion on dog days. *World J Acupunct - Moxibust*. 2014;24(3):57-60. doi: 10.1016/S1003-5257(15)60014-9
11. Qin F, Liu JY, Yuan JH. Chaihu-Shugan-San, an oriental herbal preparation, for the treatment of chronic gastritis: A meta-analysis of randomized controlled trials. *J Ethnopharmacol*. 2013;146(2):433-439. doi: 10.1016/j.jep.2013.01.029.
12. Hassan TMM, Al-Najjar SI, Al-Zahrani IH, Alanazi FIB, Alotibi MG. Helicobacter pylori chronic gastritis updated Sydney grading in relation to endoscopic findings and H. pylori IgG antibody: diagnostic methods. *J Microsc Ultrastruct*. 2016;4(4):167-174. doi: 10.1016/j.jmau.2016.03.004
13. Rodríguez C, Medici M, Rodríguez AV, Mozzi F, Font de Valdez G. Prevention of chronic gastritis by fermented milks made with exopolysaccharide-producing *Streptococcus thermophilus* strains. *J Dairy Sci*. 2009;92(6):2423-2434. doi: 10.3168/jds.2008-1724.
14. Toller IM, Hitzler I, Sayi A, Mueller A. Prostaglandin E2 prevents Helicobacter-induced gastric preneoplasia and facilitates persistent infection in a mouse model. *Gastroenterology*. 2010; 138(4):1455-1467. doi: 10.1053/j.gastro.2009.12.006.
15. Deng WL. Observation of curative effects of omeprazole in treating 53 cases of chronic superficial gastritis. *J Med Theory Pract*. 2010;23(3):301-302.
16. Gao W, Li HY, Wang LX, Hao LJ, Gao JL, Zheng RJ, et al. Protective effect of omeprazole on gastric mucosal of cirrhotic portal hypertension rats. *Asian Pacific J Tropic Med*. 2014;7(5):402-406. doi: 10.1016/S1995-7645(14)60065-1.