



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**Available online at: <http://www.iajps.com>

Research Article

**AN EXPERIMENTAL RESEARCH TO DETERMINE AND
EVALUATE THE LAGB (LAPAROSCOPIC ADJUSTABLE
GASTRIC BANDING) APPLICATION AS A TREATMENT
MODALITY****¹Dr. Amina Bashir, ²Dr. Muhammad Qasim, ³Dr. Umaar Azhar**¹Services Hospital Lahore²Lahore Medical and Dental College Lahore³Kyrgyz State Medical Accadomy Kyrgyzstan**Abstract**

Objective: The application of LAGB (Laparoscopic Adjustable Gastric Banding) carries numerous benefits in the medication of ominous obesity. Moreover, such a process may face some particular issues like intragastric migration. Therefore, we designed this study, to evaluate and determine the impacts of this kind of migration as well as the possible methods which are usually being applied during surgically administrative cures.

Methodology: This experimental research studies 134 patients at Services Hospital, Lahore from February to November 2017. To apply the Pars Flaccida technique, we selected (134) patients who all experienced LAGB. All the participants laid between the age group of (18 – 54) with the mean age (27) years. To identify the migration, we applied the technique of gastroscopy. It is assumed that the absence of band-related obstruction is the cause of migration.

Results: Among one hundred and thirty-four patients total three percent (4) of them reported migration through medical reports while another subject reported it from the other centre where he experienced LAGB. We recorded the mean value of BMI as (47 kg/m²). So, professionals initially stitched the breaches in the areas of the stomach as well as removed the bandages off (4) patients. One patient out of research sample experienced RNYGE (Roux-en-Y gastro-enter ostomy) and cholecystectomy.

Conclusions: A keen study of said problem found that the growth and expansion of migration after the experience of LAGB is a longstanding issue and impediment. We can testify through the findings of this study that when the migration is reported, professional must remove the gastric bands. In the meanwhile RNYGE is helpful or professional must prefer new bands after three to six months.

Keywords: Morbid Obesity, Bariatric Surgery, Laparoscopy and Band Migration.

Corresponding author:**Dr. Amina Bashir,**

Services Hospital, Lahore.

QR code



Please cite this article in press Amina Bashir et al., *An Experimental Research To Determine And Evaluate The Lagb (Laparoscopic Adjustable Gastric Banding) Application As A Treatment Modality.*, Indo Am. J. P. Sci, 2018; 05(12).

INTRODUCTION:

In terms of morbid obesity utilization of LAGB has gain popularity in clinical treatment in the modern clinical medication and therapy [1 – 3]. This is a surgical technique which has multiple pros like it has the least insensitive, intrusive application, reversibility, and it has complete control during the process of weight loss. Additionally, if we compare this method with other surgical technique some of the complications are least common like dispositioning or loosening of the bandage, and as well as migration. Migration of band takes place when it moves down from gastric wall and travels into the stomach of the patient. As a result, this migrated band loses its functionalities as well as it produces the inflammation in the tissues where it moves down. Migration of gastric bands may appear with different frequencies. It may range between (0.5% – 3.8%) [4, 5]. All those patients who encounter with multiple surgeries due to multiple reasons and are treated with gastric bandage usually develop sudden and severe inflammation as well as fibrosclerosis Therefore, these developments and manifestations lead to the advent of migration [6]. So, this research report took an analytical account of all those patients (selected for this study) who are treated with a gastric bandage and encountered issues like migration and inflammation.

METHODOLOGY:

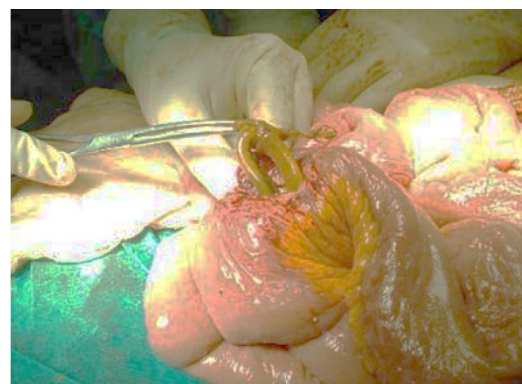
This experimental research studies 134 patients at Services Hospital, Lahore from February to November 2017. We experimented LAGB to (134) patients who enrolled in this research. The sample of the study comprised (101) female patients and (33) male patients with the mean age of (27) years. This sample ranged between (18 – 54) years. We recorded their mean BMI as (44 kg/m²). For the upper limit, we used (9 cc) with bands for all patients. Similarly, all other medical centres also used (9 cc) for the patients. IFSO (International Federation for the Surgery of Obesity) prescribed the rules for the surgeries, therefore, we followed all those transcribed procedures during operating on the patients. Prior to the operations, we acted upon the multidisciplinary and dynamic approach. To performed surgeries, we applied the Pars Flaccida technique. The open conversation was the requirement of seven patients, hepatomegaly for (4) patients, perforation while segmentation in (2) patients, and scepticism of gastric damage due to Veress needle in (1) patient. We documented the types of bands, paths of application, navigated issues and the level of fluid in the capacity bank of the band. We also obtained the information regarding anamnesis from other centres to measure

the quantity of fluid in the basin of the band. Many of the patients usually reported about the sufferings of epigastric pain and infection in their port site. every patient included in the research sample received the examination through endoscopic and BCGR (barium contrast gastroduodenal radiography). We observed gastric particles in (3) patients who complained about it. The band migrated into the stomach of four patients. Therefore, we diagnosed one patient through palpation of the band inside the jejunum in course of laparotomy because of sub ileus. Due to concurrent illness, we applied arthrosis on two patients, whereas, we treated on the patient through cholelithiasis. To perform laparoscopy, we systematically gave general anaesthesia to all the subjects. We removed the bands in (4) patients with the help locking system. The bands were removed by opening the locking mechanisms in four patients. One patient filed the case of (110 cm) hole owing to the band in the jejunum. So, we detach the band that caused a perforation in the surface through blunt dissection. By dint of this research examination, we observed numbers of inflammatory regions and granulomas in their stomach, jejunum and duodenum of the patients.

Figure – I: Silicone Banding in Jejunum



Figure – II: Band Removal from Perforated Jejunum Region



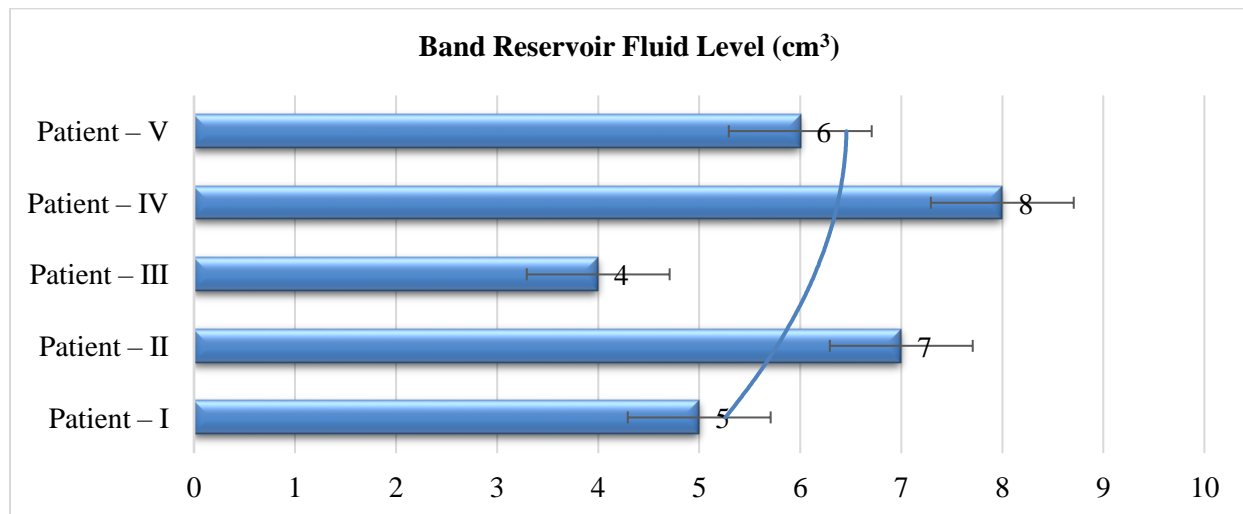
RESULTS:

Total (4) out of (134) patients reported the band migration that was (3%) of the total sample. Similarly, we observed the same case of band migration in one patient from another centre whom they treated with LAGB treatment technique. These band migrations occurred over the mean time duration of fourteen months. As per observations, it ranged from (6 – 22) months. We explored this act of band migration during the follow-up period. Their mean BMI in the laboratory examination was (47 kg/m²) that ranged between the values of (39 – 56) kg/m². At the time of band migration diagnosis, we filed the mean BMI as (41 kg/m²) among the patients with complications. Therefore, these subjects experienced laparoscopically adjustable of gastric banding as a remedial action. Furthermore, we undertook the investigation of three owing to the port area infection and exploration of gastric elements through port reservoir hole. Whereas, other two patients had gastric elements or an infected port surface. We diagnosed such cases through gastroscopy by implementing it among all the patients. Physicians performed the techniques of

Laparoscopy on the patients whom we diagnosed with band migration. Additionally, observers recorded disseminated fibrosclerosis along the sides of the band in the course of exploration. However, they diagnosed partial migration in one patient only. To administer diluted methylene blue with the technique of NG (nasogastric catheter) professionals removed the band. Moreover, for the identification of punctured areas, they examined the leakage in the intraperitoneal area. We treated the leakage through suturing with (3 – 0) polyglactin one by one, who suffered from leakage after the eradication of the bands in four patients. We maintained NG catheter for three days in the time period of post-operation follow-up. We eradicated it from the area of deficiency as it controlled the leakage through methylene blue. But in one case, we removed the band from the area, where it appeared in the jejunum. Originally, we closed the punctured surfaces and jejunum through (30) polyglactin through one layer in the fourth part of the duodenum. Owing to cholelithiasis among the patients, we executed Cholecystectomy including subtotal gastrectomy and RNYGE.

Table – I: Concomitant Diseases, Bands utilised and Band Reservoir Fluid Level

Patients	Band Type	Concomitant Disease	Band Reservoir Fluid Level (cm ³)
Patient – I	AMI	Cholelithiasis	5
Patient – II	Helioscope	-	7
Patient – III	AMI	Gonarthrosis	4
Patient – IV			8
Patient – V	Cousin	-	6



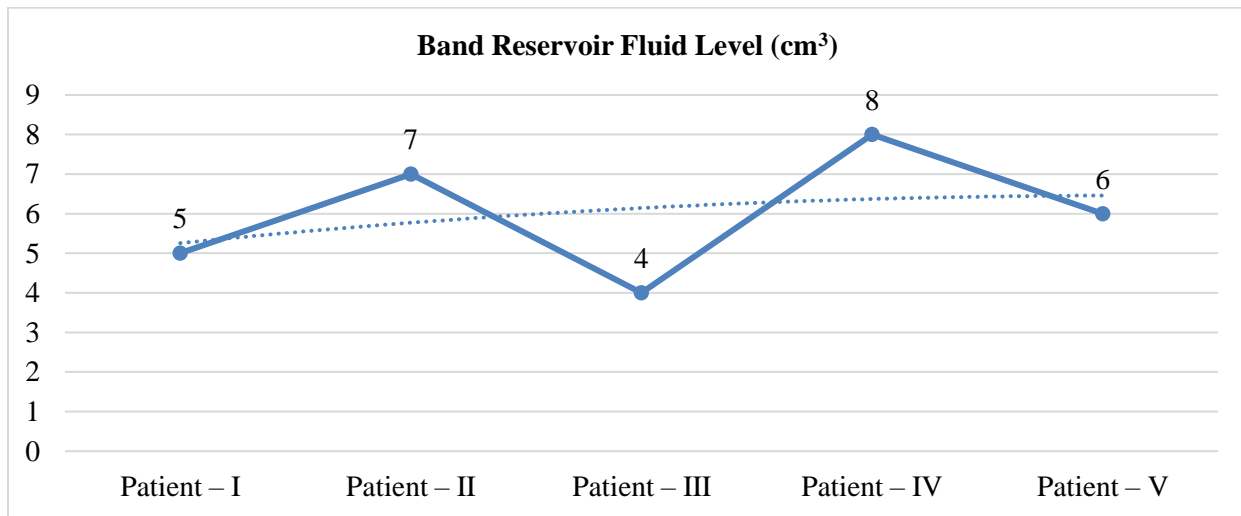


Table – II: Outcomes and Complaints with Surgical Interventions

Patients	Complaints & Outcomes	Operations
Patient – I	Port infection Gastric contents with puncture	Cholecystectomy Roux-en-Y gastroenterostomy
Patient – II	Port infection	Band removal and Primary Suturing
Patient – III	Gastric contents with puncture	
Patient – IV	Port infection Gastric contents with puncture	
Patient – V	Port infection Gastric contents with puncture	

DISCUSSION:

For ominous obesity, LAGB is a minimally persistent, useful, valuable, and alterable treatment. Yet there are little chances of certain technical hitches, such as; band slippage, band opening, and band migration may exist [7 – 9]. Band migration can be a result of a long-term complication. Band migration should be expected in the result of infection at the port site or weight loss, and/or weight regain. With the help of gastroscopy, one can definitely identify the migration of the band. By performing gastroscopy, band migration was identified due to weight regain after weight loss in one patient and port infection in four patients in the present study. Due to the effect of gastric content and contamination, a migrated band burst. To identify the areas of infection, professionals usually apply the method of port puncture which is a simple but most

definite process of certain diagnosis of the patient. However, in terms of this research, in four out of five patients, we aspirated the gastric substance through puncturing of the port reservoir. Many authors have proposed numerous hypotheses in order to explain the phenomenon of gastric band migration. These hypotheses encapsulate the opinions like gastric injury while applying the band, infected areas around the band, injected an amount of fluid more than the capacity of the band, and the reaction of external particles in the band [10 – 13]. On the other hand, some scholars propounded that if the inflammatory functioning gets acceleration, it can be the root cause to generate infection in the area of the band while many believe in the hypothesis as after the occurrence of migration some infection makes the link with the gastric particles [5]. So, authors suggest that physicians must carefully eradicate the migrated

band with the help of endoscopy and laparoscopy by means of band cutter [14, 15]. Therefore, we eradicated the migrating band by using laparoscopy during this study. Vertruven and Paul conducted a thorough study and documented that they used the technique of laparoscopy for the eradication of migrant band in ten (1.38%) out of (727) patients who had experienced LAGB along with (11cm) Lap-Band® and the patients experienced the same technique after (6) months. Furthermore, they did not observe any complications [16]. According to some observations, a migrated band can also produce hindrances in the intestinal system. Taskýn et al. also validated this report through his study which recorded a duodenal obstruction owing to the migrant band [17]. Similarly, Egbeare et al. also registered a case that had erosion and obstruction and erosion due to the migration of band [18]. In case of its appearance in the jejunum, some also term it as so-called “cheese-wire effect.” Bueter et al. 19 while a study on a (65) years old subject, observed obstruction in the small intestine due to the band. Whereas, in terms of this study, we observed inflammation and a puncture in the jejunum. However, we recommend the surgical procedures for the cure of obesity after the eradication of migrated band [20]. Suter et al. stated the migration of band in twenty-four (6.8%) out of (347) subjects of his study, who underwent gastric banding [21].

CONCLUSION:

LAGB is less disturbing, intrusive, effective, and a revertible curate method for the treatment of morbid obesity. Therefore, some complication is usual in the treatment through this method. Band displacement, opening and migration to the stomach can be the complication in this process of therapy. We recommend that as soon as one noticed migration of band, he must remove the band. Conclusively, surgical administration of morbid obesity, a malabsorptive process like RNYGE or re-banding is suggested in case of removal of bandage after (3 – 6) months.

REFERENCES:

1. Niville E, Dams A, Van Der speeten K, Verhelst H. Results of lap re-banding procedures after Lap-Band removal for band erosion- a mid-term evaluation. *Obes Surg* 2005; 15:630–3.
2. Vertruven M, Paul G. 111-cm Lap-Band® system placement after a history of intragastric migration. *Obes Surg* 2003; 13:435–8.
3. Taskin M, Zengin K, Unal E. Intraluminal duodenal obstruction by a gastric band following erosion. *Obes Surg* 2001; 11:90–2.
4. Egbeare DM, Myers AF, Lawrance RJ. Small bowel obstruction secondary to intragastric erosion and migration of a gastric band. *J Gastrointest Surg* 2008; 12:983–4.
5. Bueter M, Thalheimer A, Meyer D, Fein M. Band erosion and passage, causing small bowel obstruction. *Obes Surg* 2006; 16:1679–82.
6. Kasalicky M, Fried M, Peskova M. Some complications after laparoscopic nonadjustable gastric banding. *Obes Surg* 1999; 9:443–5.
7. Suter M, Giusti V, Heraief E, Calmes JM. Band erosion after laparoscopic gastric banding: Occurrence and results after conversion to Roux-en-Y gastric bypass. *Obes Surg* 2004; 14:381–6.
8. Lattuada E, Zappa MA, Mozzi E, Gazzano G, Francese M, Antonini I, et al. Histologic study of tissue reaction to the gastric band: Does it contribute to the problem of band erosion? *Obes Surg* 2006; 16:1155–9.
9. Zappa MA, Micheletto G, Lattuada E, Mozzi E, Spinola A, Meco M, et al. Prevention of pouch dilatation after laparoscopic adjustable gastric banding. *Obes Surg* 2006; 16:132–6.
10. Weiss HG, Nehoda H, Labeck B, Peer-Kuehberger R, Oberwalder M, Aigner F, et al. Adjustable gastric and esophagogastric banding: A randomized clinical trial. *Obes Surg* 2002; 12:573–8.
11. O'Brien PE, McPhail T, Chaston TB, Dixon JB. A systematic review of medium-term weight loss after bariatric operations. *Obes Surg* 2006; 16:1032–40.
12. Abu-Abeid S, Keidar A, Gavert N, Blanc A, Szold A. The clinical spectrum of band erosion following laparoscopic adjustable silicone gastric banding for morbid obesity. *Surg Endosc* 2003; 17:861–3.
13. Biagini J. Intragastric band erosion (Correspondence). *Obes Surg* 2001; 11:100.
14. Niville E, Dams A, Vlasselaers J. Lap-Band® erosion: Incidence and treatment. *Obes Surg* 2001; 11:744–7.
15. Meir E, Van Baden M. Adjustable silicone gastric banding and erosion personal experience and hypotheses. *Obes Surg* 1999; 9:191–3.
16. Sakai P, Hondo FY, de Almeida Artifon EL, Kuga R, Ishioka S. Symptomatic pneumoperitoneum after endoscopic removal of the adjustable gastric band. *Obes Surg* 2005; 15:893–6.
17. Angrisani L, Furbetta F, Doldi SB, Basso N, Lucchese M, Giacomelli F, Zappa M, et al. Lap band adjustable Gastric banding system: The experience with 1863 patients operated on 6 years. *Surg Endosc* 2003; 17:409–12.
18. Allen JW, Coleman MG, Fielding GA. Lessons learned from laparoscopic gastric banding for

- morbid obesity. *Am J Surg* 2001; 182:10-4.
19. Ren C, Weiner M, Allen J. Favourable early results of gastric banding for morbid obesity. *Surg Endosc* 2004; 18:543-6.
 20. Moreno PM, Alastrué A, Rull M, Formiguera X, Casas D, Boix J, et al. Band erosion in patients who have undergone vertical banded gastroplasty. *Arc Surg* 1998; 133:189-93.
 21. Nocca D, Frering V, Gallix B, de Seguin des Hons C, Noël P, Foulonge MA, et al. Migration of adjustable gastric banding from a cohort study of 4236 patients. *Surg Endosc* 2005; 19:947-50.