To Evaluate Surgical Outcome of the Sutureless Hemorrhidectomy by Legasure at Tertiay Care Hospital.

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ABSTRACT

Introduction:-hemorrhoidectomy by Legasure is seemed to be effective and result oriented modality with better surgical outcomes as compared to other procedure of this disease. It is less painful, day care, easily performed, sutureless and above all it is the most liked procedure nowadays by the surgeons. **Objective:-** To detect the effectiveness and evaluate outcomes of this procedure **Patients and methods:-**This study is conducted at department of surgery surgical unit 3 at PMCH Nawabshah. This is a cross sectional study done from July 2018 to June 2019. All the patients were admitted from surgical OPD. Total 48 patients were included. All the patients included had grade 3 and 4 hemorrhoids. Exclusion criterion was the patients suffering from lover cirrhosis, HIV positive, uncontrolled diabetes and bleeding disorders. **Results :-** Total 48 patients were included in this study. 30 (62.5%) patients were male and 18 (37.5%0 patients were females. Postoperative complications were noted specifically. Postoperative pain was recorded only in 3(6.25%) patients. Bleeding was found to be in 4(8.33%) patients only. 2(4.16%) patients developed urinary retention. 1(2.08%) patient has breakdown of tissue seal with raw area that healed secondarily. **Conclusion:-** It is concluded that legasure is the best procedure of all as it is suture less, simple, safe, effective and day care procedure.

Key words. Legasure, Sutureless, Grade 4 Hemorrhoids, Bleeding.

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INTRODUCTION

Hemorrhoids are simply defined as the cushions of sub mucosal tissue with venules, arterioles and smooth muscle. In surgical, it is the common condition being faced by South Asian population specially Indian and Pakistani people. More of the half of the population involves this illness.[1]

Deciding for the management of this disease it is better to know the grade of this disease. It is divided into 4 grades. Grade 1 and 2 are treated conservatively. Treatment options are included like rubber band ligation, sclerotherapy, cryotherapy and photocoagulation. Moreover, for the treatment of grade 3 and 4, intervention is the sole option to be applied by the surgeons in every setup. Milligan and Morgan method or Ferguson is still the gold standard. Stapled hemorrhoidectomy for prolapsed hemorrhoids has not become popular because of technical and cost reasons.[2]

An innovative electrosurgical device called the Ligasure has been introduced in surgical world of the globe which has revolutionized the treatment of hemorrhoids with many advantages over other procedures. It has become available for last decade as a 'vessel-sealing system'. The mechanism of this device is not complicated. It simply delivers electro-diathermy energy across its jaws much like a bipolar diathermy device with

minimal spread of current or heat. This method has gained popularity. Diathermy hemoroidectomy by monopolar cautery has also many complication due to thermal spread and damage to nearby richly innervative tissue.[3]

Recently introduced electrosurgical unit legasure is an improved version of bipolar diathermy with advantage of achieving homeostasis by its vessel sealing system. It is bloodless up to 7 mm in diameter. The energy delivered by this device is confined between tissue grasped and jaws with minimal spread of thermal energy to surroundings.[4]This device has many functions performing at one time. It has ability to grasp, seal, dissect bluntly and finally divide tissue. In fact, it is modification of bipolar diathermy which utilizes combination of pressure and radiofrequency and causes sealing blood vessel upto 7mm diameter and limits thermal energy up to 2 mm in operative field. The limited spread of energy makes surgeon easy to perform the related procedure. It reduced anal spasm with resultant decrease in postoperative pan. Nowadays, legasure hemorroidectomy is considered to be superior to diathermy hemorrhoidectomy.[5,6]

The rationale of our study is to find out effectiveness and evaluate the surgical outcome of legasure hemorroidectomy so that patients may be benefited from the best method.

PATIENTS AND METHODS

This study is conducted at department of surgery surgical unit 3 at PMCH Nawabshah. This is a cross sectional study done from July 2018 to June 2019. All the patients were admitted from surgical OPD. 48 patients were included. All the patients included have grade 3 and 4 hemorrhoids. Exclusion criterion was the patients suffering from lover cirrhosis, HIV positive, uncontrolled diabetes and bleeding disorders. Patients taking anticoagulants were advised to stop this drug 5 days prior to surgery. The surgery was done as day care surgery except those who had postoperative complications. The procedure was done under caudal block and intravenous sedation in lithotomic position.

In legasure, the jaws of handset were applied to the pedicle and the instrument was activated by foot paddle. Flow of energy was the required one and computer controlled feedback had to stop the energy flow automatically when its need is furnished after vessel was fully coagulated. Excision of hemorrhoids was done by scissors. No suture was used because legasure device also caused fusion of mucosa. Anal packing was not done routinely.

RESULTS:-

Total 48 patients were included in this study. 30 (62.5%) patients were male and 18 (37.5%0 patients were females as is shown in figure 1 below. The age ranged from 22 to 62 years. Average age was 43 years. 8(16%) Patients aged from 22 to 30 years. 10 (20.83%) patients were of 31 to 40 years. 20(40%) ranged from 40 to 55 years. 10(20.83%) were of 56 to 62 years as is shown below in table 1 Postoperative complications were noted specifically. Postoperative pain was recorded only in 3(6.25%) patients. Bleeding was found to be in 4(8.33%) patients only. 2(4.16%) patients developed urinary retention that was resolved accordingly. 1(2.08%) patient has breakdown of tissue seal with raw area that healed secondarily as shown in table 2. No other complaint was recorded by the operating team involved in this research.

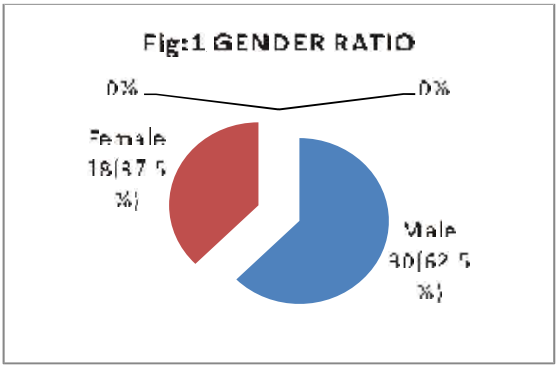

Table 1: Age Distribution Among Patients

S.NO:	Age Of Patients	n	%
1	22-30 Years	8	16.66%
2	31-40 years	10	20.84%
3	41-55 years	20	41.66%
4	56-62 years	10	20.84%
Total	22-62 years	48	100%

Table 2: Frequency and % of complications			
S.No:	Complications	n	%
1	Postoperative pain	3	6.25%
2	Hemorrhage	4	8.33%
3	Retention of urine	2	4.16%
4	Break down of tissue seal	1	2.08%
Total		10	20.82%

DISCUSSION

It has been observed that the problem of hemorrhoid in the world is common and complicated one from treatment point of view especially in South Asian region. The treatment modalities like open and closed hemorrhoidectomy have played vital role in cure of this disease till the invention of new modalities like Laser, Diathermy, and HALL-RAR. But each procedure has its own merits and demerits. Additionally, recent invention of Legasure in the field of surgery has caused dramatic results in this connection.[7]

Gentile et al did study on legasure and concluded that it is safe, simple and has least postoperative complications like postoperative pain and bleeding. Altomere et al concluded that this modality has the shortest operative time of all procedures of hemorrhoids.[8] In a study, hemorrhage was noted in 10% patients but in our study it was in 8.3% patients. Urinary retention was noted in a study up to 10% but in our study it was 4.16%. In a study, wound breakdown was20% but in our study it was 2.08%.[9]

Legasure is the safe and effective sutureless procedure due to submucosal dissection technique and coagulation of the hemorrhoidal pedicle. The blood vessels and tissue are reduced to wafer thin seal with good hemostasis. Sutures are not required because mucosal tissue over the pedicle is sealed off with the current. By this method, external components of hemorrhoids can also be treated simultaneously. Minimal electrical energy is required for this entire function of legasure. As it is easy to use and there is less postoperative pain and least other complication, this procedure can be performed as day care procedure.[10]

In this procedure, the sub mucosal dissection avoids inadvertent anal sphincter injury. It also reduces the use of intravenous analgesia postoperatively owing to minimal collateral thermal spread and absence of sutures. Pain in first 24 hours is most important as it can precipitate urinary retention and constipation. But in our study, no any case of constipation was seen postoperatively.[11]

Hospital stay after conventional hemorroidectomy is prolonged especially when patient develops postoperative pain and bleeding. But in our study, there was minimal hospital stay. Only 6.25% patients who complained of post operative pain stayed for 2 days only. 8.3% patients with bleeding also stayed for 2 days. All remaining patients were discharged as day care patient. In a study, it is concluded that hospital stay prolonged from 2 days to 5 days but in our study, it was short.[12,13]

CONCLUSION:- To sum up, it is concluded that legasure is the best procedure of all as it is suture less, simple, safe, effective and day care procedure as compared to other procedures.

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