

**Research Article****A Prospective comparative study of Lichtenstein tension free hernioplasty under local Anesthesia versus spinal Anesthesia**Dr. Ashok Kumar<sup>1\*</sup>, Dr. Sitaram Gothwal<sup>2</sup>, Dr. Sanjay Sharma<sup>3</sup>, Dr. Sunil Dhaka<sup>4</sup><sup>1</sup>Asst. professor, Surgery, S.P. Medical College, Bikaner, Rajasthan, India<sup>2</sup>Professor, Surgery, S.P. Medical College, Bikaner, Rajasthan, India<sup>3</sup>Asst. professor, S.P. Medical College, Bikaner, Rajasthan, India<sup>4</sup>PG Student, Surgery, S.P. Medical College, Bikaner, Rajasthan, India**\*Corresponding author**

Dr Ashok Kumar

Email: [drashokrajil@yahoo.co.in](mailto:drashokrajil@yahoo.co.in)

**Abstract:** Today inguinal hernia repair, using any technique is considered under day care surgery where local anaesthesia can be superior to regional or general anaesthesia in terms of patient's co-operation on Table, assessment of quality of herniorrhaphy /hernioplasty done, time save in surgery and to the delight of the surgeon watching patient walking out of operation room on his feet. The comparative study of Lichtenstein tension free hernioplasty under local anaesthesia versus spinal anaesthesia was conducted in the department of general surgery at PBM Hospital, Bikaner in order to compare feasibility of infiltration anaesthesia, cost of anaesthesia, time saved in surgery, patient's co-operation on table assessment of hernioplasty by asking patient's to cough, immediate postoperative pain and postural stability.

**Keywords:** inguinal, hernia, Lichtenstein, local, spinal, herniorrhaphy, hernioplasty, cost effectiveness, regional anaesthesia

**INTRODUCTION**

Hernia is a protusion of a viscus or part of a viscus through an abnormal opening in the walls of its containing cavity. Hernia repair is one of the most common procedure which is done by General Surgeon worldwide [1]. Italian Surgeon E. Bassini (1884) contributed most of the repair of inguinal hernia and he is called the "father of modern herniorrhaphy" [2].

Today inguinal hernia repair using any technique is considered under day care surgery where local anaesthesia can be superior to regional or general anaesthesia in terms of patient co-operation on table assessment of quality of herniorrhaphy/hernioplasty done. Time saved in surgery and to delight of the surgoen watching patient walking out of operation room on his feet.

**MATERIALS AND METHODS**

The study was undertaken to evaluate and assess workability of local anaesthesia for inguinal hernia repair in our circumstances.

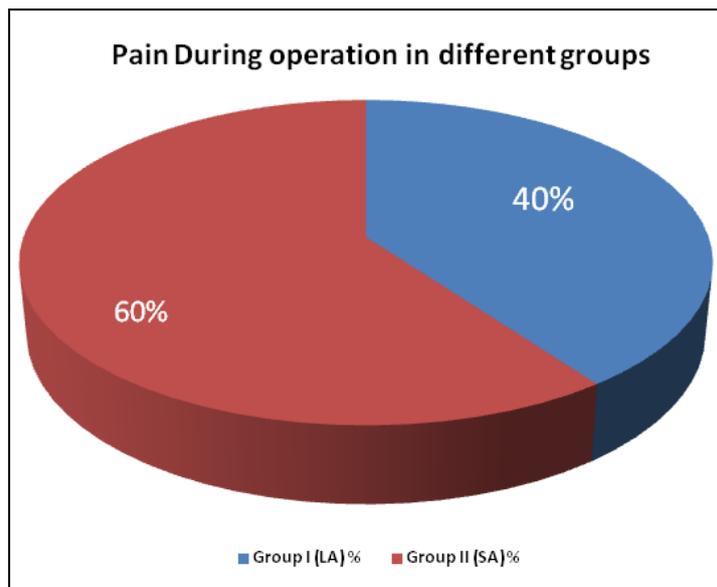
Between May 2010 to Jan 2011, 50 patients who underwent Lichtenstein tension free hernia repair with prolene mesh were included in our study. Patients were randomly divided in to two groups of 25 each, one group with hernia repair done under local anaesthesia and second group hernia repair done under spinal anaesthesia.

**RESULTS**

Majority of patients undervent Lichtenstein mesh repair were beyond sixty years. Average operative time taken in hernia repair was 39.84 minutes and 56.36 minutes in local and spinal anaesthesia respectively. Post operative complecation rate was 12% in spinal anaesthesia include hesitancy and retention of urine and 24% include headache comparing to no complication in local anaesthesia group. 8 patients in local anaesthesia group were associated medical patient illness like HT, asthma, DM bronchitis and COPD patient .statistical about anaesthesia, drugs and management of complications is <400 Rs. in local anaesthesia group and 1000 Rs. in of spinal anaesthesia group.

**Table-1: Intra Operative Pain Perception in different group**

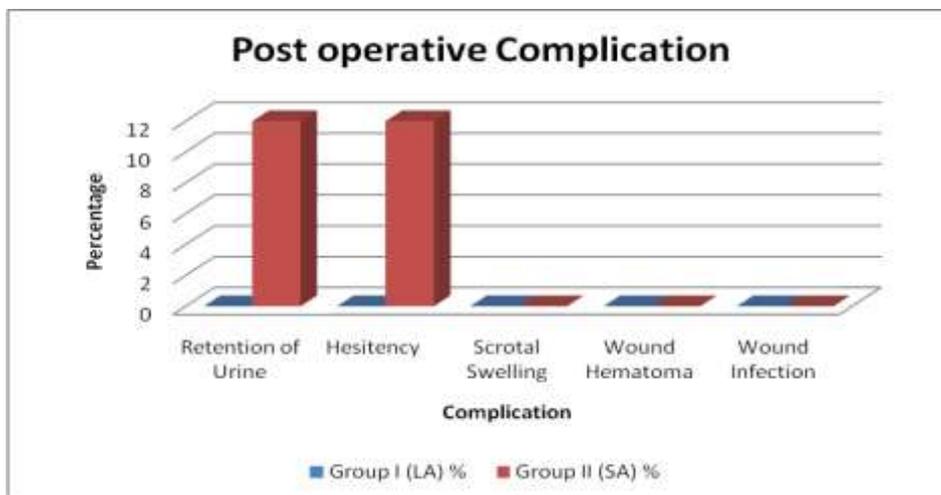
Response	Group I (LA)		Group II (SA)	
	No.	%	No.	%
Pain During operation	2	8	3	12



**Fig-1: Diagrammatic representation Intra Operative Pain Perception in different group**

**Table-2: Post operative complications**

Complication	Group I (LA)		Group II (SA)		Total	
	No.	%	No.	%	No.	%
Retention of Urine	0	0	3	12	3	6
Hesitency	0	0	3	12	3	6
Scrotal Swelling	0	0	0	0	0	0
Wound Hematoma	0	0	0	0	0	0
Wound Infection	0	0	0	0	0	0



**Fig-2: Post operative complications**

**DISCUSSION**

Hernia is a protrusion of a viscus or part of a viscus through an abnormal opening in the walls of its containing cavity. The earliest records of inguinal hernia dates back to approximately 1500 BC. The term hernia derives from the greek word meaning an offshoot, a budding or bulge. The latin word hernia means a rupture or tear.

Although a hernia can occur at various sites in the body, these most commonly involve the abdominal

wall, particularly the inguinal region. abdominal wall hernias occur only at sites where the aponeurosis and fascia are not covered by striated muscle.[1]

Italian surgeon E.bassini (1884) contributed most of the repair of inguinal hernia and he is called the “father of moderm herniorraphy”. [2] Shouldice(1953) described multilayer repair of hernia to reduce the incidence of recurrence after hernia operation.[4]

This repair was done by using monofilament suturing or damping material like polypropylene/wire/polyamide/silk/nylon/etc. however this type of approximation of tissue under tension accounts for an unacceptable failure of hernia repair and the rate of recurrence was high. A hernia repair done with undue tension is doomed to failure, not only does the inherent weakness of the tissue lead to failure, the ischaemic necrosis of the tissue by the sutures holding them under tension is the major culprit.[5]

Herniorrhaphy/hernioplasty under local anaesthesia has proved to be safe and easy to perform. It eliminates the common complications often encountered after general or regional (Spinal, epidural) anaesthesia, and reduces the cost to about 20 percent of that incurred by hospitalized patients who undergo the operation with general or regional (Spinal, epidural) anaesthesia.[6]

In the modern era of repair various techniques are used like pure tissue repair, dam repair, mesh repair and laproscopic hernia repair. nowadays hernia repair is becoming "tensionless & sutureless" operation. Lichtenstein tension free inguinal hernia repair is one of the most common procedure which is used by general surgeons for hernia repair which takes in to account to strengthen the posterior wall by mesh, without disturbing the anatomy of inguinal canal.

Now a day's Lichtenstein tension free inguinal hernia repair is done by general surgeon for hernia repair is considered under day care surgery where local anaesthesia can be superior to regional or general anaesthesia in terms of patient cooperation on table, feasibility of administration, adequacy of

anaesthesia cost effectiveness and very low rate of complication.

## CONCLUSION

Local anaesthesia was applied to all type of clinical reducible hernia is a safe and feasible means of anaesthesia in patients with concurrent medical illness. All patient operated under local anaesthesia were discharged within 24 hours. Intraoperative and postoperative complications rate were very low and more cost effective than spinal anaesthesia.

## References

1. Hernia. Available from <http://www.nlm.nih.gov/medlineplus/ency/article/000960.htm>
2. Bassini E; Nuovo metodo per la cura radical dellernia unguinale. Atti cong. assoc Med ital, 1887; 2; 179-182.
3. Lichtenstein IL, Shulman AG, Amid PK et al. The tension free hernioplasty. Am J Surgery 1989; 157;188-193.
4. Byrnes shouldice E; The Shouldice repair for groin hernia; surg clin N Am, 2003; 83:1163-1187.
5. Beeraka C, Surapaneni S, Raavi R; Repair of a Primary inguinal hernia by Using a polypropylen: A tension free Lichtenstein Repair in Rural Andra Pradesh; Journal of clinical and Diagnostic Research. 2012; 6(2):261-263.
6. Frederik P, Billy BK, Lund C, Henrik Kehlet et.al. Postural Stability. After Inguinal herniorrhaphy Under Local Infiltration Anesthesia, Eur J Surg, 2001; 167:449-452.