

Hospital Stay in Laparoscopic Nephrectomy -An Initial Experience in IGMC, Shimla

¹Dr.Bhartendu Nagesh, Department of surgery, IGMC, Shimla

²Dr.D.K Verma, Professor, Department of surgery, IGMC, Shimla

³Dr.R S Jhobta, Professor, Department of surgery, IGMC, Shimla

⁴Dr.Sanjiv Sharma, Professor, Department of Radiodiagnosis, IGMC, Shimla

⁵Dr. Mehar Chand, Department of surgery, IGMC, Shimla

Corresponding Author: Dr. Mehar Chand, Department of surgery, IGMC, Shimla

Citation this Article: Dr.Bhartendu Nagesh, Dr.D.K Verma, Dr.R S Jhobta, Dr.Sanjiv Sharma, Dr. Mehar Chand, “Hospital Stay in Laparoscopic Nephrectomy -An Initial Experience in IGMC, Shimla”, IJMSIR- March - 2021, Vol – 6, Issue - 2, P. No. 78 – 81.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Background: Laparoscopic nephrectomy has been established as the standard of care for the management of benign non-functioning kidneys and has gained worldwide popularity over the past decade.

Methods: This study was conducted in the Department of General surgery, Indira Gandhi medical college, Shimla on 20 selected patients of benign non functional kidney admitted for elective Laparoscopic Nephrectomy between July 2018 to June 2019

Results: Maximum patient in lap group were discharged within 5 days with a mean hospital stay in lap group 7.8 ± 7.7 days and inpatient converted to open it was 9.5 ± 4.2 days which is statistically significant with P-value of 0.0

Conclusion: It was concluded that early return to normal activity is due to less post-operative pain, early ambulation, a shorter period of hospital stay and a small incision.

Keywords: Laparoscopy, Nephrectomy, Hospital stay

Introduction

A laparoscopic nephrectomy is performed under a general anaesthetic. Three or four small abdominal incisions are made in the abdomen to provide access for surgical instruments that are used to detach the kidney and to ligate the blood vessels. The intact kidney is enclosed in a bag and removed through an incision or it may be placed in an impermeable sack, morcellated and removed through one of the port sites.¹

Hand-assisted laparoscopic nephrectomy allows the surgeon to place one hand in the abdomen while maintaining the pneumoperitoneum required for laparoscopy. A small incision is made which is just large enough for the surgeon’s hand and an airtight ‘sleeve’ device is used to form a seal around the incision. At the end of the procedure, the intact kidney can be removed through the same incision.^{2,3}

Material and method

Study period: This study was conducted in the Department of General surgery, Indira Gandhi medical college, Shimla on 20 selected patients of benign non

functional kidney admitted for elective Laparoscopic Nephrectomy between July 2018 to June 2019

Study design: observational

Method of Collection of Data

Patients diagnosed with non functioning kidney were assessed clinically, hematologically & radiologically and were taken up for laparoscopic nephrectomy. Various parameters were studied intra operatively and findings were reported as per performa attached.

The following patients were included in the study

Patient of all age groups and of both sex with nonfunctioning kidney due to

- Stone disease
- PUJ narrowing
- Renal tuberculosis
- Chronic pyelonephritis

The Patients with following conditions were excluded

- A prior abdominal surgery with the formation of intra-abdominal adhesions

Table 1: Duration of hospital stay in a different group in days

Days of Hospital stay	LAP		LAP Converted To Open	
	n	%	n	%
3-4	3	25.0	0	0
5-6	6	50.0	3	37.5
7-8	1	8.5	2	25.0
>8	2	16.5	3	37.5

11 (55 %) patients returned to normal activity in less than 30 days which included only successful laparoscopic nephrectomy patient and 2 patient returned to normal activity in 40 days and there were 7 (35 %) who returned to normal activity in 50 days

- Morbid obesity
- Uncorrected coagulopathy
- Untreated infection and hypovolemic shock
- Severe cardiac or pulmonary disease
- With Pregnancy
- With Malignancy
- With Uncontrolled diabetes and uncontrolled hypertension

Results

9 (75 %) of the patient in the lap group were discharged within 6 days of surgery and 3 patients. in lap converted to open were discharges within 6 days and Maximum patient in lap group were discharged within 5 days with a mean hospital stay in lap group 7.8 ± 7.7 days and inpatient converted to open it was 9.5 ± 4.2 days which is statistically significant with P-value of 0.0

which mainly included laparoscopic converted to open patients. Return to normal activity in laparoscopic nephrectomy was 26 ± 6.93 days and in lap converted to open it was 40 ± 6.3 days which is statically significant with a p-value of 0.0072

Table 2: Return to normal activity after surgery in days in a different group

Return to normal activity	20-30	31-40	41-50
Lap group	11	1	1
Lap to Open	0	1	6

Discussion

The duration of hospital stays in the present study was, ranged from 4 days to 30 days including converted patients. Mean hospital stay in a successful nephrectomy was patient with laparoscopic nephrectomy was 7.8±7.7 days and in lap completed by open, it was 9.5±4.2. Zaidi Z et al⁴. observed mean hospital stay of 3.1 ± 2.39 days, and in lap converted to open is 9.5±4.2 Desai et al.⁵ observed the hospital stay of 4 days. Parra RO at el.⁶ observed Hospital stay ranging from 2 to 6 days (mean 3.5) which was significantly shorter than for those undergoing a flank procedure, 3 to 16 days (mean 8). Shekarriz B et al.⁷ observed In the inflammatory and benign groups mean postoperative hospital stay was 4.1 ± 2 and 3 ± 1 day respectively, Phillips J et al .⁸ observed The median hospital stay of successful cases was 5 days. The median hospital stay of four days was observed by Wilson BG at el.⁹ In this study median hospital stay is 5 days in successful lap nephrectomy. Hospital is more than the literature because of postoperative complication in two patient causing an increase in an overall hospital stay and we took one extra day in the laparoscopic group for discharging from hospital, as patients were from far-flung area and this surgery was initial experience for us, however, median stay is within range of literature.

In the present study, 11 (55 %) patients returned to normal activity in less than 30 days which included only successful laparoscopic nephrectomy patient and 2 patient returned to normal activity in 40 days and there were 7 (35 %) who returned to normal activity in 50

days which mainly included laparoscopic converted to open patients return to normal activity in laparoscopic nephrectomy was 26± 6.93 days and in lap converted to open it was 40 ± 6.3 days which is statically significant with P-value of 0.0072, Wilson BG at el.⁹ observed a return to normal activity 4 Parra RO at el¹⁰. return to regular preoperative activities 10 to 21 days (mean 16) for patients undergoing laparoscopic nephrectomy. Rassweiler et al¹¹ observed convalescence period 21 days

Conclusion

It was concluded that early return to normal activity is due to less post-operative pain, early ambulation, a shorter period of hospital stay and a small incision.

References

1. Ljungberg B, Hanbury DC, Kuczyk MA, et al. Guidelines on renal cell carcinoma. Available via http://www.uroweb.nl/files/uploaded_files/guidelines/08%20Renal%20Cell%20Carcinoma.pdf.
2. Ono Y, Kinukawa T, Hattori R, Gotoh M, Kamihira O, Ohshima S. The long-term outcome of laparoscopic radical nephrectomy for small renal cell carcinoma. J Urol 2001;165:1867–70
3. Hemal AK, Wadhwa SN, Kumar M et al: Transperitoneal and retroperitoneal laparoscopic nephrectomy for giant hydronephrosis. J Urol 162:35-39, 1999
4. Zaidi Z, Samad L, Aquil S. Laparoscopic nephrectomy: technique and outcome. J Pak Med Assoc. 2007;57:355–9

5. Desai PJ, Castle EP, Daley SM. Bilateral laparoscopic nephrectomy for significantly enlarged polycystic kidneys: a technique to optimize outcome in the largest of specimens. *BJU Int.* 2008;101:1019–1023.
6. Parra R, Perez M, Boullier J, Cummings J. Comparison Between Standard Flank Versus Laparoscopic Nephrectomy for Benign Renal Disease. *The Journal of Urology.* 1995;1171-1173.
7. Seshadri PA, Poulin EC, Pace D, Schlachta CM, Cadeddu MO, Mamazza, J Transperitoneal laparoscopic nephrectomy for giant polycystic kidneys: a case–control study. *Urology* 2001;58:23-27
8. Phillips J, Catto JW, Lavin V, Doyle D, Smith DJ, Hastie KJ, Oakley NE. *Postgrad Med J.* 2005 Sep;81(959):599-603.
9. Wilson BG, Deans GT, Kelly J, McCrory D. Laparoscopic nephrectomy: initial experience and cost implications. *Br J Urol.* 1995;75:276–80
10. Parra R, Perez M, Boullier J, Cummings J. Comparison Between Standard Flank Versus Laparoscopic Nephrectomy for Benign Renal Disease. *The Journal of Urology.* 1995;1171-1173.
11. Rassweiler, Frede T, Henkel TO, et al: Nephrectomy. A comparative study between the transperitoneal and retroperitoneal laparoscopic versus the open approach. *Eur Urol* 33:489—496, 1998