

ORIGINAL ARTICLE

Complications Risk with Ivanissevich's Technique for Varicocele Treatment 2 Years' Experience in Sir Ganga Ram Hospital, Lahore

¹ABSAR NAZIR, ²AAMER ZAMAN KHAN, ³NAEEM GHAFAR, ⁴WASEEM MUHAMMAD, ⁵SAIMA BATOOL

¹Assistant Professor Surgical Unit I FJMU/SGRH, ²Professor/Head of Department Surgery Unit I, Pro-Vice Chancellor FJMU/SGRH, ³Assistant Professor Surgical Unit I FJMU/SGRH, ⁴Post Graduate Resident FJMU/SGRH, Lahore. ⁵Consultant Histopathology.

Correspondence:- Dr. Absar Nazir, Assistant Professor Surgical Unit I FJMU/SGRH, Lahore.

Email Address:- Abbsar71@hotmail.com.

ABSTRACT

Background: Ivanissevich's procedure is commonly practiced. However it was observed that the complication rate seen in this procedure was quite high then other techniques like Paloma or with laparoscopy..

Objective: We conducted this study to high light complication rate observed in Ivanissevich's Procedure and discourage this procedure for varicocele treatment.

Methodology: We conducted this study in surgical department of SIR GANGA RAM HOSPITAL LAHORE and 120 patients were included in it, over a period of two years from march 2014 to feb 2016. All the patients selected were having Left Sided Varicocele and we follow up these patients over the period of 6 months. C

Results: Over a period of two years, 102 patients were operated (Ivanissevich's procedure) for grade II Varicocele .there age ranges between 13 to 45 years with mean of 25.5 years. 13 patients (13%) developed scrotal edema which settled within ten days, post-operative hematomas observed in 6 patients(6%) and recurrence was the most common complication which was seen in 17 patients(17%). only one patient had testicular atrophy.

Conclusion: Ivanissevich's procedure has considerable complications then other available procedures like Paloma and Larorscopic Varicocelectomy.

Key Words: Varicocele, Paloma, Hematoma, Hydrocele Testicular atrophy.

INTRODUCTION

Varicocele is found approximately in 10 to 15% of the male population especially in infertile population (30—45%). it is seen mostly on left side (95%) due to the difference in venous drainage of two sides¹. It can present as complication of renal cell carcinoma with renal vein involvement^{2,3}, but mainly it is idiopathic.

Varicocele fortunately regarded as one of the surgically treatable causes of male infertility. The principle in its management is basically cutting the venous continuity of the spermatic vessels. This is done surgically by following different approaches such as Low ligation i.e Ivanissevich's procedure, high ligation (Paloma's Procedure) and Laproscopic varicocelectomy.² we use 2-3cm incision in inguinal region in Low ligation (Ivanissevich's) after opening inguinal canal we dissect engaged vessels and transect them after

ligating with suture.^{4,5} but in High Ligation (Paloma) we give 2-3cm incision below and lateral to the umbilicus and testicular veins are ligated and divided retroperitoneally in Laproscopic procedure we also use retroperitoneal approach for ligating testicular vessels. Nowadays the concept of Embolization of testicular vessels also gaining popularity for the treatment of vercocele.^{6,7}

The basic aim of the study was to compare the complications rate of low ligation procedure in our hospital to worldwide available data.

MATERIALS AND METHODS

We conducted this study in surgical department of SIR GANGA RAM HOSPITAL LAHORE and 120 patients were selected, during the period of two years from March 2014 to February 2016. All the patients were admitted through out Patient department of the hospital and there baseline

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investigations were performed to rule out any other disease like carcinoma Kidneys etc Ultrasound Abdomen and Pelvis and Ultrasound Scrotum was included in the screening. All the patients selected were having left sided varicocele and operation was performed by consultant in charge to eliminate operative bias. Complications in patients were followed for 6 months period. All the patients were followed up weakly for five weeks and afterword monthly for 5 months. . Results were analyzed using SPSS 17.

RESULTS

Over a period of two years, 102 patients were operated (Ivanissevich's procedure) for grade II Varicocele .there age ranges between 13 to 45 years with mean of 25.5 years. Most of the patients were in twenties i.e. 51.7% (52 patients) while 28.4% (29 patients) and 21.8% (22 patients) were in 2th and 4nd decades respectively. (Table I)

All the patients had grade II left sided Varicocele. Postoperative complications were noted and it was found that13patients(13%) developed scrotal edema which settled within ten days, post operative hematomas observed in 6 patients(6%) and recurrence was the most common complication which was seen in 17 patients(17%).only one patient had testicular atrophy. (Table 2)

Table 1. Age Distribution

AGE (in years)	Number	Percentage
<10	-	-
21-30	52	51.7%
31-40	22	21.8%
41-50	-	-
11-20	28	27.5%

Table 2: Postoperative Complications

Complications	Number	Percentage
Hematoma/Hydrocele	6	5.99%
Recurrence	17	16.99%
Edema	13	12.99%
Testicular Atrophy	1	1%

DISCUSSION

Varicocele is found in 10% of individuals most commonly in younger age groups. Most commonly left side is affected. Tall, thin individuals are more prone. Reported incidence of left sided varicocele is more than 85%, and right sided present in less than 1% while 14% present bilaterally.⁶

Varicocele presents at early adolescence, rarely detected individuals younger than 10 years which gradually increases between 10-15 years of age and ultimately 15% develop varicocele at this age. In this study mean age was 25.5 years. Most of the patients were in twenties (51.7%) and 21.8% were in there 4th decade while remaining 27.5%were in there 2nd decade of life. Patients seek medical advice late due to lack of knowledge about disease.⁷

The cause of Varicocele is still not known. There are many factors which influence the venous dilatation like absent valve, more length of spermatic veins which causes increased venous pressure , draining of these vessels at right angle in renal vein, as iliac veins has more venous pressure than renal veins so they transmit pressure to the pampiniform veins by vein of ductus deferens as they join internal iliac vein, if a middle age man develop recently verecocele then one should have high suspicion of renal cell carcinoma.⁸ Varicocele is divided into three grade. Grade- I: Palpable with the help of Valsalvamanoeuvre
 Grade-II: Palpable without Valsalvamanoeuvre.
 Grade III: Varicocele is visible without palpation.

Varicocele can easly be diagnosed clinically.⁹ when we have suspicion about diagnosis many investigation are useful like doppler ultrasonography,spermatic venography , contact scrotal thermography and blood pooling radioisotope angiography. To assess testis size ultrasound is helpful.

Macleod in his study observed decreased sperm motility in 90% and in 65%of the patients have decreased sperm count.The treatment of verecocele is surgery and its indications are symptomatic varicocele(palpable or painful) , abnormal sperm counts, decrease in size of testes on affected side and Cosmoses.

When we talked about surgery there are many different technique to tackle this problem, the principle for all procedure is the same in which we ligate the testicular veins and save other structure like testicular artery and vas deference. These procedures are divided in two groups.^{10,11} One is Low ligation (Ivanessivich) and other is High Ligation in which we have Paloma and laproscopic..Some also advocate transcutaneous balloon embolization. Every technique has its own merits and demerits.^{12,13} Among above mentioned procedures Paloma and laproscopic techniques

are popular nowadays because they are easy to perform and has less complication rate.^{15,16,17}

The result of our study is comparable with the data of other studies .if we talked about high complications rate In low ligation procedure are comparable with the result of studies conducted by Bechara CF , Weakley SM, Kougias P⁸ and Shamsa A, Mohammadi L, Abolbashari M, et al.⁹ in our study the recurrence rate is 17% which is near to the result of Al-Kandari AM, Shabaan H, Ibrahim HM, et al¹⁴ study in which recurrence rate was16% and it is also comparable with the recurrence rate of 11% mentioned by FicarraV ,Cerruto MA, Liguori G, et al.¹⁵ and other complications rate like hydrocele and scrotal edema are also comparable with many studies conducted by different people in different places.^{16,17} in our study the patients presented with hydrocele had mean age of 25.5 which is supported by international data in which it is mentioned that verecocele is most common in 3rd decade .our study , the mean age of the patients was 26.6 years. Also as supported by the data available by other research done internationally the disease was most prevalent in third decade of life (52.7%).¹⁵ Hence our results were comparable to available international data.

CONCLUSION

According to our study (Paloma) and laproscopic varicoectomy(high ligation) procedures are better than Low ligation (Ivanessivich) procedure which has high complication rate .

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