

COMPARISON OF PAIN DEGREES USING VISUAL ANALOG SCALE (VAS) IN VARICOCELE PATIENT AFTER MICROSURGERY VARICOLECTOMY COMPARED TO NON MICROSURGERY VARICOLECTOMY PROCEDURE AT HASAN SADIKIN HOSPITAL BANDUNG IN 2014 – 2015

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ABSTRACT

Objective: This study aimed to report the demographic, presentation, and compare the pain degree after varicocelelectomy procedure at Hasan Sadikin Hospital Bandung from 2014 until 2015. **Material & Methods:** We study the demographic, presentation, and outcome of varicocelelectomy to pain degree in patient who came to Hasan Sadikin Hospital Bandung from 2014 until 2015. **Results:** The mean age of patients was 29.43 years old. Patient consist of 2 (2.89%) patients with varicocele grade I, 32 (46.37%) patients with varicocele grade II, 33 (47.82%) patients with varicocele grade III, and 2 (2.89%) with varicocele grade IV. We found incidences of varicocele at the right side in 1 (1.44%) patient, at the left side in 34 (49.27%) patients, and at bilateral in 34 (49.27%) patients. Thirty eight patients (55%) patients underwent non-microsurgical varicocelelectomy and 31 (45%) patients underwent microsurgical varicocelelectomy. 22 (57.89%) patients still had pain after non microsurgical varicocelelectomy and 30 (96.77%) patients had no pain after microsurgical varicocelelectomy. Only one (4.34%) patient experienced scrotal pain after microsurgical varicocelelectomy but the pain relieves after 6 months postoperative. **Conclusion:** Microsurgical varicocelelectomy is an effective treatment of varicocele. Our comparative study among open surgical and microsurgical varicocelelectomy has confirmed microsurgical varicocelelectomy has a better postoperative outcome.

Keywords: Varicocele, pain, varicocelelectomy, microsurgical varicocelelectomy.

ABSTRAK

Tujuan: Tujuan dari penelitian ini adalah untuk melaporkan demografi, presentasi, dan membandingkan tingkat rasa sakit setelah prosedur varikokelektomi di Rumah Sakit Hasan Sadikin Bandung pada tahun 2014 hingga 2015. **Bahan & Cara:** Kami mempelajari demografi, presentasi, dan hasil varikokelektomi ke tingkat nyeri di pasien yang datang ke Rumah Sakit Hasan Sadikin Bandung pada tahun 2014 hingga 2015. **Hasil:** Usia rerata pasien adalah 29.43 tahun. Pasien terdiri dari 2 (2.89%) pasien dengan varikokel grade I, 32 (46.37%) pasien dengan varikokel grade II, 33 (47.82%) pasien dengan varikokel grade III, dan 2 (2.89%) dengan varikokel grade IV. Kami menemukan insiden varikokel di sisi kanan pada 1 (1.44%) pasien, di sisi kiri pada 34 (49.27%) pasien, dan pada bilateral pada 34 (49.27%) pasien. Tiga puluh delapan pasien (55%) pasien menjalani varikokelektomi non-mikro dan 31 (45%) pasien menjalani varikokelektomi mikro. 22 (57.89%) pasien masih mengalami sakit setelah varikokelektomi non-mikro dan 30 (96.77%) pasien tidak memiliki rasa sakit setelah varikokelektomi mikro. Hanya satu (4.34%) pasien yang mengalami sakit skrotum setelah varikokelektomi mikro tetapi sakit berkurang setelah 6 bulan pasca operasi. **Simpulan:** Varikokelektomi bedah mikro adalah pengobatan varikokel yang efektif. Penelitian komparatif kami antara bedah terbuka dan varikokelektomi bedah mikro telah mengkonfirmasi bahwa varikokelektomi bedah mikro memiliki hasil pasca operasi yang lebih baik.

Kata Kunci: Varikokel, sakit, varikokelektomi, varikokelektomi bedah mikro.

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INTRODUCTION

Varicocele is an abnormal dilatation of the internal spermatic veins within the pampiniform

plexus of the spermatic cord.^{1,2} It present in 12%-15% of the normal male population^{3,4} The most common complaint is dull or usually described as "scrotal heaviness" and throbbing pain which

worsen with exertion and strain.⁴⁻⁷ It also accounts for 2% to 14% pain in the setting of chronic scrotal pain.⁴ Due to its painfulness has made the pain as one of the major indication for surgery.^{2,7,8} Another indication for surgery related to infertility.^{2,7} This is because varicocele has found in approximately 25% of men with infertility.³ Varicocele is the most commonly treatable cause of impaired fertility among men.^{6,8}

Although varicocele is clearly a risk for subfertility, the impact of varicocele treatment in terms of increased pregnancy rates in infertile couples are less clear and remain controversial issue.³ Data on this particular matter showed that about 85% of men with varicocele in population-based studies have fathered children.¹

Several approaches for varicocele treatment are available ranging from conservative to invasive procedure. Conservative management which may be offered including limitation of physical activities, scrotal elevation and treatment with non-steroidal anti-inflammatory analgesics. However, these often do not contribute to pain management.^{3,9}

Invasive procedure is still the ultimate choice for patients with painful varicocele who show no improvement after conservative management.^{3,9} Still, the ideal method of varicocelectomy is still a matter of controversy. Several methods have been used, including open surgical ligation of the spermatic vein, retrograde or antegrade sclerotherapy, laparoscopic, and inguinal or subinguinal microsurgical varicocelectomy. Each technique has its own issue.³

Among variousity of invasive methods for varicocele there are three common techniques have been used widely. Those are conventional (open surgery and laparoscopy) and microsurgical technique.³ Many researches noted that the microsurgical either inguinal or subinguinal varicocelectomy has proved a great success, with minimal complication rates.² Whatever the method of choice but the goal is to achieve pain relief after the procedure.

OBJECTIVE

This study aimed to report the demographic, presentation, and compare the pain degree after varicocelectomy procedure at Hasan Sadikin Hospital Bandung from 2014 until 2015.

MATERIAL & METHODS

This is a retrospective study of 69 patients who underwent varicocelectomy at Hasan Sadikin

Hospital Bandung in 2014 until 2015. Data was obtained from our Medical Records Office. The grade of varicocele, location, and Visual Analogue Scale (VAS) before and 3 months after varicocelectomy procedure were reviewed and discussed.

RESULTS

From 69 patients, the age of our sample ranging from 14 until 59 years old with mean age 29,43 years old and median age 29 years old, detailed number of varicocele patient according to its grade and location are presented in table 1. Patient consist of 2 (2.89%) patients with varicocele grade I, 32 (46.37 %) patients with varicocele grade II, 33 (47.82%) patients with varicocele grade III, and 2 (2.89 %) with varicocele grade IV. From 69 patients we found incidences of right side varicocele in 1 (1.44%) patient, left side varicocele in 34 (49.27%) patients, and bilateral varicocele in 34 (49.27%) patients.

Table 1. Demographics of the patient.

	Number of People	Total
Varicocele		
Grade		
I	2	
II	32	
III	33	
IV	2	69
Varicocele		
Location		
Right side	1	
Left side	34	
Bilateral	34	69

We categorized our patient according to their varicocelectomy procedure into non microsurgery and microsurgery along with their VAS before and 3 months after varicocelectomy procedure.

Thirty eight patients (55%) patients underwent non microsurgical varicocelectomy and 31 (45%) patients underwent microsurgical varicocelectomy. 22 (57.89%) patients still had pain after non microsurgical varicocelectomy and 30 (96.77%) patients had no pain after microsurgical varicocelectomy. Only one (4.34%) patient experienced scrotal pain after microsurgical varicocelectomy but the pain relieves after 6 months postoperative.

Table 2. VAS before and after surgical procedures.

Procedure	VAS before procedure		VAS change in 3 months after procedure		Complain at 3 months post procedure
	Scale	Number of patient	Scale	Number of patient	
Non microsurgery	0	11	0	7	1 patient report still experienced scrotal swelling
			1	4	
			2	-	
			3	-	
	1	18	0	6	
			1	10	
			2	2	
			3	-	
	2	5	0	2	
			1	3	
			2	-	
			3	-	
	3	4	0	1	
			1	1	
			2	2	
			3	-	
Microsurgery	0	11	0	20	1 patient report pain, but relieves after 6 months postoperative
			1	1	
			2	-	
			3	-	
	1	19	0	9	
			1	-	
			2	-	
			3	-	
	2	1	0	1	
			1	-	
			2	-	
			3	-	
	3	-	0	-	
			1	-	
			2	-	
			3	-	

DISCUSSION

The mean age of our patients was 29.43 years old even though varicocele is considered as congenital lesion. It rarely diagnosed before the age of 10. Although screening programs exist in some communities, the majority of varicoceles identified

incidentally by a primary care practitioner or due to patient complaints.¹ These also explained why most of our patient (n=58, 84.05%) were diagnosed with VAS score more than 0.

It was mentioned in research that complete resolution of scrotal pain in only 48% of the men who underwent conventional intervention. Meanwhile,

another demonstrated that 7 (88%) of their patients experienced complete resolution of pain and that 2 (22%) of them who reported partial or no improvement in pain had a varicocele recurrence after microsurgical varicocelectomy.¹⁰ Our research supported those preexisting data because 30 (96.77%) patients had no pain after microsurgical varicocelectomy and only one (4.34%) patient experienced scrotal pain after microsurgical varicocelectomy but the pain relieves after 6 months postoperative.

Treatment failure in pain resolution after non microsurgical varicocelectomy might be due to underlying pathology other than varicocele, such as epididymitis, idiopathic orchalgia, or a surgical complication (eg, hydrocele). It also has been shown that varicocele recurrence generally results from incomplete ligation of collateral venous channels and that magnification of the spermatic cord with the use of the operating microscope reduces the potential for the development of such a complication.¹⁰ However, microsurgical varicocelectomy remains a technically challenging procedure because time consuming and requires microsurgical skill.^{1,10}

CONCLUSION

Microsurgical varicocelectomy (inguinal or subinguinal) is an effective treatment of painful varicocele. Our comparative study among open surgical and microsurgical varicocelectomy has confirmed the best outcome in the microsurgical group. In order to achieve that goal as a urologist, we need to master it although it's a challenging procedure.

REFERENCES

1. Wein AJ, Kavoussi L, Novick AC, Partin AW, Peters CA, editors. Campbell-Walsh Urology. 10th ed. Philadelphia: Elsevier Inc.; 2011.
2. Yaman Ö, Özdiler E, Anafarta K, Göğüş O. Effect of microsurgical subinguinal varicocele ligation to treat pain. *Urology*. 2000; 55(1): 107-8.
3. Al-Said S, Al-Naimi A, Al-Ansari A, Younis N, Shamsodini A, A-sadiq K, et al. Varicocelectomy for Male Infertility: A Comparative Study of Open, Laparoscopic and Microsurgical Approaches. *J Urol*. 2008; 180(1): 266-70.
4. Altunoluk B, Soylemez H, Efe E, Malkoc O. Duration of preoperative scrotal pain may predict the success of microsurgical varicocelectomy. *Int Braz J Urol*. 2010; 36(1): 55-8.
5. Köse MG, Önem K, Çetinkaya M, Karada E, Arpali E. Influence of preoperative pain duration on microsurgical varicocelectomy outcomes. *Adv Urol*; 2013.
6. Kim HT, Song PH, Moon KH. Microsurgical ligation for painful varicocele: Effectiveness and predictors of pain resolution. *Yonsei Med J*. 2012; 53(1): 145-50.
7. Schlegel PN, Goldstein M. Alternate indications for varicocele repair: Non-obstructive azoospermia, pain, androgen deficiency and progressive testicular dysfunction. *Fertil Steril*. 2011; 96(6): 1288-93.
8. Al-Kandari AM, Shabaan H, Ibrahim HM, Elshebiny YH, Shokeir AA. Comparison of Outcomes of Different Varicocelectomy Techniques: Open Inguinal, Laparoscopic, and Subinguinal Microscopic Varicocelectomy: A Randomized Clinical Trial. *Urology*. 2007; 69(3): 417-20.
9. Park HJ, Lee SS, Park NC. Predictors of pain resolution after varicocelectomy for painful varicocele. *Asian J Androl*. 2011; 13(5): 754-8.
10. Chawla A, Kulkarni G, Kamal K, Zini A. Microsurgical varicocelectomy for recurrent or persistent varicoceles associated with orchalgia. *Urology*. 2005; 66(5): 1072-4.