

Appendix

Figures

Figure (5) Kruger normal sperm morphologic criteria

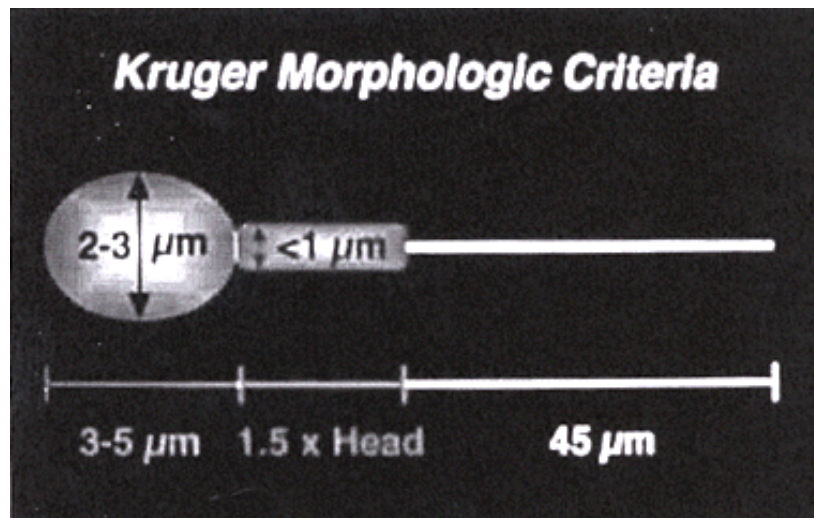


Figure (6) Testis diameters in Ultrasonography.

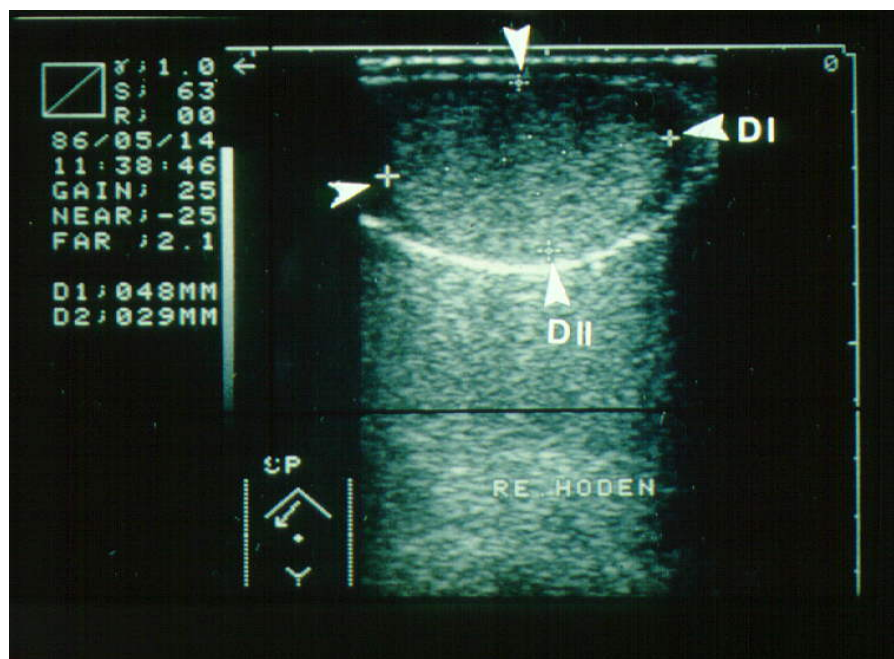


Figure (7) Doppler Ultrasonography shows Left varicocele

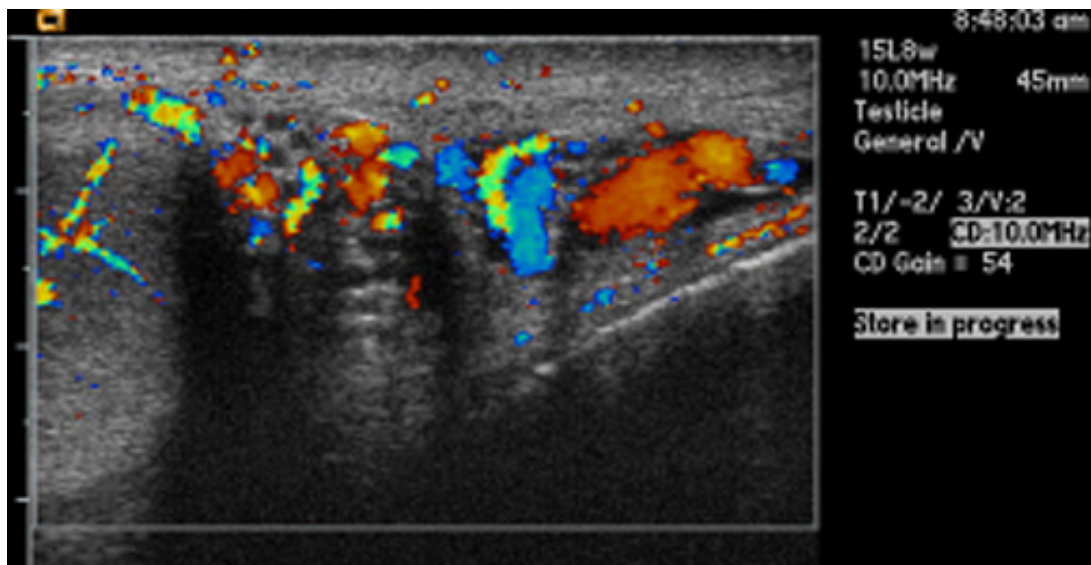


Figure (8) Doppler Ultrasonography shows Right varicocele

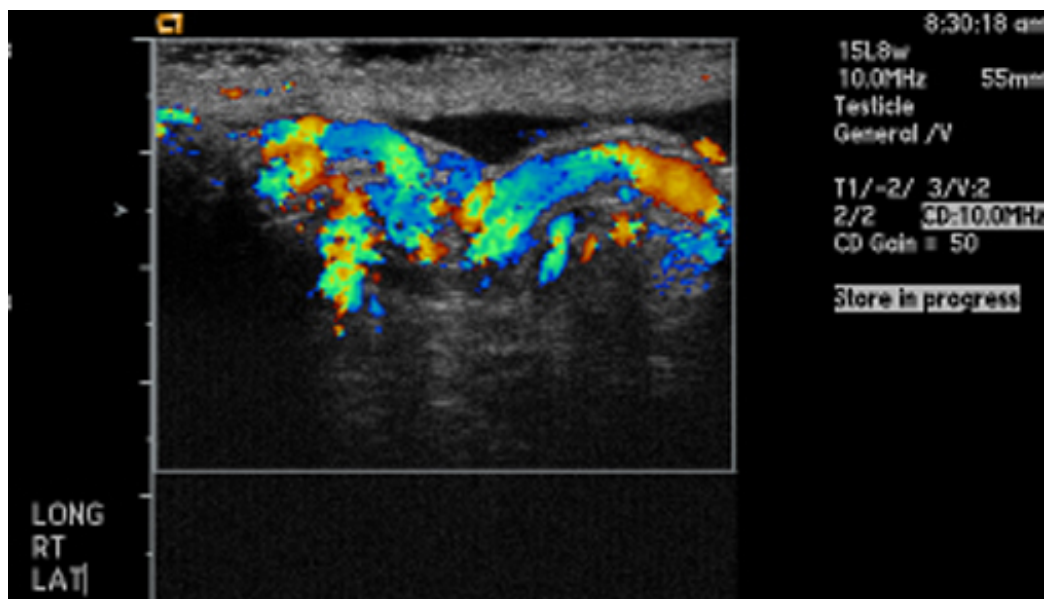


Figure (9) Pelvic CT scan shows left varicocele

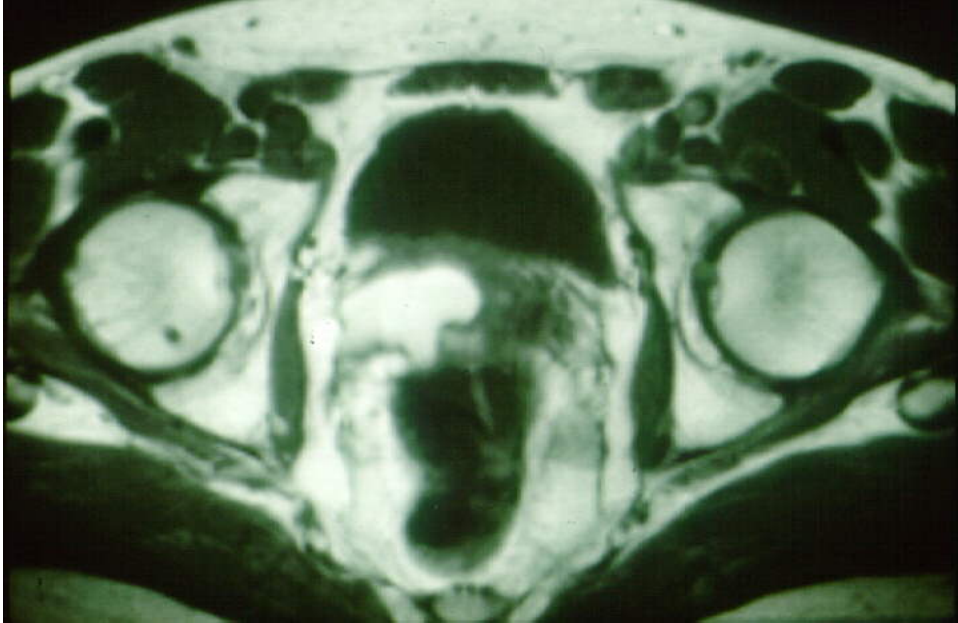


Figure (10) Venography shows left varicocele



Fig (11) The spermatic cord is isolated and suspended.

(Sub inguinal approach)



Fig (12) The external spermatic veins and Gubernacular veins are totally identified and ligated (Microscopic subinguinal approach).

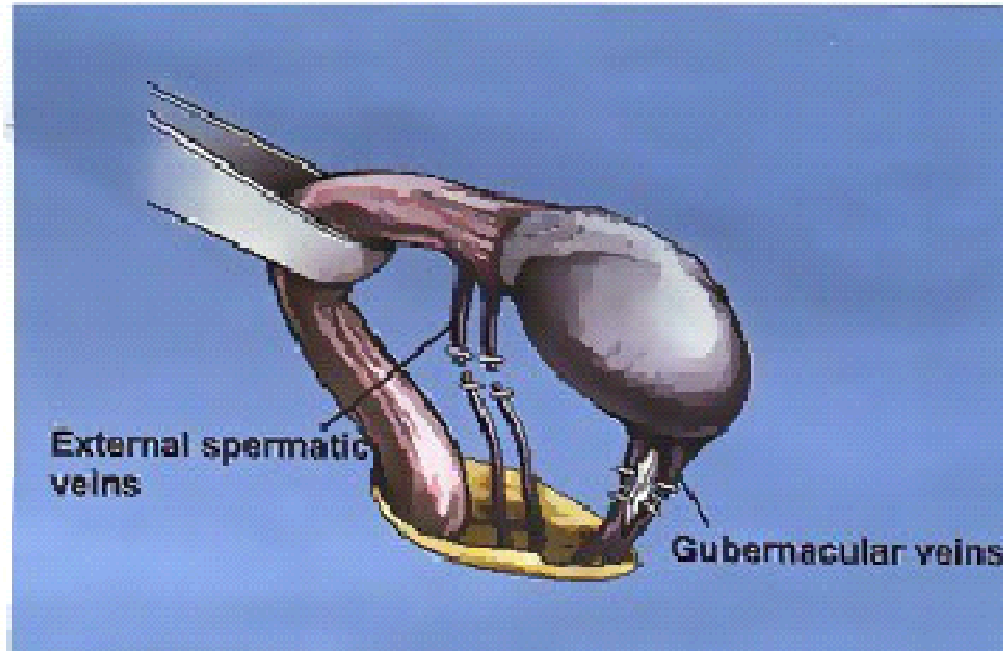


Fig (13) Microsurgical varicocelectomy allows clear identification and preservation of testicular artery.

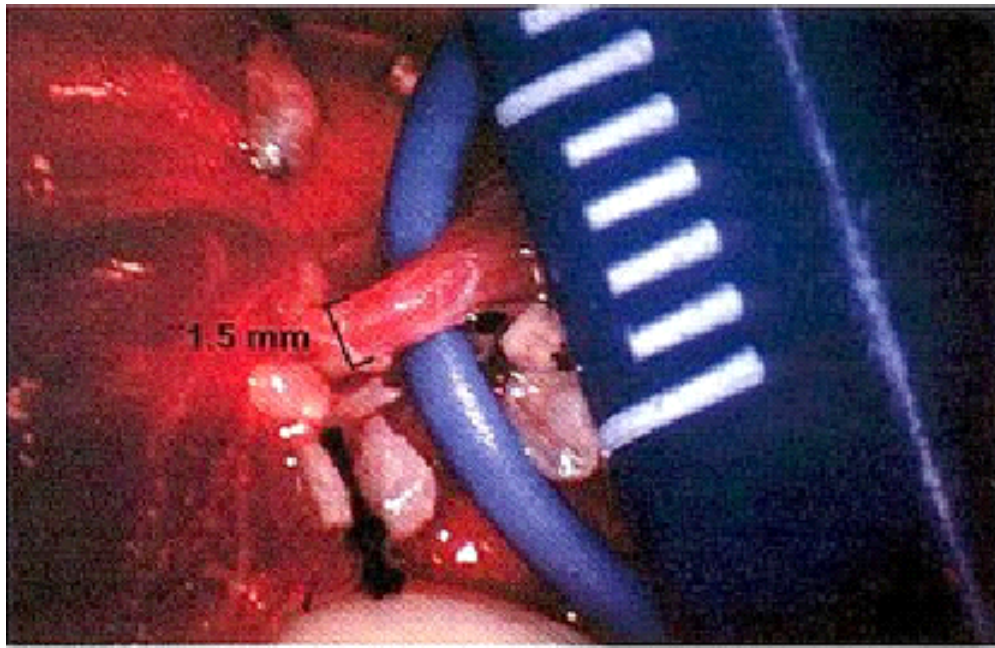


Fig (14) lymphatic vessels can be clearly identified and preserved (Microsurgical varicocelelectomy).

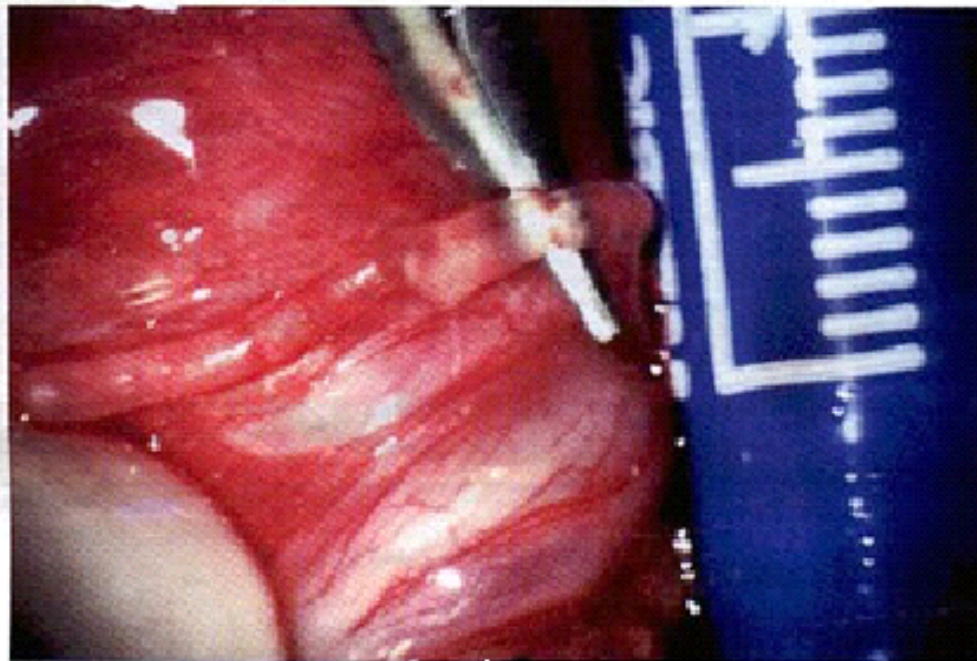


Figure (15) After embolization is complete the coils block flow into the varicocele.

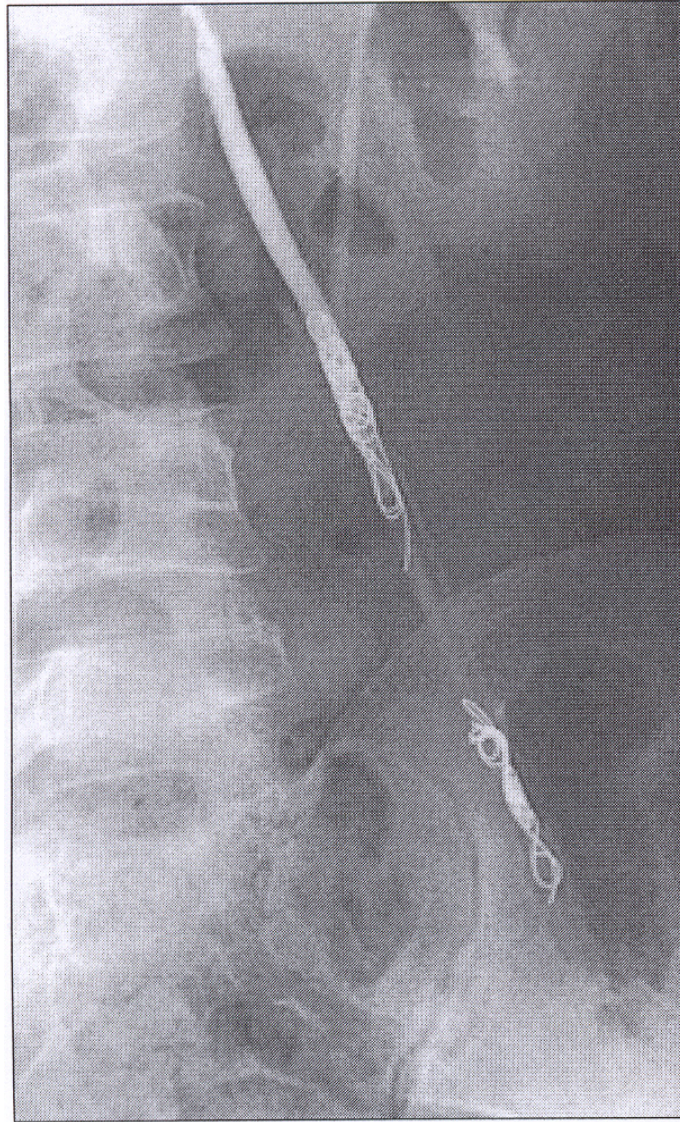


Figure (16) A catheter is passed from the right femoral vein, up the vena cava, into the left renal vein, and down the left spermatic vein (ISV)

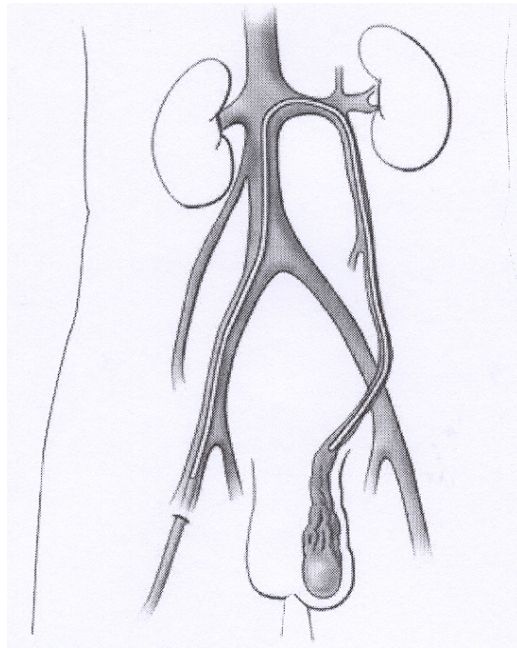


Figure (17) With the catheter tip near the internal inguinal ring, an embolization coil is deposited. More coils will be placed higher in the vein.

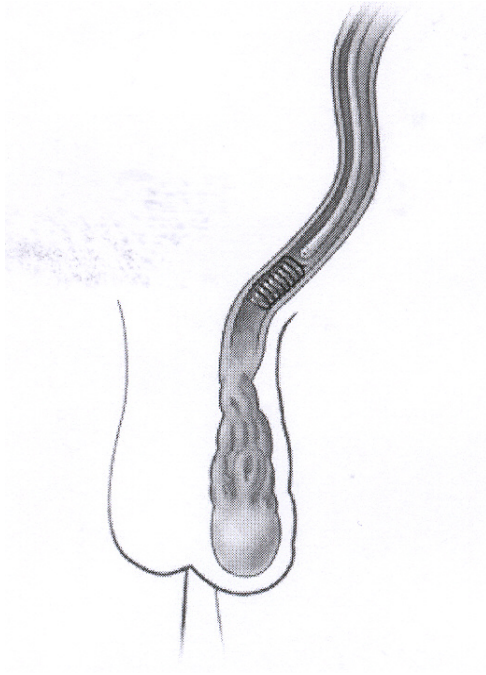


Figure (18) Contrast injected via a catheter in the left renal vein refluxes down the internal spermatic vein (ISV).

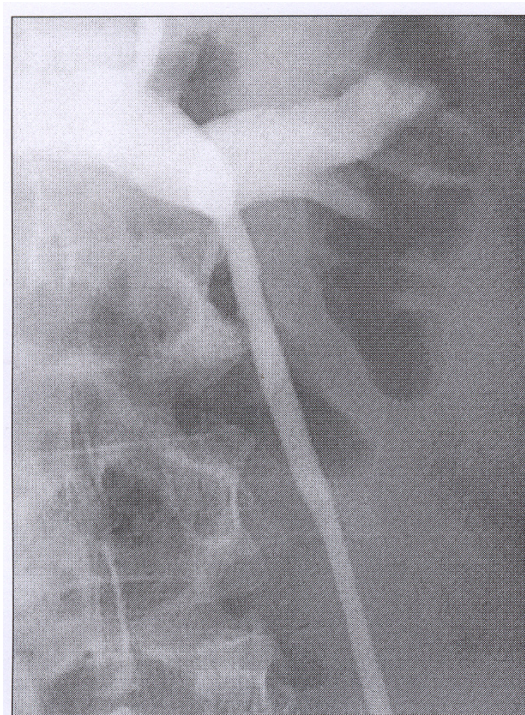
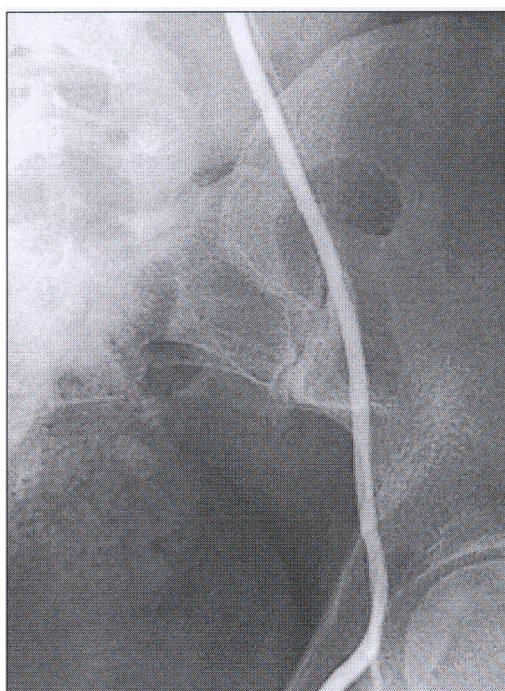


Figure (19) Contrast injected into the upper internal spermatic vein (ISV) refluxes down into the scrotum indicating a varicocele.



NO	Volume		Concentration		Motility %		Morphology %	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	2.5	2	172	195	40	60	35	65
2	4	3	95	115	60	62	5	30
3	3	3.5	120	127	45	52	10	33
4	3	2.5	140	183	30	43	15	35
5	2.5	3	165	173	35	72	25	40
6	3	4.5	10	90	40	50	10	28
7	5	3	30	69	55	72	20	35
8	3	2.5	130	120	40	42	35	65
9	3.5	3	155	170	40	53	15	72
10	2.5	3	121	145	18	55	35	50
11	4	2.5	75	110	32	70	15	42
12	4	3	8	40	20	25	30	30
13	3	3.5	110	128	40	44	15	34
14	2	3.5	90	120	35	38	10	25
15	2.5	3	25	70	50	18	10	22
16	3.5	3	120	135	25	20	55	60
17	2	3.5	127	182	15	62	25	70
18	2.5	3	80	89	25	60	20	38
19	3	3	15	78	40	55	20	61
20	2	3.5	10	35	45	50	25	41

21	3	2.5	122	163	15	25	35	75
22	2.5	4	45	100	35	65	15	40
23	4	2.5	10	90	30	65	35	62
24	2.5	3	25	64	15	20	20	42
25	3.5	3	38	71	40	65	25	45
26	2.5	3	90	135	30	70	20	40
27	3	2	35	115	20	42	35	35
28	3.5	3	80	130	40	70	25	55
29	3	3.5	18	44	45	62	60	65
30	2	3	62	95	14	45	45	50
31	2.5	3	70	75	65	69	15	20

Data Collection Sheet (1)

Varicocele Catheter Embolization data collection sheet

Data collection sheet (2)

Microsurgical Varicocelectomy

NO	Volume		Concentration		Motility %		Morphology %	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	3.5	2	41	52	20	35	30	50
2	3.5	3	8	12	3	36	20	35
3	0.6	0.4	1.6	15.2	20	11	90	43
4	4.5	6	117	233.3	40	30	30	65
5	2.4	2.5	16.8	25	6	35	10	30
6	7.5	3.5	42	77	44	54	65	50
7	3	3.2	2.6	4.2	0	12	5	20
8	2.5	2.5	0.1	0.3	0	0	0	30
9	2.6	2.5	4.6	9	2	1	22	18
10	2.5	3.5	29	24	21	20	20	20
11	0.5	1	20	41	30	20	15	35
12	6	4.5	2.6	5	15	16	15	18
13	1.95	1.5	86	102	6	62	59	25
14	3	3.25	121	58	6	45	45	45
15	2	2.5	50	118	0	55	30	90
16	0.9	2	11.8	124	14	28	39	38

17	4	1.7	37	18	35	38	40	35
18	4.5	2.7	17	44.5	2	23	15	54
19	3	3	56	153	10	39	40	55
20	3	3	22.3	23.3	35	37	30	10
21	0.5	2	91.6	98	30	10	25	40
22	2.5	2	57	50	40	40	85	80
23	7.3	4.5	64	60	41	60	5	50
24	6	5	89	76	40	60	40	2
25	3	3	43	96	40	35	30	10
26	2	3	55	180	45	65	20	20
27	3	2.5	2.8	12	0	10	10	5
28	3	2.2	13	36	3	30	10	25
29	3.5	4	6	15	0	55	0	20
30	2	3.5	37	55	10	20	5	20