MICROSURGERY FOR OBSTRUCTIVE AZOOSPERMIA IN A DEVELOPING COUNTRY (ABSTRACT ID: 18-7536)

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INTRODUCTION:

Obstruction is responsible for ± 40% of cases of azoospermia and may result from epididymal-, vasal-, or ejaculatory duct pathology. Vasectomy is the most common cause of vasal obstruction. A significant proportion of vasectomized men will also develop more proximal (epididymal) obstruction within a few years after vasectomy due to epididymal "blow out". In South Africa, no formal training program in male infertility microsurgery exists and Urologists do not perform any microsurgery. Male infertility is also predominantly managed by OBGYN's in our setting. South Africa is a developing country with limited healthcare resources

OBJECTIVE: Ш.

To review the learning curve, complications and outcomes of the first 80 cases of microsurgical vasectomy reversal performed in a developing country (South Africa).

Mean	Range
45	29 - 66
34	19 - 56
2,4	0 - 8
0,5	0 - 4
33	20 - 45
11,3	0,5 – 29,
13,2	0,69 – 7,2
	45 34 2,4 0,5 33 11,3

Table 1: Patient Information

Table 2: Intra-operative Information

	Mean	Ra	
Distance between vas ends (mm)	15,2	0	
Surgical time per testis unit (minutes)	80,2	37	
Total surgical time (minutes)	157	95	
Sperm motility at abdominal vas end or epididymal tu			
Good	23,	5%	
Poor	68,	1%	
Average	8,4	4%	

METHODS: III.

The first dedicated service in male infertility microsurgery in South Africa was established following training received abroad by the primary surgeon (ADZ). In the first 2,5 years a total of 80 patients underwent microsurgical vasectomy reversal by the same surgeon (ADZ). A prospective database was maintained, which included intraoperative microscopy of seminal fluid.

RESULTS: IV.

The mean surgical time per testicular unit was 80,2 minutes (range 37 to 115) and total operative time 157 minutes (range 95 to 200). Sperm motility (intra-operative light microscopy 400X magnification) was rated as good in 23,5%, average in 8,4% and poor in 68,1%. Vasovasostomy was required in 45,8% of testicular units and vasoepididymostomy in 42,2%. In 6 patients sperm was harvested at the time of reversal for cryopreservation. Complications occurred in 21% of patients and were managed conservatively in all but 3, who required an additional surgical procedure.

For patients with adequate follow up the overall surgical success rate was 81%. Mean post-operative sperm count was 73,3 million. Eighteen pregnancies have so far been recorded during the limited follow up. Comparing the first 40 cases with the last 40 cases revealed no significant differences in surgical time, complications or patency rates. The mean post-operative sperm count was 10% higher for the last 40 cases.

Table 3: Surgical	Outcomes
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Outcomes	
Vas-vas reconstruction	
Vas-epididymis reconstruction	
Overall patency rate	
Post operative semen parameters	
Average sperm count	
Average morphology	
Average motility	
Pregnancy rate:	

29

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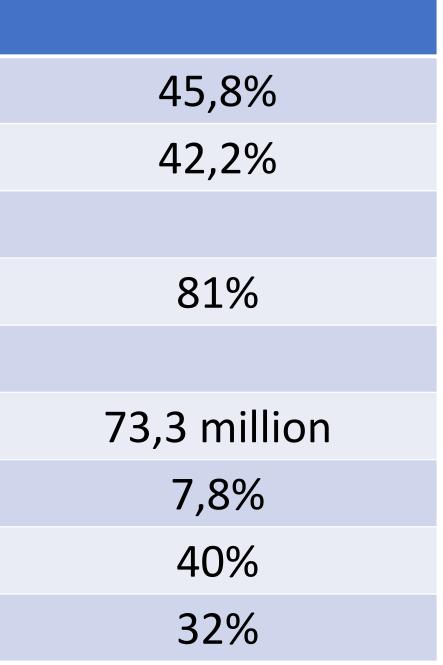
- 70

- 115

- 200

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DISCUSSION AND V. **CONCLUSIONS:**

The main challenges encountered when establishing male infertility microsurgery in a developing country were related to:

A. Availability of expertise:

- No formal- or informal training available this surgery
- No peer support from fellow Urologists

B. Availability of specialized equipment:

- Surgical equipment (access to surgical microscope)
- Consumables (correct micro-sutures and needles)

C. Limited healthcare resources:

Despite these challenges, data from the first 80 cases of microsurgical reversal of vasectomy indicate that it is feasible to establish this sub-specialty in a developing country. Compared to the surgical outcomes achieved in high-volume centers in developed countries, there certainly is room for improvement. International collaboration- and training is essential in ensuring a service which is of high standard.

Table 4: Complications



- Correct intra-operative decision making is crucial to success of

- Limited knowledge and referrals from GP's and other specialities

- Expensive surgical procedure not covered by Medical Insurance - Long waiting lists for cancer surgery in training hospitals - Availability of research staff for data collection and management

A total of 17 patients suffered a complication

Haematoma Surgical site infection Subcutaneous nodule Cosmetic concern Superficial wound dehiscence Acute testis torsion Third degree skin burn on thigh (hot water bottle) **3** Patients required surgery to manage a complication