

Microscopic Vasectomy Reversal

John C. McHugh M.D.

Adding a precious blessing to your family by vasectomy reversal.

Top Ten Reversal Questions:

1. What is the success rate?

The success rate is dependent on several factors.

Factors in Reversal Success

"I rather be lucky than good!"

- The skill and experience of the surgeon.
- The number of years since the vasectomy was performed.
- Luck.



Vasectomy Reversal Success Rate

The skill and experience of the surgeon.

- *Less than 1% of urologists in the U.S. perform microscopic vasectomy reversals on a weekly basis.*
- *The procedure is technically challenging and requires microscopic suture and an operating microscope.*
- *Less than 5% of patients who have had a vasectomy will desire a vasectomy reversal at a later time.*
- *The procedure is not covered by most insurances.*
- *Because of the above factors, very few urologists overcome the obstacles of having enough experience, expertise and opportunity to perform the procedure successfully and at an acceptable price to the patient.*

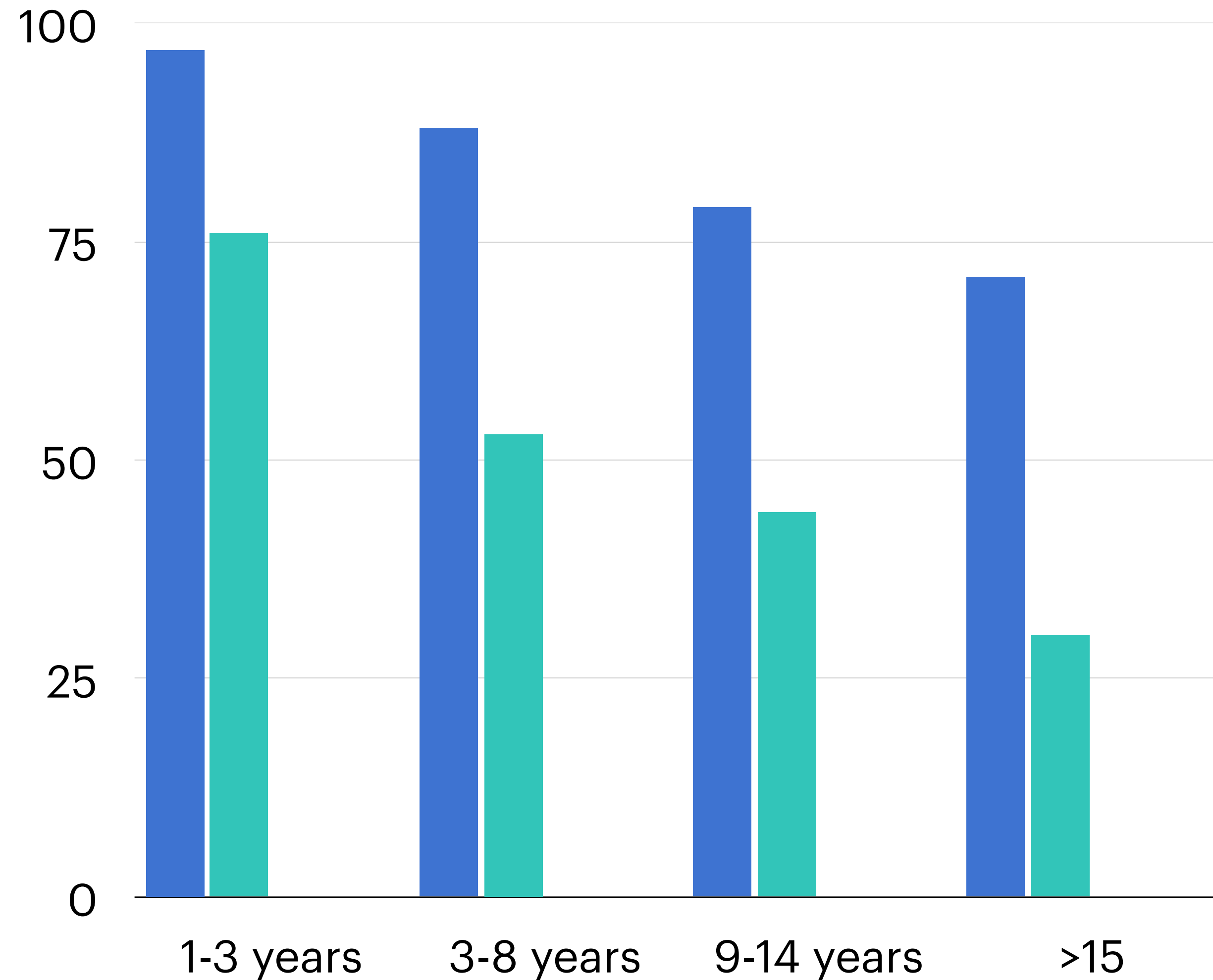
**"Dr. McHugh has done hundreds of
microscopic vasectomy reversals in his
practice owned and accredited
ambulatory surgery center."**

Years Since Vasectomy.

The testicles ability to produce sperm again decreases with time.

- The sooner a reversal is done after the vasectomy, in general, the better the likelihood of success.
- After the vasectomy the testicles are "turned off" and the longer the interval between reversal and the vasectomy the harder it is for the testicles to "turn back on."
- Some testicles do a better job of preserving function than others. A sperm granuloma acts as a "pop off valve" and when present increases the likelihood of success and predicts better fluid from the testicular end at the time of reversal.
- It takes the testicles about 3-4 months to begin producing sperm after a reversal.

Patency(dark blue) vs. Pregnancy - percentage based on interval since vasectomy. Note pregnancy decreases with time since vasectomy.



Patency vs. Pregnancy

Patency

Patency is the presence of sperm in the ejaculate after a vasectomy. It implies that the procedure was technically successful in allowing for the free passage of testicular fluid. As seen in the graph, this is a higher percentage than achieving pregnancy.



Patency vs. Pregnancy

Pregnancy

- Pregnancy after a vasectomy reversal is a higher bar to achieve. Not only does this require the reversal to be successful, but there must be sufficient numbers of sperm (20 million) and quality of sperm (>45% motility).
- Achieving pregnancy still has the normal impediments that are common to any couple.



Seeing sperm (patency) is the presence of sperm in the semen after a vasectomy reversal and is not the same as achieving pregnancy. Pregnancy requires several factors to be achieved, one of which is a sperm count above 20 million.

The importance of "Luck"

"We'd rather be lucky than good, but we want both!"

- After the procedure in the recovery area, I am able to give the patient and his spouse a synopsis of my finding regarding the reversal surgery.
- The performance of reversal is in the majority of cases straight forward and easy to complete. The vasectomy site is easy to find, easy to delineate the two ends and easy to reconnect with microscopic suture and the operating microscope. I will be able to tell the couple it was easy or not.
- When the tube closest to the testicle is cut in preparation for the reversal, fluid emanates from the testicle side. This fluid is evaluated for its character (milky vs. creamy) and microscopically for the quality (whole sperm and or sperm parts). Milky and seeing whole sperm is a favorable finding; creamy and and parts less so.

The anatomic findings of the vasectomy site and how the testicles responded to years of obstruction is not known until the time of the procedure. Some patients that who 10 years out from a vasectomy will have a better success rate than the patient 5 years out for this reason.

Hence: "The Luck Factor"

2. What is the cost?

Costs

A reversal is not covered by insurance.

- Most urologists who perform vasectomy reversals provide all-inclusive pricing.
- Our fee includes the surgeon fees, facility fees, staffing, anesthesia, microscopic suture and the operating microscope.
- Owning our own accredited surgery center allows us to offer affordable pricing by not having to use a hospital or an outside surgery center.
- There are no "hidden fees."



3. Is a reversal like having a vasectomy? How long does it take to perform?

Reversal vs. Vasectomy

Same tube...different procedure.

- A vasectomy has one small opening and takes 15-20 minutes.
- A reversal by Dr. McHugh takes 2 hours, a 3/4 inch incision and the recovery is longer. (In your discovery process, this is a good question. The less experienced surgeon takes longer.)
- A reversal has very little blood loss but because it takes 2 hours there is the likelihood of more bruising and swelling.



4. What is the recovery time?

Reversal recovery

- **Off your feet for the first 3-5 days and then being careful with activity until 3 weeks post op.**
- **No sexual activity for 3 weeks.**
- **Compression underwear for 3 weeks.**
- **Sutures dissolve over the 3 weeks.**



5. Is it safe ?

Reversal Safety/Risks

"A minor procedure that takes two hours."

- Similar to a vasectomy in that the chance of a complication, change in sexual desire/activity, or blood loss is very unlikely.
- Anesthesia is very safe and in particular at our facility we have not had an anesthesia related complication.
- Hospital admission is very rare and most patients can travel home after the procedure unless they prefer to spend the night in a local hotel.



6. What is the time frame of reversal results?

Reversal timeline

It is a "patient journey."

- Patients will often give the reason of proceeding with a reversal by saying, "got to start the clock."
- It takes three months on average for the testicles to begin producing sperm again. Longer as the time from the vasectomy increases.
- If pregnancy occurs, on average it is usually between 6- 18 months.
- The testicles have to not only produce sperm but in the numbers and quality necessary for pregnancy.



7. Are the sutures used permanent?

Sutures Used for Reversal

Two types of suture.

- The scrotal incision is closed with an absorbable suture. (Chromic suture)
- Absorption is usually complete by three weeks and timing of each side varies and is asymmetrical.
- The vas deferens is repaired with microscopic permanent suture (9-0) and is the size of a strand of hair. (Nylon suture)
- The opening of the vas is the size of "O" in God on a penny. 12-14 microscopic sutures are placed on each side.



8. What about the facility and the staff involved with the vasectomy reversal?

Credentialing

Dr.s and R.N.s are certified and experienced.

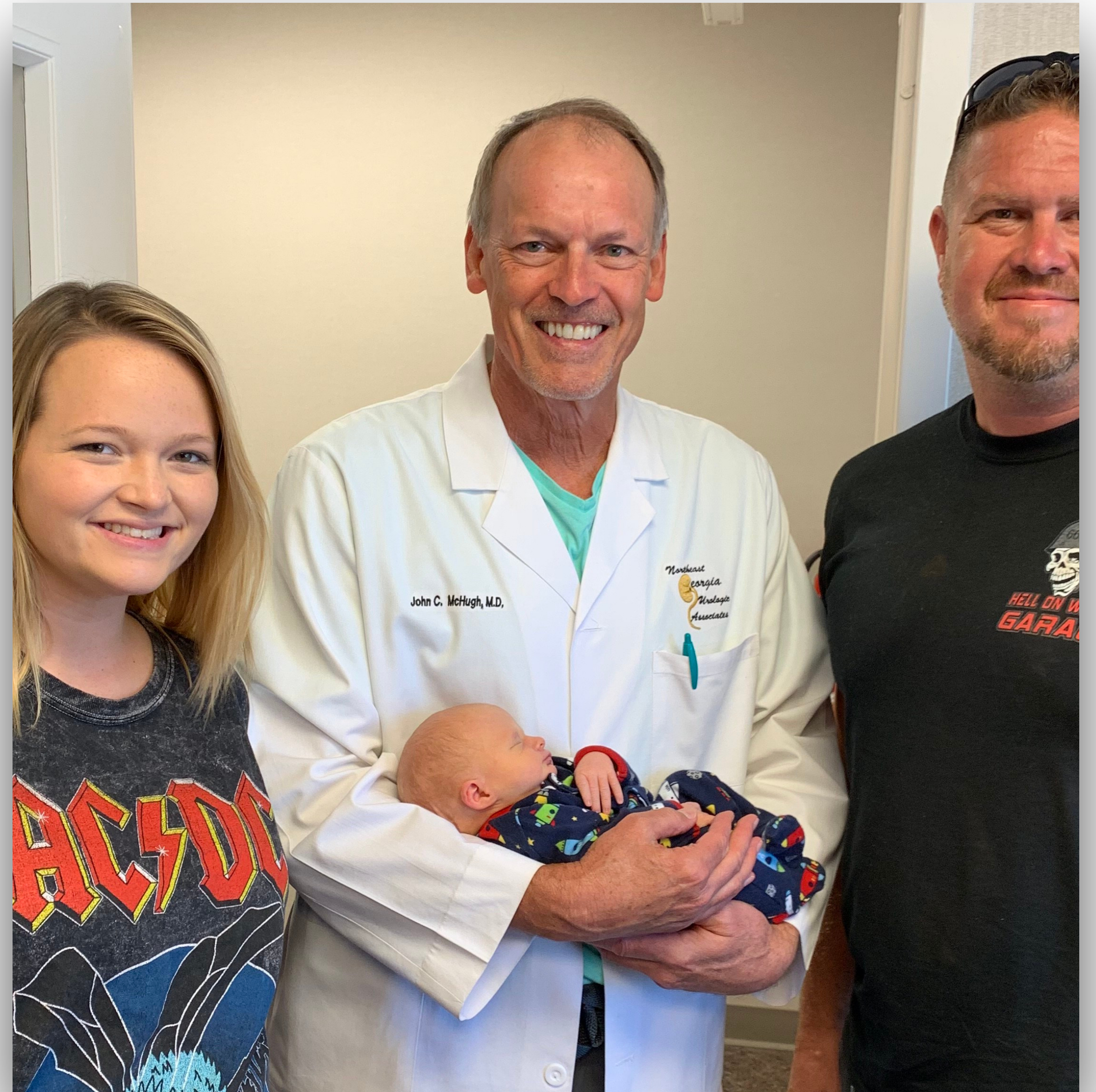
- The facility is state licensed and accredited by AAAASF for general anesthesia.
- Dr. McHugh is a board certified urologist.
- The nurses are Registered Nurses.
- The anesthesiologists are board certified.
- Our safety record has been impeccable!



9. Is the age of the couple having
a reversal important?

The age of the mother is most important.

- The success rates for microscopic vasectomy reversal decrease after the age of 39 for the female.
- The age of the father is not as big a factor as the female because the male continues to produce sperm as he ages.
- The biggest factor for the male is the number of years since the vasectomy.



10. When do you begin to check for sperm after a reversal?

When to check for sperm.

On the right is a "successful" post reversal semen analysis.

- Since it takes the testicles three months to produce sperm, we recommend the first check at 3-4 months.
- If no sperm are seen, we recommend rechecking again at 2 months.
- If sperm are seen, it is a very encouraging sign for two things: 1. the reversal was a technical success (the tube is open) and 2. the testicles retained the ability to produce sperm.

SEMEN COLLECTION	
Collect Date: 12/14/21	Received Date: 12/14/21
Collect Time: 1:30	Received Time: 2:21
ANALYSIS	
TEST	RESULT
VOLUME (ml)	4.5
CONCENTRATION x10 ⁶ /ml	98
% MOTILE	65
PROGRESSION	2/2+
pH	8.0
VISCOSITY	Mild
% NORMAL MORPHOLOGY (WHO criteria) 5 th Ed.	2
ROUND CELLS x10 ⁶ /ml	<1
WBC (x10 ⁶ /ml)	n/a
TOTAL MOTILE SPERM x10 ⁶	286.7

The Reversal Procedure-An Overview

Reversal 101

What you would expect to discuss during our free phone consultation.



Reversal 101 Consultation

Dr. McHugh offers free of charge a phone or office consultation to any couple considering a vasectomy reversal. A pre-operative visit by phone consultation for the male with no significant health issues is an acceptable and safe option for our out-of-town patients. The following outlines the reversal process at the Northeast Georgia Urological Surgery Center.

The procedure will be performed by Dr. McHugh with general anesthesia provided by a board-certified anesthesiologist in our accredited urological surgery center.

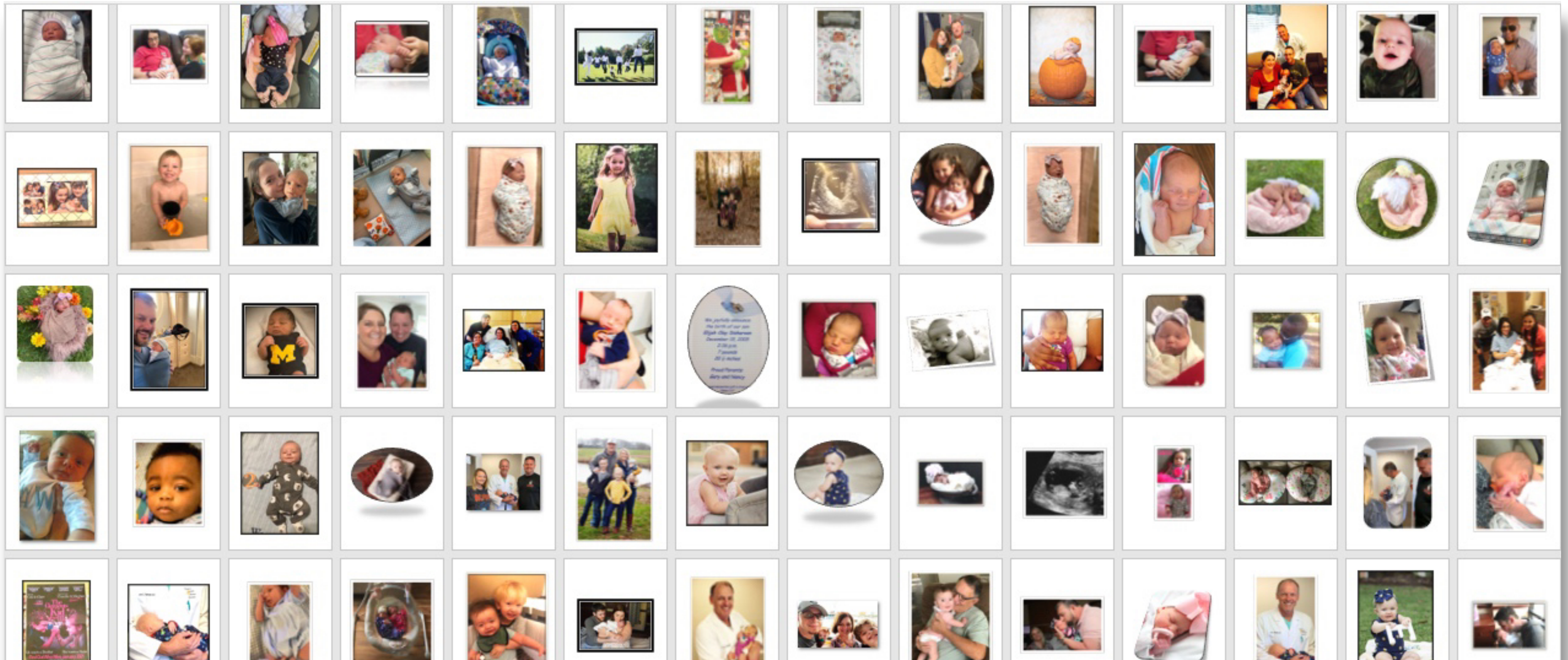
- The patient will be examined by both Dr. McHugh and the anesthesiologist prior to the procedure.
- If a patient is over the age of 50 or has other medical issues, we may request that the patient obtain a pre-operative clearance and baseline lab evaluation by his family doctor.
- The procedure will last approximately two hours.

- There will be a $\frac{3}{4}$ inch incision at the upper aspect of the scrotum bilaterally. Absorbable sutures will be used and will dissolve in approximately two weeks.
- A Zeiss operating microscope and microscopic suture will be utilized for the procedure.
- The method used for the procedure is a modified two-layer closure with the usual total number of sutures being 12 -14 on each side. These are non-absorbable sutures.
- The vasectomy site is delineated, bypassed and the testicular end of the vas and the body end will be freshened up, examined under the operating microscope to be sure they are pristine, and then the microscopic anastomosis will begin.
- Microscopic instruments, fashioned for this procedure, will be used.
- The reversal will be watertight and tension free assuring the best chance of a patent vas deferens and presence of sperm in the ejaculate.

- The fluid from the testicular end of both of the vas deferens will be examined under a microscope. The patient and wife will be informed of the findings; the presence or absence of sperm, sperm parts and the character of the fluid is a predictive factor of success.
- The potential need for a vasoepididymostomy is more likely if the patient had his vasectomy over ten years prior to the procedure.
- If there is no fluid or there is a paste-like fluid in the testicular side of vas the likelihood of an obstruction before the vasectomy site is considered. The epididymis is then evaluated.
- A intussusception vasoepididymostomy will be performed if an isolated area of obstruction is noted with proximal dilation of the epididymal tubules.

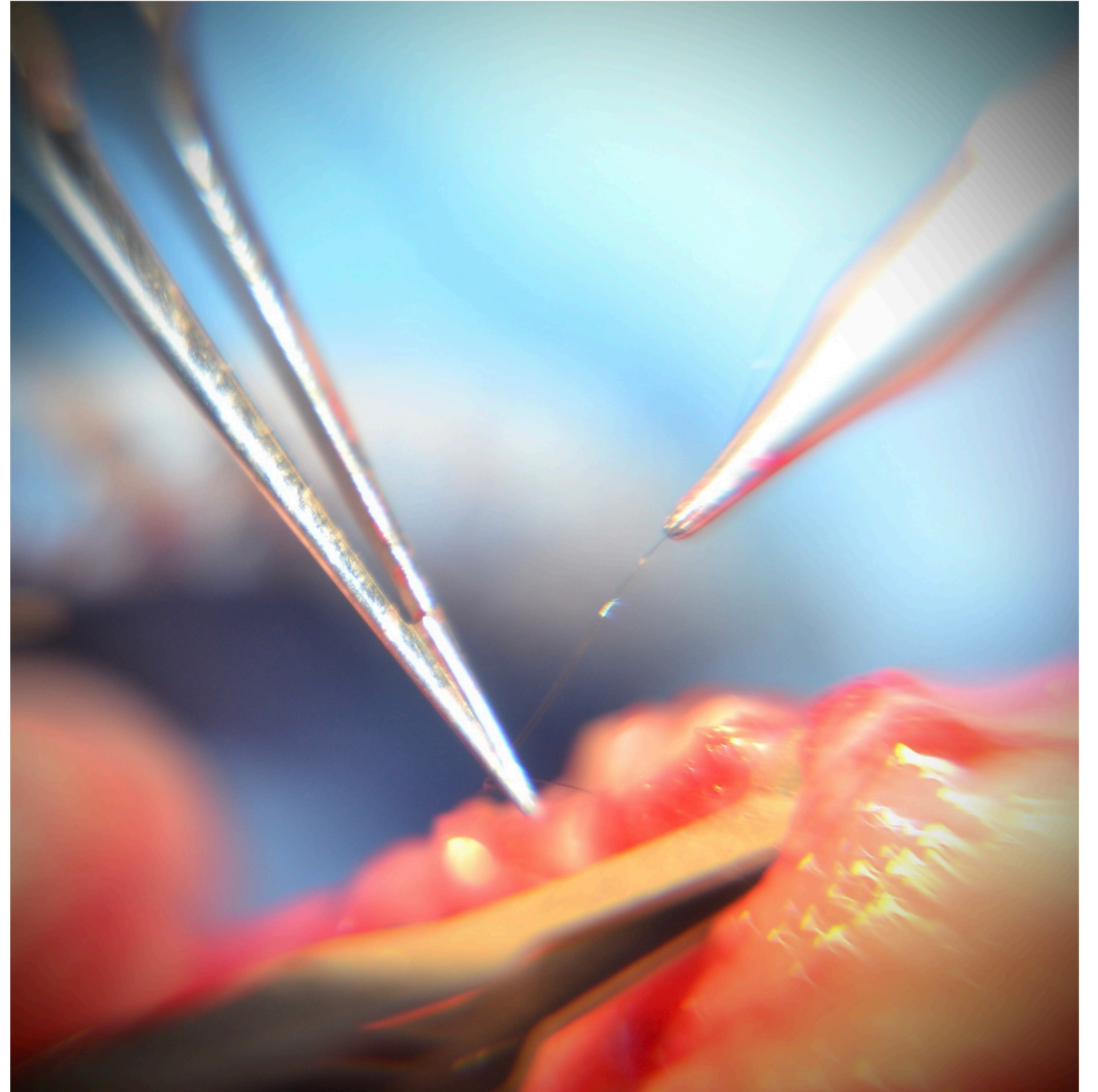
- The small incisions should have thin film of Neosporin ointment placed on them daily until healing and taking a shower the next day is okay if care is taken not to let the water hit the incision site directly.
- After the surgery, the patient should refrain from sexual activity for three weeks as well as strenuous activity. If the procedure is performed on a Thursday, for instance, he should be able to return to work on a Monday if it is a non-strenuous job. The more time taken off from work to be off your feet the less likely there is for swelling and bruising. Bruising and swelling to some degree is expected due to the length of the procedure and the nature of the scrotum and should not be a cause for alarm.

- The fee charged is all inclusive except for the prescription given post op for an antibiotic and pain medications.
- We provide the family member the prescription which can be filled while we perform the procedure. We will inform the family member when we have completed the first side of the procedure and are beginning the second side.
- Local anesthesia is placed in the incision sites to limit post operative pain on the trip home. The anesthesiologist uses intravenous medications for pain control and the prevention of post anesthesia nausea.
- Our surgery center nurse manager will call post operatively to check on you and answer or handle any issue that may arise.



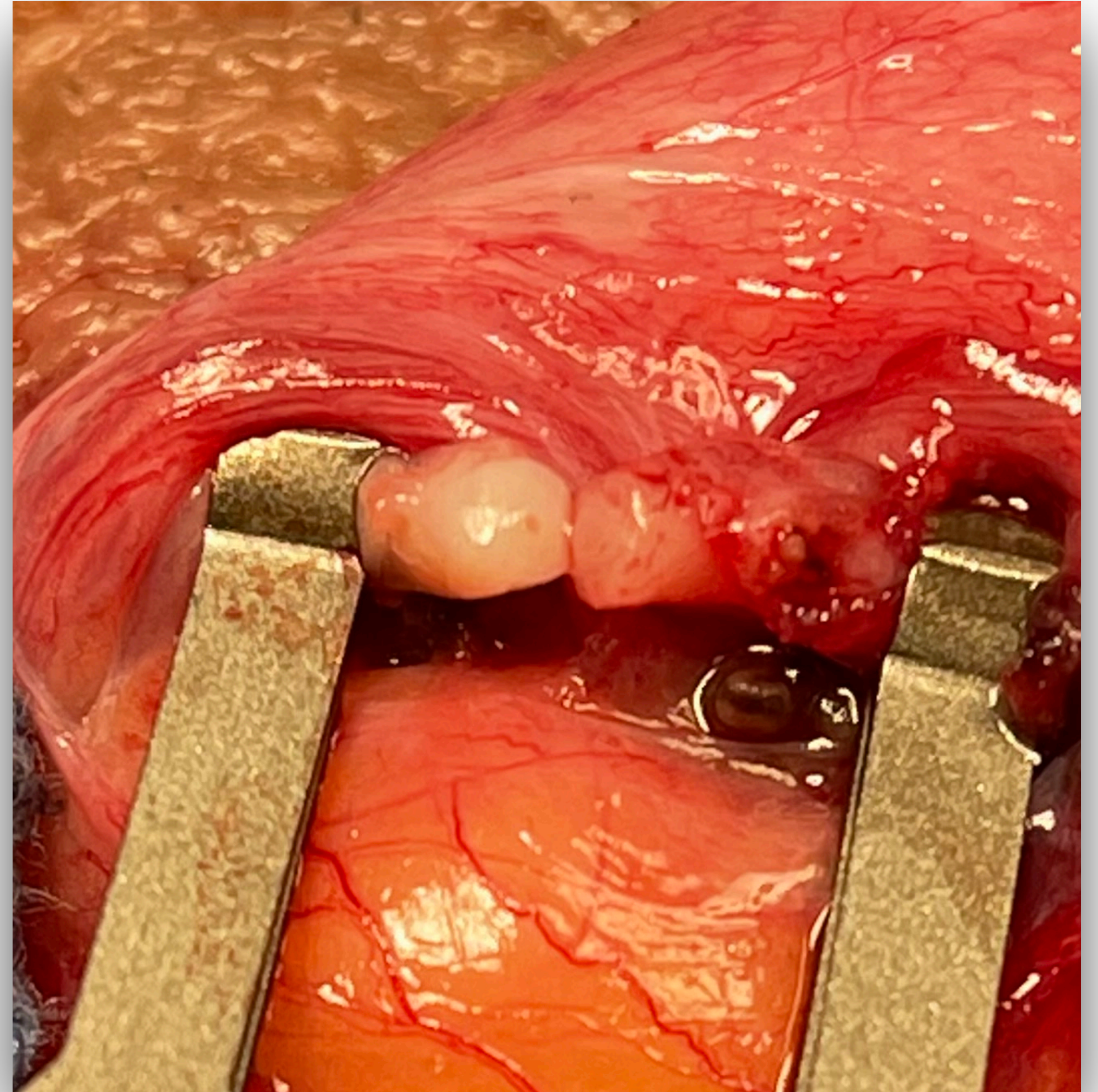
Success Gallery

The Procedure



Preparation of the Vas Deferens

- After an adequate level of anesthesia and sterile prep and drape of the scrotal area, a 3/4 inch opening is made at the left upper scrotum.
- The vas deferens on each side of the vasectomy site is identified and isolated.
- Dissection is undertaken to align each side of the pristine (not scarred from the vasectomy) vas deferens in preparation for the reversal.



Assessing the fluid

- When the testicular side of the vasectomy is transected, in the majority of cases, sperm fluid will be seen.
- The character of the fluid is one of the prognostic indicators of success. Milky indicates less breakdown of the sperm over time whereas creamy indicates a more advanced phase of the body's attempt to absorb the sperm.
- The more advanced the breakdown the more negatively success is affected.
- The picture shows a milky/creamy fluid.



Microscopic evaluation of the post vasectomy sperm fluid

The quality of the sperm fluid is important in predicting the percentage for success. Whole sperm is the best whereas sperm parts is less favorable. The patient is informed of the character of the fluid and the favorability of the microscopic findings after the completion of the surgery.

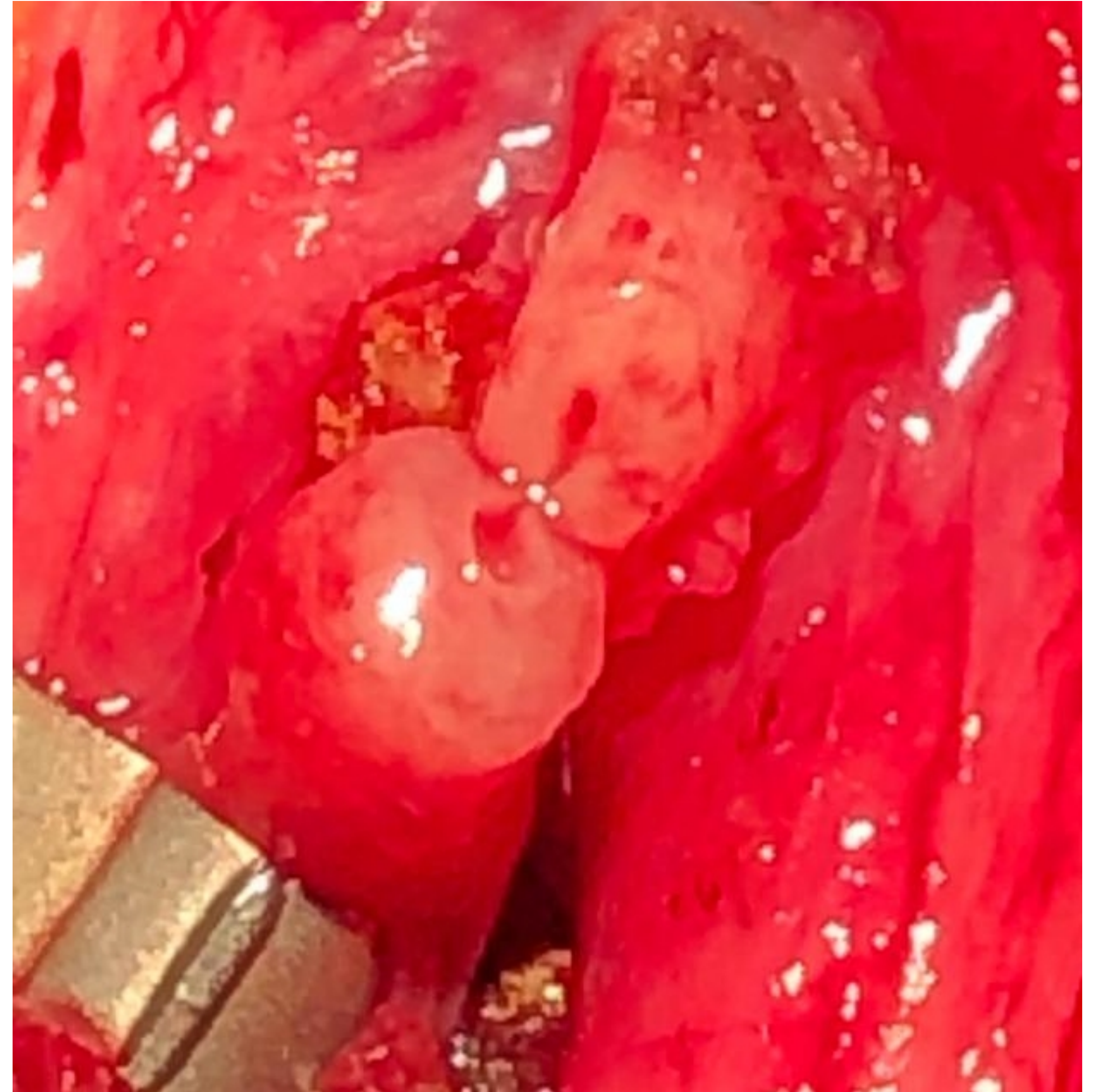


Factors for Success

- The skill and experience of the surgeon.
- The length of time from the vasectomy.
- Luck: The quality of the fluid cannot be known until the time of the procedure.

The "Reconnection"

Using in 9-0 microscopic suture the two ends are brought together in a tension free and watertight fashion. Here one sees the the two ends brought together by the first of 12-15 sutures using the modified two-layer technique.



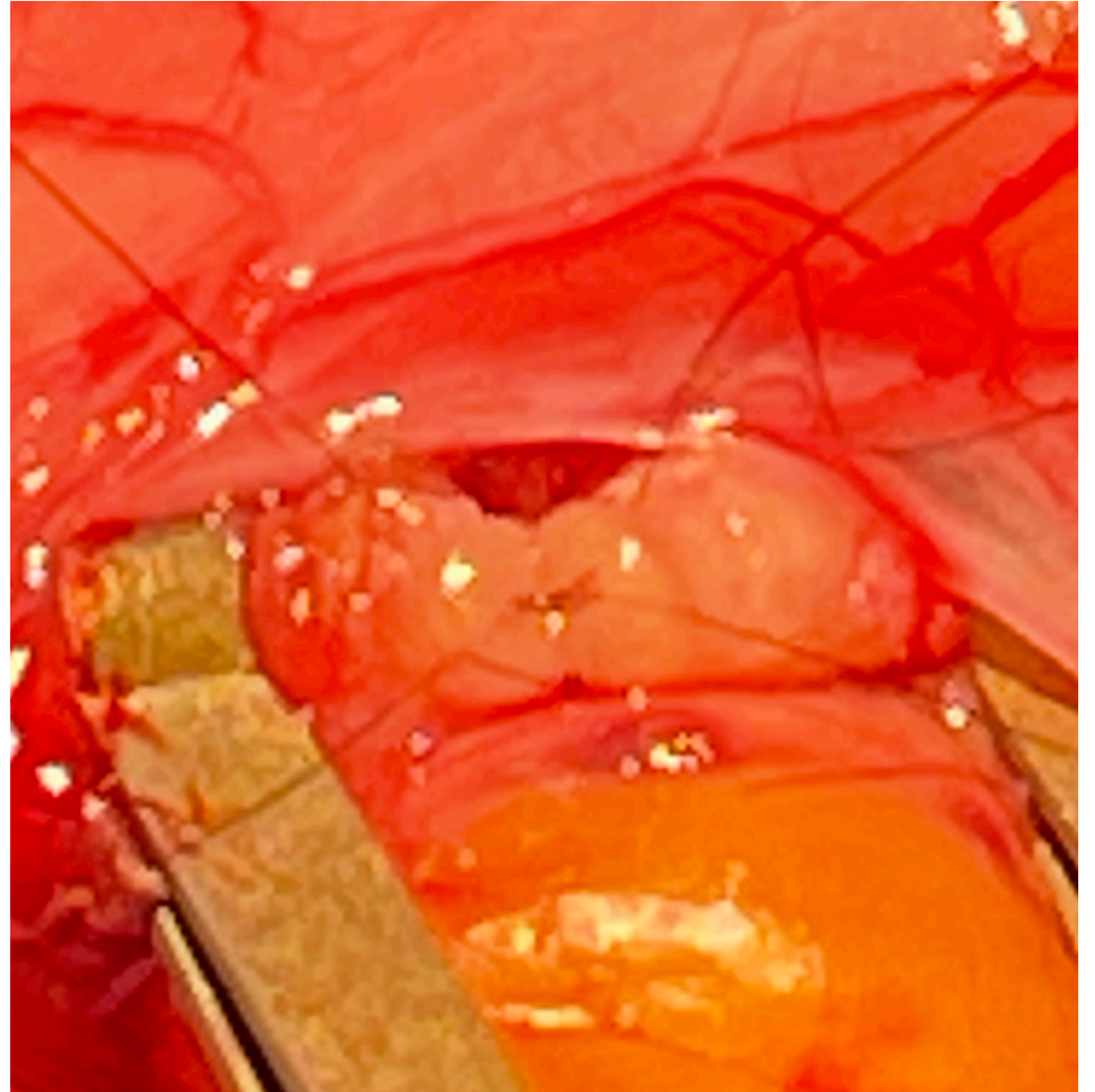
Posterior portion of inner layer completed

As a rule three to four 9-0 sutures are placed posteriorly (on the back side) and then a similar number on the anterior (front side). *The front side is now ready for sutures which will be placed in a similar fashion.*



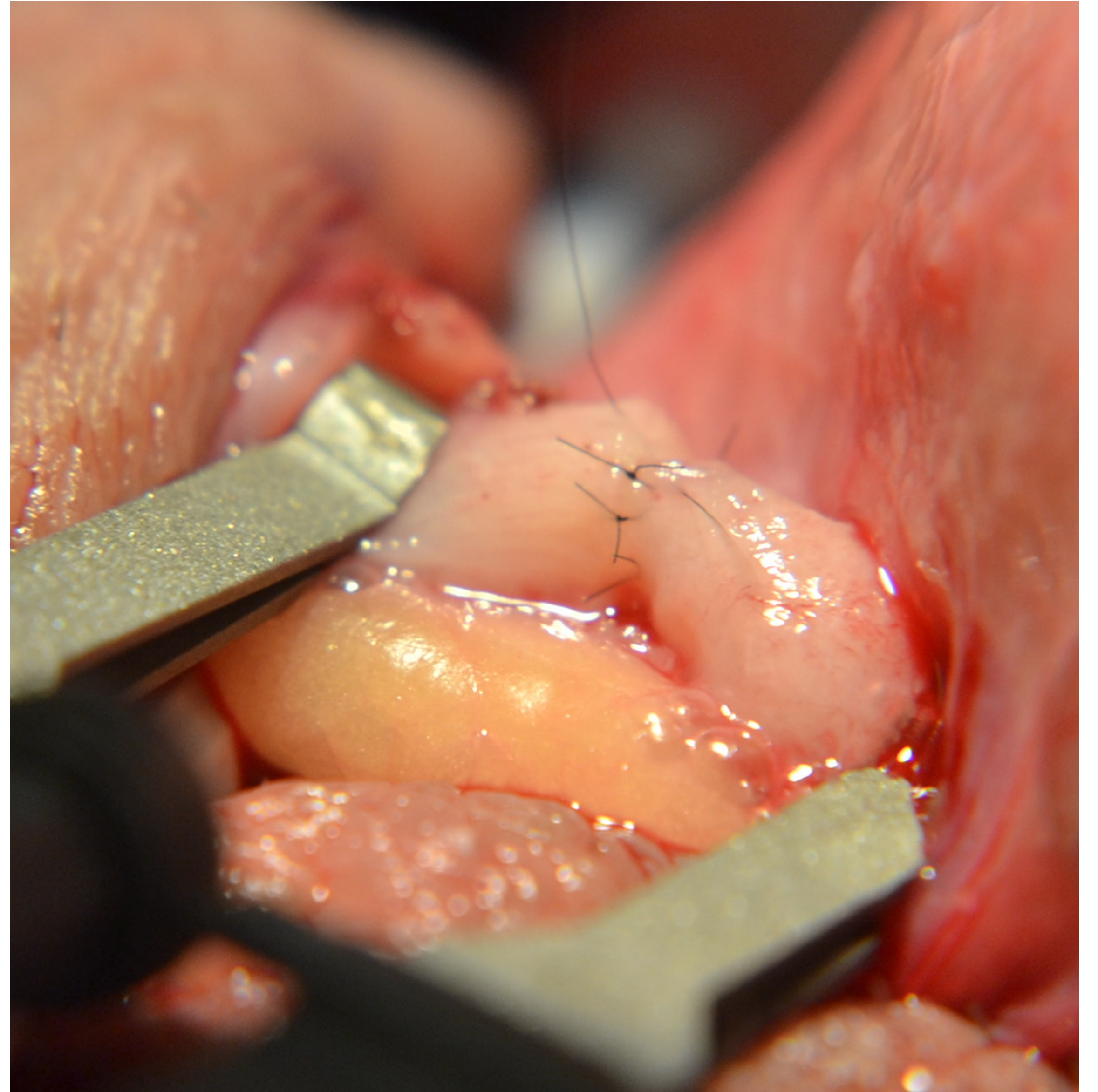
Anterior sutures of first layer

The posterior sutures of the first layer have been completed and the anterior sutures have been placed and ready to be tied. The first layer has six 9-0 sutures.



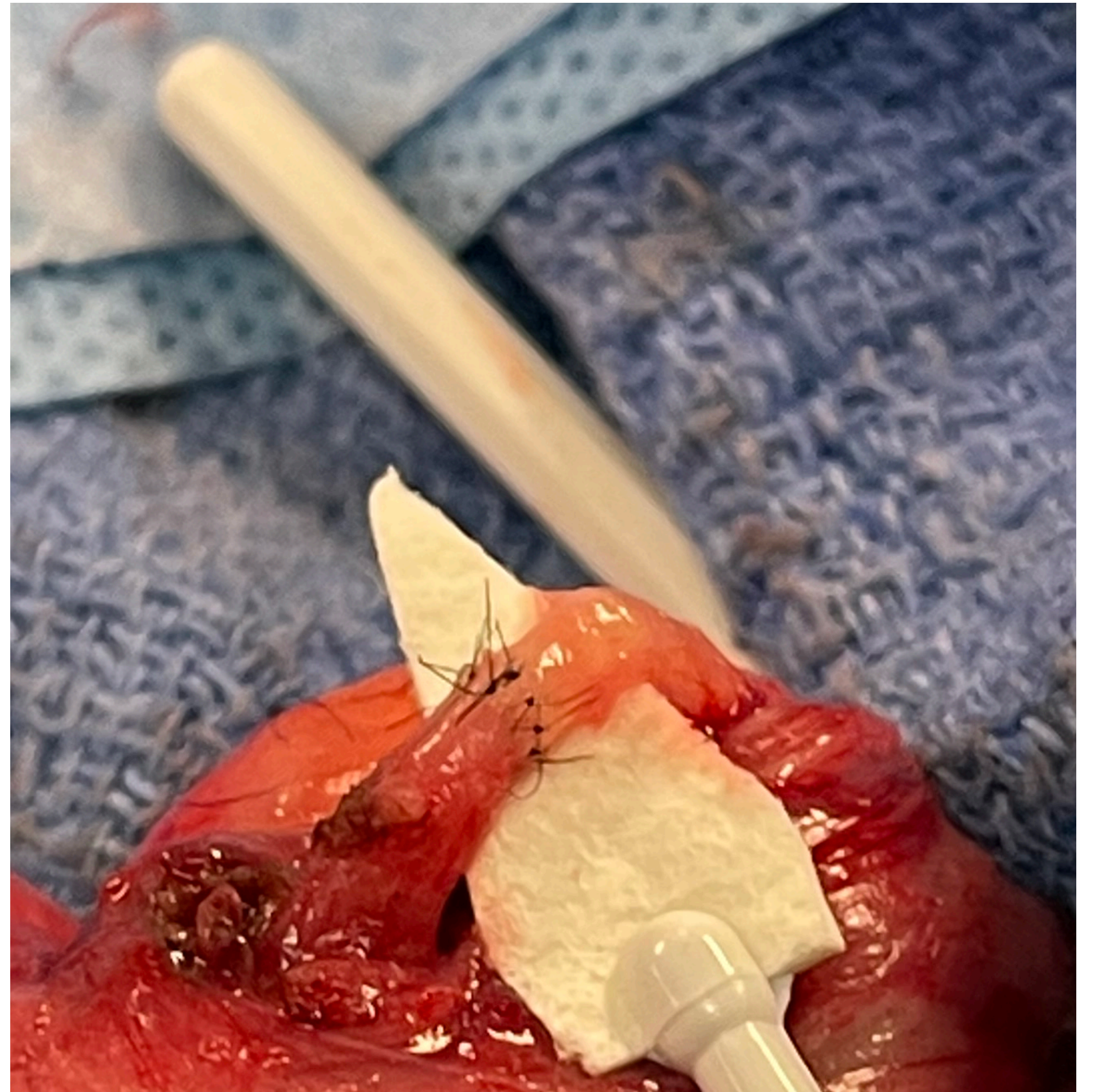
Completion of first layer

The 9-0 ties are now being tied and the first layer completed. The slightly stronger 8-0 suture will now be placed between the first layer to strengthen the repair.



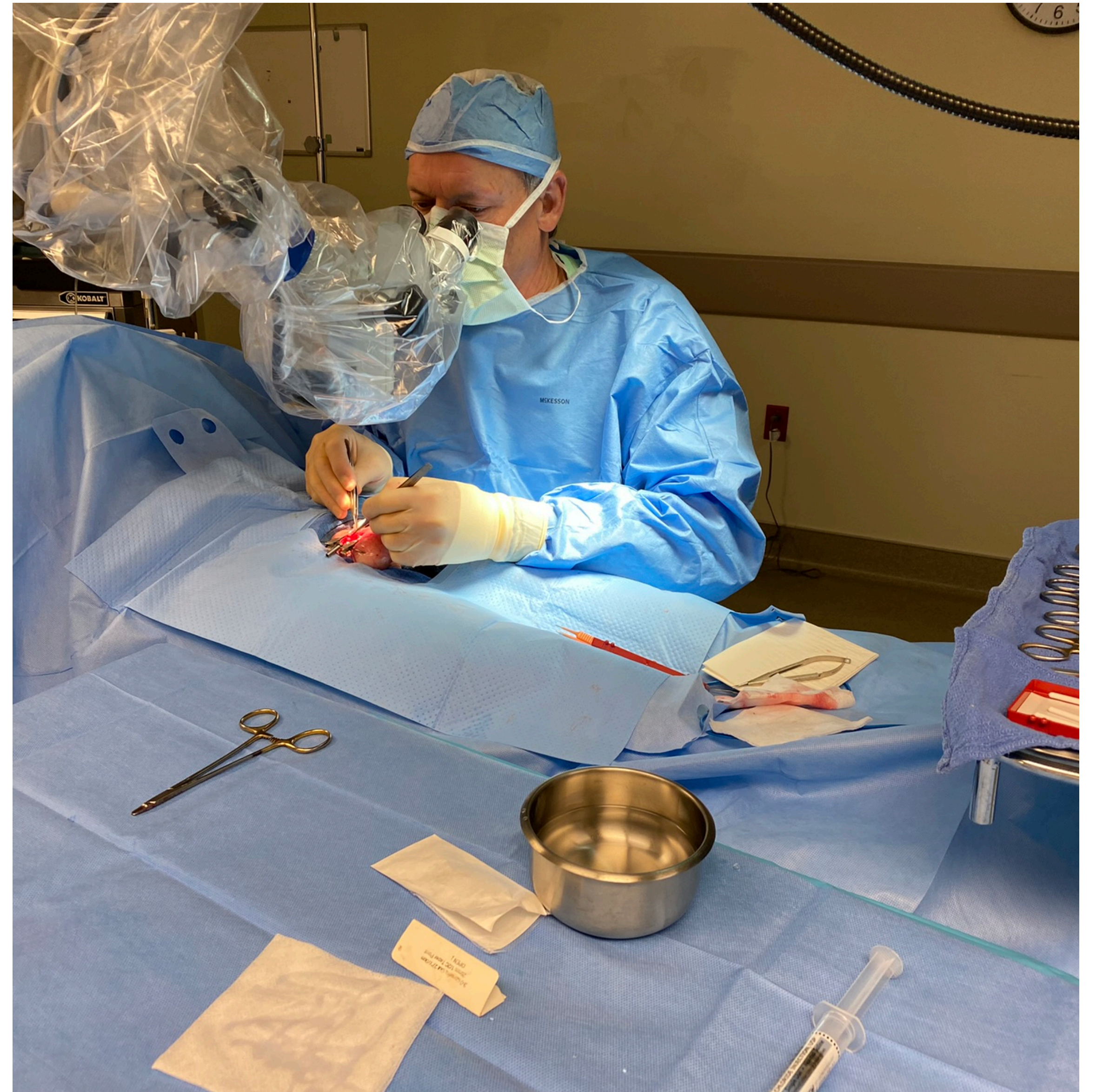
Reversal Completed

The reversal is completed with six inner layer sutures of 9-0 and the outer with six to eight 8-0 (slightly larger) suture. If you look closely you can see the slight difference in the caliber of the suture. The goal is for the final result is tension free and watertight.



Completion of left side

The operative microscope is used in conjunction with bipolar electrocautery. This is important as the effect of the cautery is only the tissue that is treated. This protects the blood vessels which supply the reversal site and hence the success of the repair.



Last step

After assuring hemostasis microscopically, the testicle is placed in its natural anatomical position within the scrotum. The incision is closed in two layers with absorbable suture. The right side then will be completed in a similar fashion.



After the procedure

- The recovery room time is usually less than one hour.
- The patient's vital signs and incisions are evaluated and felt to be acceptable before discharge.
- An order for a semen analysis is given for an evaluation at three months at your local lab/hospital.
- Our R.N. nurse manager will follow up with phone call and contact information is provided.



On behalf of the Northeast Georgia Urological Ambulatory Surgery Center staff and Dr. McHugh, we look forward to working with you and together achieving the precious new addition to your family.



McHugh Vasectomy Reversal

- Over 30 years of experience.
- Hundreds of reversals performed.
- Board certified urologist.
- Certified anesthesiologist.
- Owned and accredited facility.
- Surgery center is state licensed and AAAASF certified.
- Impeccable safety record.
- Gavasectomyreversal.com
- ngurology@gmail.com
- *660 H Lanier Park Dr.*
- *Gainesville, Ga*
- *30501*
- *770-535-0000*



