5. Clitoris

We Have the Same Parts (and How History Repeats)

Men and women both demonstrate the same parts (though the name of the parts may vary): both have corpus cavernous; both have a clitoral hood (the foreskin in the male), Skene's glands (prostate in the male), corpus spongiosum, a dorsal nerve, etc.). Moreover, useful analogies can be made regarding the progress of the research and treatment of male sexual dysfunction with that of female sexual dysfunction. Research for females is lagging around 20 years behind that of men (although it is rapidly catching up), and history seems to be repeating itself.

Looking at those analogies and the history of male-oriented research could help accelerate both the understanding of current treatments and the progress of the research regarding female sexual dysfunction.

The History of Treating ED

Start by considering the dogma of the nineteen eighties regarding erectile dysfunction; the following is a quote from *Urology (Finkle, 1980)*:

"...most instances of acquired impotence are psychogenic.
Any nonjudgmental, competent practitioner can aid victims of psychogenic impotence by a "listening and encouragement" method.
Urologists, in particular, are commonly confronted with genital/sexual problems
and may be best suited as primary therapists
by developing an interest in counseling."

Said another way, *Urology* published that since most men suffering erectile dysfunction were suffering because of a psychogenic etiology, urologists should learn to provide counseling.

I am old enough (63 years old) to remember being taught in the 1980s that 80% of erectile dysfunction is from psychogenic causes. Then, of course, when a blood pressure medicine (Viagra®, which did not work so well as an antihypertensive) turned out to cause stronger erections, then we learned that, 80 to 90% of ED is primarily neurovascular in etiology.

In the 1980s, urologists were taught that counseling is
the best and *only* treatment
for 80% of men suffering from erectile dysfunction.

Then, when Viagra® was discovered, suddenly that 80% of men who were thought to best benefit from counseling, suddenly became erect because the etiology of their ED was actually not psychogenic but instead was neurovascular.[1]

[1] Successfully achieving erection using Viagra, of course, does not negate the need for counseling; it just changes the focus of the psychosocial issues. For example, giving a man the pharmacological capability of erection without addressing the dynamics of his relationship with his lover can often hurt, not help satisfaction both in and out of the bedroom (for example when libido and function become more mismatched).

The etiology of ED had been molded to fit the availability of tools for treatment.

Still, as late as 2003, though we enjoyed ways to help men achieve erection (intracavernosal injections and PDE5Is like Viagra), there was no way to reverse the etiology of the neurovascular changes causing impotence (Siroky, 2003); we were only making the diseased tissue work harder.

If you treat erectile dysfunction with Viagra, you are just making whatever vascular flow is still remaining work harder; you are not restoring; you are not causing neovascularization or neurogenesis.

In summary, part of the reason for the assumption that 80% of erectile dysfunction was due to psychogenic causes was because there were no treatments for the root cause—vascular disease. Then, when we found something that treated vasculogenic causes of ED, we realized that 80% of men with ED suffer from vasculogenic causes, *but there is always a psychogenic component*. It is not one or the other, both are part of the system, and (for optimal function) all parts of the system should be optimized.

For the treatment of sexual dysfunction in men,
always,
both the physical and psychological must be optimized
because both are part of the orgasm system—
as with men,
so with women.

Now, not only do we have treatments for ED that help the diseased tissue work better, but we also have treatments (shock wave, P-Shot®, Priapus Toxin™) that improve the health of the tissue (Longoni, 2023).[2]

Now, after reviewing the history of the treatment of male dysfunction, in the next section of this course, consider the current state of the treatment of female sexual dysfunction and the clitoris. I think history could be repeating; I will show you evidence to that effect and how I think we are actually helping correct that problem with this course.

The Story of a Naïve Doctor and a Sex Therapist

When I came up with a way of using platelet-rich plasma to restore sexual function and urinary continence in women, it appeared to me to be a huge breakthrough (Runels, 2014). Considering the results I was seeing with my patients, I entertained a naive vision that the idea would become quickly and widely accepted, and I would enjoy respect and recognition.

I would smile and go to bed thinking about my picture on a postage stamp.

My inflated naivete looks hilarious to me now.

Instead of accolades, after rolling out the O-Shot® procedure, I faced extreme anger from many sex therapists and mostly disbelief from physicians (it's okay, it made me smarter, and I was deserving of it). The anger from the therapists I found the most disturbing because I thought they would be quickest to see the value in my new innovative treatment, yet they seemed the angriest. Instead of accolades, some of them made aggressive efforts to damage me personally (not just in relation to the new procedure).

[2] To study further research about these regenerative therapies for the penis, see PriapusShot.com/research and PriapusToxin.com/research

Not for fear, but for disappointment, I became disheartened.

So, not understanding why this was happening, I called a colleague, Veronica Monet, who wrote *Sex Secrets of Escorts* (Monet, 2005), to see if she could enlighten me. Ms. Monet enjoys an international reputation for her amazing work counseling both men and women regarding sexual function and dysfunction and how to deepen relationships in a shame-free zone.[3] Her experience is tremendous, and she had proven her brilliance and insightfulness to me during a previous conversation when she hosted me on one of her shows featuring my first book, *Anytime* (Runels, 2004).

So, I telephoned her and humbly asked, "Why are sex therapists so angry at me?"

She said, "Charles, it's because you've given the impression that you think your invention is a magic shot—a cure-all."

I was surprised.

Even then, my understanding gave me great respect for the complexities and elegance of every component of the orgasm system, so I felt misunderstood, but I was grateful to Ms. Monet because I could see how I had given the wrong impression.[4]

I started exercising more care with my communications, and now, 13 years later, one of the things I hope to correct with this course is that misunderstanding.

A Reminder that Thoughts Rule Everything

Before we talk about the clitoris and how clitoral research parallels that of the penis, the following diagram is a reminder that I hope will help me avoid the wrath I saw a decade ago: the pituitary gland is part of the brain and responds to thought.

As an easy example, fear causes your pituitary gland to tell your adrenal glands to pump out adrenaline. Then your heart rate goes up, and your blood pressure changes and your blood vessels vasodilate. You have sympathetic and parasympathetic changes that are immediate and affect brain chemistry as well as bodily function. Even without a behavior change, just a thought can change the metabolism of your entire body.

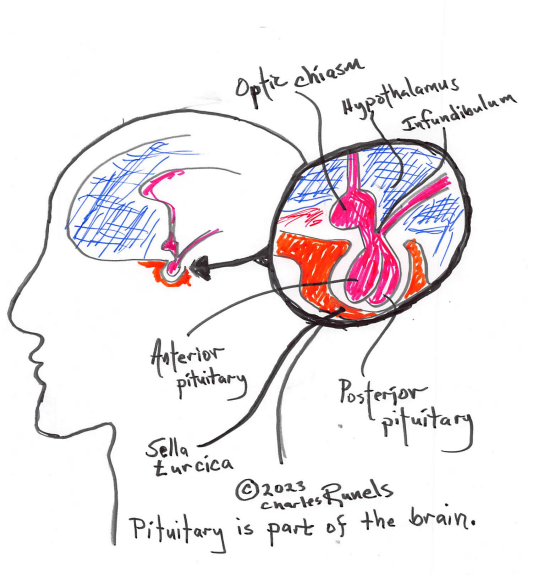

Figure 1. By thoughts, the pituitary affects the entire body, including the orgasm system, even independent of the helpful practices that may occur with expert counseling.

So even though we will now move on to consider the clitoris, I just want to back up (to help prevent misunderstanding) and plainly say that not only are thoughts and therapy important, they are critical because you can have everything else working perfectly well but if thoughts are not congruent with good sexual function, the whole orgasm system shuts down.

[3] For her writings and to explore her counseling options, see https://theshamefreezone.com.
[4] To examine the growing body of research about the O-Shot® procedure for *some* etiologies of sexual dysfunction, https://oshot.info/research

Imagine Jane, feeling her sexiest, her parasympathetic system is in full bloom: she enjoys the pleasure of maximal vasodilation of the clitoris; she bathes in the pleasure of deep arousal (the hunger we desire so that we can then satisfy the hunger). Then, suddenly she smells smoke, and the fire alarm goes off. Her brain will immediately tells her pituitary gland to go into sympathetic overload. She develops vasoconstriction of the clitoris, hypertension, and tachycardia, and does not want to have sex; blood is shunted to her legs, her pupils constrict, and she wants to run. A similar thing could happen with only the knock of her child on the door while she is in the locked bedroom, while she wants to be private with her lover.

So there is an elegance in how the brain affects both immediate and long-term function of the orgasm system—immediately through blood flow and changes in function and long-term through metabolism and changes in actual structure and function.

Therapy is critical; thoughts are critical; they change the whole metabolism and structure of the body. But, on the other hand, there's also this other important part of the female orgasm system—the clitoris.

As with men in the 1980s, Therapy for Women with Sexual Dysfunction Focuses on the Psychogenic Etiologies

The following was my initial rough draft of the whole female orgasm system. Remember, a system has multiple components that work together for a purpose.

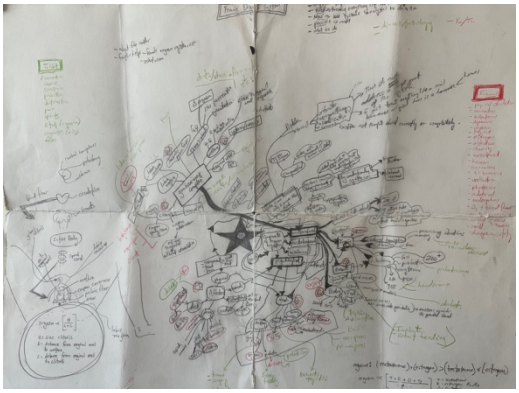

Figure 2. First draft of the female orgasm system.

Next is my simplified version of it, with each block or circle representing one of the components and all the lines representing a simplified version of the influences of one component on another. So the brain is important, but also the rest of it is important. Other components include the remainder of the body, like the spinal cord, the genitourinary complex, the labia, the psychosocial, and endocrinology. So, there are these other parts and sub-parts, and of course, for every sub-part, you can go further and further down, as you go into the biochemistry of the endocrine system and then into the quantum physics, infinitely more complex and less relevant to treatment in a clinical setting.

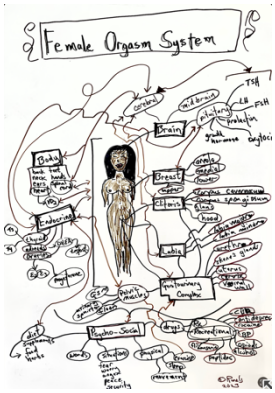

Figure 3. Major components of the female orgasm system with feedback loops.

But even with this simplified version of an infinitely complex system, these are the parts that, in my opinion, should be thought about on a first-order basis whenever trying to optimize sexual function for the female.

Now, consider that the only two FDA approved drugs that we have for libido in women are drugs that affect the brain—nothing that affects the clitoris.

Men have drugs that improve the function of the penis, why do women not have drugs that improve the function of the clitoris.

Even though we know that a larger clitoris correlates with improved orgasmic function and that testosterone can improve both libido and cause an increase in size of the smaller clitoris, there is still no FDA-approved form of testosterone for women

The history of the treatment of sexual dysfunction in men (focusing on the psychogenic with little direct-treatment therapies for the penis) is repeating with the treatment of sexual dysfunction in women (with no FDA approved drug that affects the function of the clitoris).

With this chapter, we will try and change that situation.

Anatomy of the Clitoris General Principles

So this is a beautiful picture, I think of the clitoral anatomy and going through the research. Here's some of my favorite papers about anatomy, but this one caught my eye as being the most demonstrative of what we're talking about. (see photo in the video at OrgasmCollege.com)

Here's a simplified version that everyone on this call could draw with their eyes closed, representing the structure of the clitoris, which is analogous to the penis or vice versa.

We all have the same parts (men & women): glans, body, corpus, cavernosum, and corpus spongiosum, and the traversing of those structures is mostly subcutaneous, so you are not able to see them.

Catching Up, An Overview

On the male side, we recently published a paper demonstrating improved function and increased size from improvement using platelet-rich plasma; we have multiple papers showing how to improve the cellular structure and function of the penis itself (Brandeis, 2023).[5]

Finally, even though there is still no FDA-approved drug to address the clitoris, we are gaining on the male research with studies in the female arena using both shockwave, hormonal therapies, and of course, our PRP procedures. Here are some of my favorites.[6]

Here's some regarding dryness, interstitial cystitis, and treating mesh pain. All these have to do with things that we didn't have back when I first introduced the O-Shot®.

So understandably, the sex therapists in 2010 had reason to think I was off base because, as the urologist did back in the eighties, not thinking there was a way to make what you're looking at the clitoris and surrounding structures healthier.

The idea of doing something other than psycho-family therapy seemed impossible. So 80% or more of treatment revolved around the brain versus direct treatment of the genitalia.

More Anatomy (you cannot easily fix what you do not recognize)

Okay, so let's get into more of the anatomy that I think is important.[7]

Tracing the illusive hidden clitoris

First, you have the glans—easily seen.

I sometimes have trouble understanding where exactly the rest of the clitoris lies on the body. So here you have pubic rami, and then you have the body of the clitoris; see the clitoral body; it branches off and becomes the bilateral corpus cavernosi.

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[5] Further research regarding the improvement of the cellular function of the penis can be found at PriapusShot.com/research

[6] These references with commentary and links can be found in the video (OrgasmCollege.com), at OShot.com/research, and in the references at the end of this chapter.

[7] This is better understood by watching the video at OrgasmCollege.com

In the photo, the labia minora has been peeled away, and you can see it comes up and bifurcates and one side goes up and continues to become the hood. The other side goes up; this is the bifurcation right there, and becomes the frenulum attached to the glands clitoris.

Innervation Matters (and so Size Matters)

Now if you look, the surgeons on the call, and I can see names, and there are quite a few surgeons on this call, will tell you that you can actually operate on the vaginal wall without pain. There's very little sensation with a touch of the vaginal wall.

But if you look at it, let me go back to this picture. If you look at just the front on this area, which is within heart's line has extreme sensation. It's innervated like the urethra within a men's penis. So touching a needle around the urethra, even on the outside within Hart's line, would be analogous to taking a fish hook and hooking it through the meatus of the man and piercing the urethra within his penis. So very sensitive. But once you get into the vagina and you see those horizontal rugae, you can touch the area with a needle, and there's no pain unless you go deep enough to touch the urethra.

The idea is that if it's penis in vagina sex or whatever stimulation is going on with the vagina, within the vagina itself, there's not much sensation. *Pleasure happens with pressure either anteriorly against the urethra with stretch.*

There is also pleasure with pressure against the surrounding clitoris.

And research shows that the closer the clitoris is to the vagina and the larger it is by an MRI study done by a female radiologist, the more that correlates. We're not saying causes, but it definitely correlates with the woman being more likely to have satisfaction and likely to not be in-orgasmic. So orgasmic function correlates with nearness of the clitoris to the vaginal wall and size of the clitoris, larger size being correlated with easier to orgasm.

A long way of saying is that with penis and vagina sex, size matters, and position matters.

Of course, I'm going to go back to it. The whole system matters, including the brain and the pituitary gland. And if you go read that or listen to that episode (about the brain), you hear me talking about a woman a hundred pounds overweight with empty sella syndrome and how that just made her infertile and completely goofed up her sexual function, nothing to do with the vagina. Once we fixed that, she became fertile, lost a hundred pounds, threw her diabetes medicines away, had a beautiful baby boy. So that's all brain. Now we're talking about the clitoris, but that's also important, and things happen.

So let's talk about, so this is the basic anatomy of it. It lies deep. Here's the nerve. Notice how superficial the nerve is. And importantly, so this is the right, it comes up, right? Remember *this is a bone, so it comes up. So if there's pressure here, you can have damage to that branch of the pudendal nerve and look right there.*

So what could cause that?

This is a female who loves riding bicycles.

Back during medical school, I loved doing triathlons. And when my dad was younger, and we did bike races, and we did triathlons, and sometimes I would climb off the bike, and my penis would be numb.

And I would think, “Well, that can't be good!”

I mean, it would be numb as if someone had given it a shot of lidocaine, and it wasn't so well known back then. But now we know that. I mean, here are some of the studies showing what happens with a

bicycle,[8] what happens with sexual function with a bicycle, and it's not good. But when I talk to even, most physicians don't seem to be aware of that risk. But when you look at this, it makes perfect sense that these critical nerves could be damaged by a bicycle.

If you look at just the basic research regarding platelet-rich plasma, and hopefully one day we'll have available stem cells (we don't have that yet in the US unless it's under the umbrella of an institutional review board-approved study).[9]

But here are some of the studies, and these are just my favorites.

Restoring Nerve to Restore Pleasure

There are a lot of them out there about how platelet-rich plasma can help reach regenerate nerve and blood flow. And so putting platelet-rich plasma around this area when there's been nerve damage could help. And we are indeed seeing that it helps and there's more and more research coming out to that effect. Okay, so nerve, clitoral glands, clitoris, the body of the glands, the corpus cavernosum, corpus spongiosum, and the dorsal nerve of the clitoris.

Now, I don't normally do this, but I'll show you, I'll just, you give me literally about 10 seconds, I'll show you what it looks like when we do our O-Shot® procedure. And then I want to talk some more about possible treatments for damage to the clitoris itself. So hold on a second.[10]

Remember that the clitoris was not even drawn into Grey's Anatomy at one time. So thankfully we're starting to catch up as far as it's becoming, at least talked about that, the anatomy in detail. But we still don't have a... Let me show you that research before I show you this picture. I like this study, and this is recently out too, this just came out this year, and you can see it's so new that it's in pre-publication form. And what they did was they took transgender men, so a body part that used to be a clitoris and now it's a penis. So these would be people who were women who transitioned to becoming men. And 42% of them never use testosterone. And then they look to see what happened and their sexual activity went up and they say here, their vaginal pain increased.

This is different than with a double X chromosome born a woman, still a woman vagina, in that there are receptors for testosterone and it can also often be helpful for dyspareunia or can help with pain. So this is counterintuitive, but the point is here that with women even transitioning to men, testosterone improved sex. It's so many papers. There are literally hundreds of papers out there now to this effect, yet we still do not have an FDA approved testosterone for women. If you give it to a woman, you have to take a version, an FDA approved drug for men and modify the dosage to give it to a woman, even though multiple studies.

And you say, well, why is that? Different discussion, but the short answer is there's different standards of proof and it's harder to get a drug approved for women than it is for men. Okay. The other thing that happens though with testosterone is that the clitoris becomes enlarged. And remember what we talked about the clitoris, the size of the clitoris correlates with orgasmic ability. So now we actually do have two treatments we just mentioned to help with that part of the female orgasm system. We have PRP with research backing it up, some of which I've published, most of which was published by someone else, less biased than I must be. And we have testosterone, much literature published and a growing body of research regarding using shockwave, which has been demonstrated in men and is becoming widely

[8] See the references regarding linking bicycle riding to sexual dysfunction at the end of this chapter.
[9] See references regarding the ability of PRP to trigger neurogenesis and nerve repair at the end of this chapter.
[10] To see a quick demonstration of the O-Shot® procedure, see the video that accompanies this transcript at OrgasmCollege.com

adopted. But we have less research demonstrating its effectiveness in women, such a peak at... Well, that's getting sidetracked, but that research is out there too and growing.

All right, so I was going to show you what it looks like when we do an O-Shot®, and then I think we'll be getting close to being done. I would love for you guys to tell me what I might've left out, what questions you have. As you know, we're together, we're constructing a overall picture of the female orgasm system that includes everything the sex therapist would treat to everything the urologist, the neurologist, the surgeon, all the different components of the system so that no one ever thinks that they have a magic bullet or the proverbial everything's a nail because they have a hammer. But I wanted to show you this picture.

When we do the O-Shot®, let's see right here. When we do the O-Shot®, part of it goes into the clitoris and part of it goes into the anterior vaginal wall.

How Dr. G Influenced the O-Shot® Procedure (it is about much more than a spot)

Remember Dr. Grafenberg's big idea was that the urethra is the most erotic part of a woman's body, which is, it was the whole urethra and pressure. He actually talked about observing female ejaculation before the G-spot was even talked about. And so that was his idea. And then the G-spot after Dr. Grafenberg became a subset idea of the idea that the urethra is erotic. And so our O-Shot® helps with that as well. But this is a picture of what it looks to get injection of PRP into the clitoris completely pain-free. And before I ever did this to a clitoris, I injected my own penis.

So analogous structure, and now we have multiple studies demonstrating that it could be helpful. Now you go back to this picture of the anatomy and imagine, remember PRP has been around for three decades now, and in wound care studies, dentistry, orthopedics, many studies demonstrate new blood flow and nerve growth happens with platelet-rich plasma. So now if you go back and you think about if you put PRP in that area, what's going to happen? And we've actually demonstrated with an ultrasound that the PRP, when you put it in the body of the clitoris actually does hydrodissect. I'll show you where it goes here in a second.

There we go. We're almost done. So it actually does, when you inject here, it hydro dissects into the corpus cavernosum. One of the radiologists in another Cellular Medicine Association group who did a lot of the original research with Viagra, brought his ultrasound machine to my office and we injected PRP here and demonstrated flow here. And we also demonstrated a change in the waveform that is analogous to going from a flacid to an erect penis. Anyway, I think that is a good overview of the anatomy of clitoris. And without going into too much detail about, remember any subject, you could just go infinitely into it. You could talk about the nerves and then you could talk about neuroscience and changes in membrane, electro potentials, which could show all the way down to physics and mathematics.

Critical Systems Analysis Theory and Finding the Boundaries

So you have to figure out where's the boundary of your system.

And usually that boundary is drawn at the level where the clinician thinks about it.

Let me see if we have any questions, if not, we'll end the discussion there. Let's see. Yep, we don't see any questions, so I hope you find that helpful. If you go to orgasmcollege.com, you'll notice that as I transcribe these, I'm adding usually more references and more diagrams and more information because

as I edit the transcript, I see things that we left out and I see things that need clarification. So always check out the transcript, and I'm hoping this is helping you either personally or with the care of your patients. Have a great day. Bye-bye.

(Next lesson we discuss more about how the clitoris can hide and how to find it and make it less bashful).

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