

Transcript Details

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Advances in HS: Staged CO2 Laser Marsupialization

Announcer:

You're listening to *On the Frontlines of Hidradenitis Suppurativa* on ReachMD. Here's your host, Dr. Steve Jackson.

Dr. Jackson:

This is *On the Frontlines of Hidradenitis Suppurativa* on ReachMD. I'm Dr. Steve Jackson, and joining me to discuss staged carbon dioxide laser marsupialization for hidradenitis suppurativa, or HS, is Dr. Barry Resnik. He's the Medical Director of the Resnik Skin Institute and HS Authority in Aventura, Florida, and a Voluntary Clinical Professor of Dermatology and Cutaneous Surgery at the University of Miami Miller School of Medicine. Dr. Resnik, welcome to the program.

Dr. Resnik:

It's really great to be here with you, Steve.

Dr. Jackson:

Now, let's start with some context. Dr. Resnik, where do you think current treatments for HS fall short, in particular with the classic surgical options?

Dr. Resnik:

Patients with HS need to know that there are both surgical and medical options, and, in the context of what we're doing, we've got three biologics, all of which work well.

But with the scarred tunneled plaques that patients develop in the context of classic HS, there really isn't any other way of getting rid of them. We'll get them under control, but they're still going to be there. I tell patients, these are like time bombs that explode, reset themselves, and don't tell you what time they're going to explode again. So really the only way to gain time without the bombs is to remove the bombs.

Previously, the only surgery that was really available for patients was called en bloc excision and primary closure. That's where they'll cut a huge piece of someone out. And when I say they, I'm talking about plastic, general, colorectal surgeons—the people who are getting involved with this—and this is what they were taught to do. I'm not casting aspersions, but it's not a great procedure for them, because the primary closure is going to be staples or suture that's trying to close a circle in a straight line, because none of these lesions are in an area where you can incorporate it in an ellipse, the way we would normally do skin surgery. Or they're going to harvest a piece of skin, do a split thickness skin graft, and mesh it to open it up so they can place it there. Or they're going to do musculocutaneous grafts, and these are not great options for patients. They devastate the anatomic landmarks there. When you have patients who have disease around and in the anus, around the perianal and perineal skin, and on the buttocks, they're losing the complete architecture. You have difficulty finding the anus when they're all done.

And then the healing time is rough. They're going to be in the hospital or under wound care with drains, and they're going to have wound VACs. And it has a very high recurrence rate and a very high infection rate. It's a just a devastating healing time, and it's going to come back.

Dr. Jackson:

With that background in mind, can you give us an overview of how staged CO₂ laser marsupialization works and how it can help fill those gaps you just described?

Dr. Resnik:

It's a straightforward procedure developed by my friend Paul Hazen about 15 years ago. What we do is, we're using a CO₂ laser. And we can do this in the office under tumescent anesthesia—that's the anesthesia that Jeff Klein developed for tumescent liposuction—or we can do it under general anesthesia in the surgical center. That's dictated more by the patient preference, number one, and number two, whether the areas are so scarred that it'll be almost impossible to gain local anesthesia, because it's hard to put the medicine where you need it.

But let's say we're doing it in the office. We've got them numbed up with the tumescent. It takes about an hour to take effect, and then we'll go in and we'll test. And then we're going to take a CO₂ laser in continuous waves with a collimated beam, and we're just going to cut around the area that you've outlined. And because we know where the disease is and where it's not, we're not taking extra skin. We're not doing an extra wide margin, so we can "get it all." We know where it is. Some people have done ultrasound to try to further delineate where we cut and where we don't. We haven't found that to be necessary when we're doing this procedure.

Once we've made that cut around it, we're going to loosen up the skin at the top or the side—whichever way the surgeon wants to go. And then we're going to use Allis or Babcock clamps to grab the skin, and then we're going to take the skin off the fat with the littlest bit of fat on the skin side, and we're going to peel it down. Because the tumescent anesthesia gives such great hemostasis, it's rare to have a lot of bleeding. I do give my patients tranexamic acid, either IV in the surgical center or by mouth before the procedure, and that really reduces any kind of post-surgical bleeding. And then I will peel that whole piece off, and it's going to leave the size defect that we outlined. And if it's in the axilla and it goes up onto the upper arm and onto the side of the breast or the chest, that's where I'm taking it. Once it's all gone, I will actually take a probe and go all the way around the periphery looking for tunnels that I missed.

We talk about a 98 percent local site cure rate. That's what we recently published just in August on 500 patients over 1,000 different sites with three different surgeons. And if we find that we've missed a piece—and usually you can tell when you do—we'll go in and take that little piece away. And then we're going to have them heal with second intention healing. We don't close it. We use Vaseline, non-stick pads, gauze, and tape. It's a very straightforward healing process. I want them functioning. I want them moving to the best of their ability, and they do, because they no longer have any pain.

Dr. Jackson:

For those just tuning in, you're listening to *On the Frontlines of Hidradenitis Suppurativa* on ReachMD. I'm Dr. Steve Jackson, and I'm speaking with Dr. Barry Resnik about treating HS with staged carbon dioxide laser marsupialization.

So, Dr. Resnik, now that we've got some background on the procedure, let's talk about the outcomes. What does the data show in terms of the recurrence rates, the scarring, and the quality-of-life improvement compared to the traditional approaches?

Dr. Resnik:

Well, unroofing in this context is not comparable to staged CO₂ because with unroofing, we're leaving the dermis in place, and we're just taking the roof off of a lesion. And generally, unroofing only really works with one or two tunnels. If you've got a plaque in the ant farm configuration that I like to talk about with patients, unroofing isn't going to do a really good job. Now, I know people who do it, and they like their results, but if I've got a plaque that's so big with so many interconnected ant farm-like tunnels, removing it is the best way to go.

We have a documented 98 percent cure rate, 98 percent success rate. We have a 0 percent infection rate. And remember, we're working in very dirty areas. We're working on the scrotum and vagina. We're working perianally, and they don't get infected. HS is not a disease of infection. The pus is inflammatory. It's a secondary issue. So the healing time is no longer a worry for these patients.

And look, every HS patient has to become a skilled wound care nurse, because they've got to take care of themselves. So I've tried to make the healing time as simple and functional as possible. I don't give them any restrictions, except I don't want them swimming in the ocean or a lake. And they can go into a pool once they've got granulation tissue laid down. It typically takes about two to four weeks after surgery to lay down granulation tissue, and I tell patients it's the soil that your body then seeds with skin cells. And we start seeing the wound shrink in size as it's healing from the periphery in. And they're doing Vaseline, gnostic pads, gauze, and tape. And initially, they're going to have a lot of exudate, because we put that tumescent anesthesia in there. And I do put tumescent in both conscious and with general anesthesia, because it gives us a lot of pain control afterwards and a lot of hemostasis.

So, after the exudative phase has passed, they just need a bandage large enough to cover the area and keep it occluded. If patients leave it open, it'll sting and burn. They've got to bathe and shower and stuff, but that's not letting it sting and burn. So when they are bandaging this, it's as small as they need to keep it covered, and then they can be functional. They can pick up their kids. They can do whatever they tolerate. They can do whatever they want. Working out the lower body or wherever we're dealing with, you don't want to disturb it. But at a month, they can start doing whatever they tolerate.

I always tell patients, it can take anywhere from three to six months to heal—sometimes less, sometimes more. The smaller the areas we're doing, the more quickly it's going to heal. The larger, the longer it's going to take. I've got a handful of patients who have taken longer than a year to heal, and we've taken care of them, ultimately, by using pinch grafting to help bring the healing process up to speed again. But patients routinely say this hurts one tenth the pain of a flare, and they're just living their lives the way they never did before.

Dr. Jackson:

Now, how about adverse events? What does the safety profile of this approach look like compared to those more traditional procedures?

Dr. Resnik:

When I talk to patients, I talk to them about the risks, the benefits, and the alternatives. The risks—well, we're going to get a scar. That's the risk, but that's the goal. You can't get HS in a scar, because you don't have hair follicles in a scar. To date, we have not had keloids in types I to VI skin. We've got a couple of what we might call hypertrophic scars, but it's more of a tighter scar, because we took so much away and it healed with a bit of decreased range of motion, which is another thing that we'll bring up. And I always tell patients, "You might not be able to ref in the NFL, but I think any college would take you," because maybe they don't have 180 degrees, but they have 172 at the end.

Numbness—any time you cut skin, you're going to end up with numbness there. I don't have anyone with muscle weakness. I'm not touching muscle. Infection, 0 percent. My infection rate—I started doing this procedure in 2015—0 percent. And that's what we documented in the study. That's pretty much it. Prolonged healing is a risk, and we've already talked about that. There really isn't a lot of downside to this.

Dr. Jackson:

And finally, Dr. Resnik, looking ahead for a moment, where do you see staged CO₂ laser marsupialization fitting into the broader treatment landscape for HS?

Dr. Resnik:

I hope that it will be the surgery that physicians move to as soon as they see that they've got patients with these thick, scarred, tunneled plaques. In the overall milieu of HS, I hope that we won't have patients with these thick, scarred, tunneled plaques, because we will have started diagnosing them much earlier. We will have instituted better controlling therapy earlier, so that we catch them before they get the tunnels. It's the tunnels that really dictate how bad it's going to be for them. So it should be the go-to for everybody. And I'm in private practice. I do this on a regular basis, along with everything else that I do, because that's how I learned from my dad. My practice is a little bit of everything, but I want to be that person for everybody.

Dr. Jackson:

And with those insights in mind, I want to thank my guest, Dr. Barry Resnik, for sharing his expertise on staged carbon dioxide laser marsupialization for HS. Dr. Resnik, it was great having you on the program.

Dr. Resnik:

I look forward to doing this again.

Announcer:

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