Stem Cells and Kidney Disease: A New Frontier in Regenerative Medicine Transcript

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Stem Cells and Kidney Healing Basics

Did you know that by the time you have reached 60, you have lost about 90% of the stems since you are born with that dramatic decline is one of the reasons our bodies don't heal and regenerate the way they did when we were younger.

But what if we could tap into a younger, more potent source of these healing cells to help restore kidney function? This is doctor Talks. Today, we are diving into one of the most exciting developments in kidney health stem cell therapy.

And I'm going to share some fascinating research that's changing how we think about treating advanced kidney disease. Along with what I'm seeing work in my own practice at Holistic Kidney Institute.

So let's start with the basics. What exactly are stem cells? Think of them as your body's master cells. They have two remarkable abilities. First, they can make copies of themselves.

And second, they can transformed into specialized cells like kidney cells, hospitals or calculators. From the moment you are conceived until the day you die, your body is constantly creating new cells to replace the ones that you have worn out.

You were born with millions of these incredible stem cells and they are responsible for growth, repair, and healing. But here's the catch. We are born with the fixed number of stem cells, and afterward the decline rapidly reset. Population.

British scientific journal nature shows that humans have somewhere between 50,000 and 200,000 adults. Tensors that can turned into any of the 220 plus types of cells in our bodies.

When we are newborns, we have about 10 billion circulating mesenchymal stem cells. By the time we hit our teenage years, that number drops to maybe 2.5 billion.

How Stem Cells Decline With Age

By the age 60, we are down to just a fraction of what we started with. That's why injuries take longer to heal, why we develop chronic diseases, and why kidney function naturally declines as we age.

Now, let me share something really promising that came out of Mayo Clinic recently. They conducted a study on patients with end stage kidney disease who needed hemodialysis.

When someone needs dialysis, doctors typically create what's called and if every fistula. Basically, they connect an artery and vein in the arm so blood can flow through for the dialysis machine to filter.

The problem is these severe fistulas feel about 60% of the time because the wheel narrows and becomes inflamed. So the Mayo researchers tried something innovative.

They took fat drives, stem cells from the patients themselves and injected them into the vein before a fistula surgery. What they found was remarkable.

Most of the patients who received their own stem cells had EVs that healed faster and lasted longer. The stem cells were releasing anti-inflammatory signals and growth factors that helped prevent that damaging inflammation and

narrowing.

This is huge because inflammation is at the root of so many health problems, not just when narrowing in dialysis patients, but heart disease, diabetes, hypertension, and yes, kidney disease itself.

These mRNA stem cells have powerful anti-inflammatory properties that can help the body heal. But here's where it gets interesting. Not everyone in that study responded the same way to the stem cells.

Some patients had excellent results, while others didn't improve as much.

Mayo Clinic Study on Dialysis Fistulas

The researchers discovered that they were specific genetic biomarkers that predicted who would respond well. This is exactly what we talk about in functional medicine.

Personalized treatment based on your unique biology. What works for one person might not work for another. And that's why through assessment and testing, we think it is very important.

Now this brings us to a important consideration in that study. They use the patient's own fat drive stem cells. And while that showed promising results, there is a limitation.

We need to talk about. The quality of your own stem cells declines dramatically with age. If you're 55 or 65 and dealing with kidney disease, your stem cells aren't as robust as they were when you were 25 years.

They're older. They've been exposed to years of inflammation, toxins, and stress, and they simply don't proliferate as quickly or work as effectively.

That's why at Holistic Kidney Institute, we explore regenerative medicine approaches. We often use umbilical cord derived mesenchymal stem cells and exosomes.

Now, you might be wondering if these cells come from someone else. Won't my body reject them? That's a common concern. And it's a great question. Here's what's fascinating about umbilical cord stem cells.

They are what we call immuno privileged or immuno tolerant. That means your immune system don't recognize them as foreign invaders. They have a very low expression of what's called MHC, which is major histocompatibility complex, which are basically the markers on the outside of your cells that your immune system uses to determine if something is friend or foe.

Because these umbilical cord stem cells have such low levels of these markers. They essentially fly under the radar of your immune system. But it's not just invisible.

These cells actually release their own anti-inflammatory signals, things like transforming growth factor, beta and prostaglandins that communicate with your immune system.

And said, hey, no need to attack. We are here to help.

Why Umbilical Cord Stem Cells Matter

So instead of triggering an immune response, they actually calm inflammation throughout the body. And because these cells come from and vehicle cord tissue, they are incredibly young and potent.

They haven't been exposed to decades of environmental toxins, poor diet, stress and all the other factors that degrade our own stem cells. They proliferate faster, they produce more healing growth factors, and they can work for much longer periods of time than adult stem cells from older body.

Let me also clarify something important. When we talk about stem cell therapy for kidney disease, we are often using a combination approach. We might use the actual stem cells, which are living cells with a nucleus that can replicate along with exosomes.

Now, excellence are not cells. They are tiny packages about 100 times smaller than a stem cells. Think of them like little delivery vehicles filled with good factors, proteins and signaling molecules.

One vial of exosomes might contain 10 to 50 billion of these healing packets, compared to 25 to 30 million actual stem cells, in a way. They work together synergistically to enhance repair and regeneration.

And that actually reminds me of a patient I recently worked with a woman in her early 60s with stage four kidney disease. Her GFR was around 22, and she was being told by her kidney doctor that dialysis was inevitable.

Probably within that year she was experiencing fatigue, brain fog, swelling in her legs and her quality of life was really deteriorating. After doing a comprehensive functional medicine assessment, we identified several root causes significant gut inflammation, heavy metal fog, city, and severe nutrient deficiencies.

We address those issues with our personalized protocol, and we also incorporated regenerative medicine using umbilical cord derived mesenchymal stem cells and exosomes.

Over the next several months, we saw her kidney function improved to a GFR of 34. Her energy came back, the swelling dissolved, and even till this day she is dialysis free and maintaining stable kidney function.

Exosomes and a Patient Success Story

Now I want to be clear everyone's body is different and what worked for her might not be the exact right solution for another person. This is highly personalized medicine.

Some patients see dramatic improvements. Others see more modest gains. It depends on their unique root causes, their bodies healing capacity, and how they respond to treatment.

And this is where I want to emphasize something really important. If you are considering any kind of regenerative therapy like stem cells, quality matters enormously.

Not all stem cells are produced equally. You need to make sure you are working with the reputable sources that provide high quality, properly screened umbilical cord tissue.

Some products out there contain fillers, contaminants, or even heavy metals, which is the last thing someone with kidney disease needs. But kidney disease?

You have to be especially careful about what you're putting into your body. The other critical piece is that regenerative medicine shouldn't be a stand alone treatment.

It works best when you are also addressing the root causes of your kidney decline. Whether that's a chronic inflammation, gut dysbiosis, environmental toxins, nutrient deficiencies, or metabolic dysfunction, the stem cells can help promote healing and tissue repair.

But if you are still exposing your body to the same factors that damaged your kidneys in the first place, you're not going to get optimal results. Think of it this way if you had a leak in your roof and water was damaging your ceiling, you wouldn't just bash the ceiling without fixing the roof, right?

You address both. That's how we approach regenerative medicine at the Holistic Kidney Institute. We identify and address the underlying causes while also supporting the body's healing mechanisms with therapies like stem cells and exosomes.

Now, I also want to mention that this field is still evolving.

Quality, Root Causes, and Safety

The Mayo Clinic study I referenced earlier was a phase one trial with 21 participants. We need larger clinical trials to fully understand the best protocols, ideal dosing and which patients would benefit the most.

That's why I always tell my patients I'm not your doctor. Just based on listening to this podcast. I don't know your specific situation, what's going on with your labs, what other medications you're taking or what your unique root causes are.

So please, before making any significant changes to your treatment plan, consult with a physician who can assess your individual needs. But what I can tell you is that regenerative medicine is opening up possibilities that weren't available even five years ago.

The research is promising, and I'm seeing encouraging results in clinical practice for patients with advanced kidney disease who are running out of options.

This can offer genuine hope, not false promises, but real potential for improving quality of life and potentially delaying or avoiding dialysis. So what are the key takeaways here?

First, stem cells declined dramatically as we age, which contributes to our decreased healing capacity. Second, research is showing that a stem cell therapy can help with renal function in dialysis patients by reducing inflammation.

And inflammation is at the root of so much kidney damage. Third, umbilical cord drives stem cells offer advantages over your own adult stem cells because they are younger, more potent, and produce more healing factors.

And fourth, these umbilical cord stem cells are immuno privileged. Your body won't reject them, making them a safe option when sourced from quality providers.

If you're dealing with kidney disease and you're interested in exploring regenerative medicine as part of a comprehensive, holistic treatment plan, I encourage you to do your research, ask questions, and work with physicians who understand the science and limitations of these service.

At the holistic.

Key Takeaways and Closing Remarks

In the Institute, we combine regenerative approaches with function and medicine to address root causes and support your body's natural healing capacity.

This is personalized medicine at its finest, using cutting edge science while respecting that each person's journey is unique. The goal isn't just to manage your kidney disease.

It is to give your body the best possible chance to heal and thrive. And that requires looking at the whole picture, not just one intervention in isolation.

If you want to learn more about how we approach kidney disease at the Holistic Kidney Institute or explore whether regenerative medicine might be right for you, visit our website at Doctor business.com, or give us a call to schedule a consultation by now.

Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health. Each day is a new opportunity to make choices that empower your wellbeing.

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