

Mayo Clinic News Network

Title: Another Promising Application for Stem Cells: Crohn’s Complications / Date: May 2016

Intro: New research at Mayo Clinic is bringing hope to hundreds of thousands of Crohn’s disease patients. Their extreme pain from complications is both physical and emotional and, for many, incurable. But, an innovation using the patient’s own stem cells seems to work extremely well in early testing. Eventually, researchers say, it may be used to treat Crohn’s disease in general. Here’s Dennis Douda for the Mayo Clinic News Network.

Video

Audio

Total running time [2:33]	/// VIDEO
Dr. Allan Dietz speaking	“We view this lab as a drug manufacturing company. To be able to test any drug, it’s critical that you actually develop consistency in that drug manufacturing process.”
Dennis Douda speaking	In this case, the drug is stem cells. One of the latest therapeutic applications at Mayo Clinic aims to harness their healing properties to cure a problem that torments roughly one-fourth of the 700,000-plus Americans with Crohn’s disease, an inflammatory bowel condition.
Dr. Eric Dozois speaking	“The disease kind of bores a hole through the bowel, and, then, that tracks out somewhere.”
TITLE: William Faubion, M.D. Mayo Clinic Gastroenterology & Immunology	“And, having a draining fistula around the rear end is a chronic problem. People really, really suffer with this.”
TITLE: Eric Dozois, M.D. Mayo Clinic Colon and Rectal Surgery	“It’s one of the most frustrating parts of my practice, because I have so little to offer these patients.”
Dennis Douda speaking	The potential solution is the result of years of research and a dynamic Mayo Clinic collaboration.
Dr. William Faubion speaking	“So we got Al together, Eric together and me ... ”
Dr. Allan Dietz speaking	“... we developed an approach in which we could bind the cells to a matrix ...”
Dr. Eric Dozois speaking	“... which is just a synthetic material that can be placed through that track. So, it seals the inside, and, then, it tries to get the body to heal around it.”
Dennis Douda speaking	Back to the stem cells. Dr. Allan Dietz is director of Mayo Clinic’s Human Cell Therapy Lab.

TITLE: Allan Dietz, Ph.D. Mayo Clinic Human Cell Therapy Lab	“These are the cells that, when you have a wound of some type, they play an important and critical role in initiating repair of that tissue.”
Dennis Douda speaking	Harvested from the patient’s own fat, the cells are separated – and then cultured to expand their numbers many times over. Then tens of millions of them are applied to a dissolvable suture material in the form of a plug. And, there is none of the stigma associated with fetal stem cells.
Dr. Allan Dietz speaking	“Those cells that go in there we commonly refer to as mesenchymal stromal cells, mesenchymal stem cells or adult stem cells.”
Dr. Eric Dozois speaking	“I, in the operating room, pull that plug through the fistula track and secure it in place. It takes about 20 minutes. It's an outpatient procedure. They recover very well from it. They have very little pain.”
Dr. William Faubion speaking	“It’s a privilege to work in an environment where everybody is sharing the same mission, which is healing patient suffering.”
Dr. Allan Dietz speaking	“It also immediately brings up: Where else can we apply it?”
Dr. Eric Dozois speaking	“And, I think this is the future – that we work together to solve these complicated problems.”

TAG: Although this phase I clinical trial is still underway, and final results are not yet available, the vast majority of patients’ fistulas have healed completely. The same research team is also investigating how to use this process to treat other nonhealing fistulas and Crohn’s disease as a whole.