

BroadcastMed | Another Promising Application for Stem Cell

[MUSIC PLAYING]

ALLAN DIETZ: 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.

NARRATOR: 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.

ERIC DOZOIS: The disease kind of bores a hole through the bowel. And then that tracks out somewhere.

WILLIAM FAUBION: And having a draining fistula around the rear end is a chronic problem. People really, really suffer with this.

ERIC DOZOIS: It's one of the most frustrating parts of my practice, because I have so little to offer these patients.

NARRATOR: The potential solution is the result of years of research, and a dynamic Mayo Clinic collaboration.

WILLIAM FAUBION: So we got Al together, Eric together, and me.

ALLAN DIETZ: And we developed an approach in which we could bind the cells to a matrix.

ERIC DOZOIS: 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.

NARRATOR: Back to the stem cells. Allan Dietz is director of Mayo Clinic's human cell therapy lab.

ALLAN DIETZ: 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.

NARRATOR: 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.

ALLAN DIETZ: Those cells that go in there we commonly referred to as mesenchymal stromal cells, mesenchymal stem cells, or adult stem cells.

ERIC DOZOIS: I, in the operating room, pull that plug through the fistula track, 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.

WILLIAM FAUBION: It's a privilege to work in an environment where everybody is sharing the same mission, which is healing patient suffering.

ALLAN DIETZ: It also immediately brings up where else can we apply it.

ERIC DOZOIS: I think this is the future. That we work together to solve these complicated problems.