Mayo Clinic Q & A - Hyperthermic intraperitoneal chemotherap...

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SPEAKERS

DeeDee Stiepan, Narrator, Dr. Travis Grotz

N **Narrator** 00:01

Coming up on Mayo Clinic Q&A

D **Dr. Travis Grotz** 00:03

HIPEC is like a chemical to just kind of sterilize the microscopic stuff the surgeon can't see. And so that's why, combined with surgery to remove everything that we can see and then chemotherapy to get rid of the stuff we can't see, those two together then increase our success rate our likelihood of the cancer not coming back.

N **Narrator** 00:21

HIPEC or Hyperthermic Intraperitoneal Chemotherapy is used for many patients with advanced abdominal cancers. It's an alternative to traditional chemotherapy or radiation therapy. HIPEC is placed directly in contact with the tumors to kill cancer cells that may remain after surgery. And since this type of chemotherapy doesn't go throughout the body, higher doses of the drugs can be used.

D **DeeDee Stiepan** 00:45

Welcome everyone to Mayo Clinic Q&A. I'm Dee Dee Stiepan sitting in for Dr. Halena Gazelka. HIPEC stands for Hyperthermic Intraperitoneal Chemotherapy. Hypothermic means warm or hot, intraperitoneal means inside the abdominal cavity, which is encased in a sac called the peritoneum. HIPEC is used in conjunction with cancer surgery, using high dose chemotherapy to kill microscopic cancer cells inside the abdominal cavity. Heating the chemotherapy drugs

enhances the procedure's effectiveness. When the chemotherapy is hot, it penetrates the tissue more deeply increasing the number of cancer cells it can reach. Here with us to discuss is Dr. Travis Grotz, a surgical oncologist at Mayo Clinic. Welcome to the program. Thanks so much for joining us.

D Dr. Travis Grotz 01:33

Good morning, Dee Dee. Thanks for having me.

D DeeDee Stiepan 01:35

Of course. So what what cancers can be treated with HIPEC and which patients would be eligible for this?

D Dr. Travis Grotz 01:41

Sure. So HIPEC, as you said, is kind of regional chemotherapy in the abdomen. So really any cancer that's just localized in the abdomen on the surface of the peritoneum, like you said, you know, could be a candidate. There are certainly some tumors that have been well studied, and we know for sure, based on studies and data that works well. So those cancers are cancers of the colon, cancers of the appendix, cancer to the ovaries, cancer to the stomach, and there's even a cancer of the lining of the peritoneum called mesothelioma. So those would be the cancers I think that are well studied and well accepted. You know, there are always rare tumors that we have less data for such as cancer to the pancreas or gallbladder or small intestine, that we don't know yet, if that's the right treatment.

D DeeDee Stiepan 02:32

Sounds good. Can you explain sort of in lay terms how exactly this works?

D Dr. Travis Grotz 02:36

Sure. So the way the way I kind of explain it to people is that it's like if you have a dirty, countertop or table, you want to clean off all the dirt and grime and stuff. And so surgery, the surgical part of the HIPEC is to remove any tumor the surgeon can see. But you know, if you want to eat on that countertop, you want it clean and sterile and get rid of the bacteria. So we use chemicals like bleach or anti-bacterial disinfectants to clean the countertop. So HIPEC is like a chemical to just kind of sterilize the microscopic stuff the surgeon can't see. And so that's why combined with surgery to remove everything that we can see, and then chemotherapy to get rid of stuff, we can't see, those two together then increase our success rate or likelihood of the cancer not coming back.

D DeeDee Stiepan 03:25

That's a great explanation. I like that comparison. So who can perform HIPEC?

D Dr. Travis Grotz 03:31

So you know, HIPEC is a pretty complex procedure. And so it takes a there's a long learning curve from the surgeon standpoint, the hospital standpoint, the anesthesia, the whole team standpoint. So it takes specialized training. So most places, most surgeons who do it are what's called surgical oncologists, which are cancer surgeons who are general surgeons who have done another two years of additional focused training in cancer surgery. And part of that two year time is dedicated to HIPEC. So cancer surgeons and then also gynecological oncologists are also, for ovarian cancer, also are specialized in HIPEC.

D DeeDee Stiepan 04:14

Very good. And what can patients expect to experience during a HIPEC procedure?

D Dr. Travis Grotz 04:20

Sure, I think this is probably one of the hardest questions to answer because it's very variable depending upon the surgery component of it. So some patients may have lots of tumor and may need a more extensive surgery component of it. And so obviously, the more extensive the surgery will be, the longer the recovery, and can be you know, higher risk of complications and things like that. And some people have very little tumor in their abdomen and so the surgery can actually be very minimal. And so those patients may recover much quicker. And then sometimes we even do the HIPEC alone without surgery. And so that, you know, obviously would have a different recovery. But in general, I would say, the chemotherapy, what it adds to or HIPEC, what it adds to the surgery is probably, you know, some fatigue. I think I always warn patients, it's going to take several months for them to get their stamina level up, it just kind of wears people out. I think there's also a component, you know, your bowels are bathed in chemotherapy. So there's some irritable bowel kind of symptoms that people can experience like gassy abdominal cramping, you know, intermittent nausea or diarrhea. It's generally mild, and again, resolves over a few months, but it's something that people can experience. And then in general there's less side effects than giving it through the vein. And that's, that's the whole reason why we do the HIPEC is because less of it's been absorbed. So there's less side effects, in general.

D DeeDee Stiepan 05:49

What are the risks of this procedure?

D Dr. Travis Grotz 05:53

Sure, so you know, the risks of HIPEC, again, just the HIPEC portion, you know, the chemo, again, is usually not as much of it as absorb, but some can be. And so some, some chemotherapy drugs we use, depending on the type of cancer, can be hard on the kidneys. And

so there's certain things that we do to decrease that risk. And usually, using those parameters, or those extra steps, minimizes that risk. Again, the fatigue, we talked about, the irritable bowels we talked about. It can drop your counts, again, usually like your white cell counts and things like that. Usually, that's mild and not, you know, really a problem. But another thing to watch out for, after surgery or after HIPEC.

D DeeDee Stiepan 06:38

And what are we talking what kind of success rate does this HIPEC procedure have?

D Dr. Travis Grotz 06:43

Sure, so that's, you know, it's very variable again, and it depends on two things really. I think the two most important. One is the ability of the surgeon to get all the tumor out. And so when surgeons are evaluating patients if they're candidates, they have to be confident they can remove all the tumor. And so that's a critical step is being able to remove all the tumor, in terms of success. And then second part is the type of tumor. So some tumors are slower growing, and are maybe more sensitive to chemotherapy and are also less invasive, meaning less sticky, so we can peel them off pretty easy. And so those tumors like, the classic Pseudomyxoma Peritonei, which is jelly belly is another name for that, where it's a tumor of the appendix, it's very mucinous, a lot of jelly. Those tumors, you know, the survival, long term survival can be quite high 60, 70%. So that success rates very high. In some tumors, very aggressive tumors, like stomach cancer, colon cancer, you know, the success rate might be lower long-term success rate, you know, more in that kind of 25 to 35, 40% range. So, that's kind of long term success, short term success, I think of as, too, as an important, too. I think, you know, chemotherapy is no fun. And so the surgery, oftentimes, even if we're not successful in the long term, can extend people's survival in the short term, and provide time off of therapy, where people don't have any cancer, they're not getting any treatment. And that timeframe is, you know, variable again, but at least, usually on average, provides some time a year and a half or two years of time without any cancer recurrence, and off of therapy. So that can be a short-term benefit as well.

D DeeDee Stiepan 08:43

Very good. You talked a little bit about what recovery is like for patients kind of depends a little bit, is there anything else that people should know about recovery?

D Dr. Travis Grotz 08:53

Yeah, I mean, I think, it might be helpful to talk to other patients who have gone through it, and there's a lot of online websites and other patients, and there are podcasts like this and other webinars that kind of explain it. But again, everybody's individual, so it's hard to take too much from each person's experience. But I think, again, people just need to know that it is a big surgery, and there's, you know, they'll need some help at home and some recovery. And I think one of the hard things people struggle with is that general, several month period of, again, the fatigue and not feeling the greatest and I think it kind of leads to some depression. I think it's

hard to feel kind of blah for a couple of months. And so, I think getting that support from your family and friends and recognizing that and trying to find joy in life and things around you and what you can do is helpful. And so I think that's something we try to help patients with recovery point to.

D DeeDee Stiepan 10:01

Absolutely. That's so important. What are some questions patients should ask their health care professionals about HIPEC, when they're, you know, when they're at these appointments?

D Dr. Travis Grotz 10:11

Yeah, I mean, hopefully they're getting a good explanation like this about what to expect about the surgery. You know, there's the surgery side of the HIPEC, there are, surgeons who can do laparoscopy, which is minimally invasive surgery, where they stick a camera in and take a look around to see where the cancer is we can get scans like CT scans, MRIs. So we can get a good idea of how extensive surgery would be. But there's always a little bit of unknown, which I think is sometimes hard for patients. Because at the end of the day, our goal is to get all the tumor out. And so there might be, when we get in there, we might see tumor we didn't see before on the laparoscopy or the CT scan. And, and so surgery can sometimes change in the operating room. Again, the goal is to get all that cancer out and, you know, obviously have good outcome in terms of quality of life and recovery. And so that's a fine balance, that's always, you know, what the surgeons trying to strive to get. So I think, they need to learn from the surgeon, what they anticipate the surgery would look like, and how extensive it would be. But they have to recognize there's going to be some flexibility. I think, again, it's a very complex surgery. So I think, it is one of those ones where there's a direct volume to outcome relationship in terms of how patients do. And, most surgeries, you know, you do 20 or 30 of them, and you've kind of gotten over the learning curve, and surgeons are competent and comfortable with it. But this surgery, actually, the research suggests it's closer to 120, 150 procedures before the outcomes are really ideal. And so I think it's important, not just from the surgeon standpoint, but the whole institution and having the whole process of medical oncologist and their involvement and chemotherapy. And having the nutritionists and the nurses and the anesthesiologists and the whole multidisciplinary team I think is really important. So those are things to ask about, I guess.

D DeeDee Stiepan 12:15

Absolutely. Yeah, that's very interesting. Is HIPEC available at all cancer centers? And is it covered by insurance?

D Dr. Travis Grotz 12:23

Good questions. So like I said, again, it is somewhat regionalized, just given the complexity of it. So not available, probably every cancer center, but it is available at most, or a lot of cancer centers. There are, you know, several that are very high volume, and there's many that do a fair amount. As far as insurance coverage, that's always a tough one because it's every

insurance is different. But again, I think the ones I just mentioned before, colon, appendix, stomach and ovarian cancer, there's very good data, you know, high level data research trials, that suggests that there's a significant benefit to the HIPEC portion of the procedure. And so those in general are covered by insurance companies. The other ones where we have less data for those are a little bit tougher, just because they're either less common or less well studied. And so those are a little harder sometimes to get insurance to cover.

D DeeDee Stiepan 13:27

Good to know. Our thanks to Dr. Travis Grotz, a surgical oncologist at Mayo Clinic, for being with us today. Thanks for the great conversation.

D Dr. Travis Grotz 13:36

Thanks, Dee Dee. Appreciate it.

N Narrator 13:38

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