



Transcript:
Season 4, Episode 5
Heart Matters: Exploring Innovative Heart Treatments

Maayan Hoffman:

Hello and welcome to the latest episode of Hadassah On Call: New Frontiers in Medicine. I'm your host Maayan Hoffman.

By the time you hear this message we'll be in the month of February. It's significant because it's American Heart Month, and Valentine's Day. Though here in Israel we don't really celebrate Valentine's Day, we celebrate Tu B'av, which usually falls in August and is considered the holiday of love. But right now, here in Israel we're not feeling a lot of love among each other and certainly from the rest of the world. Whether you're on the right or you're on the left, agree with the government or don't, it's challenging to see Israel under the international magnifying glass again, being scrutinized for carrying out a democratic debate.

Issues of religion in states, the role of the courts and how we manage the territories located over the green line are forever in the backgrounds here. Most of the time you don't feel it. But lately, with tens of thousands of people going out and protesting in the streets and articles being written by the New York Times, by CNN, it's hard not to notice. The good news is we have a vibrant Jewish state. We may not always agree with its policies, but it's ours and it's a safe haven and a light unto the nations. And for that we should count our blessings.

Anyway, as we get ready to talk about American Heart Month I thought it would be important to share some data with our listeners. According to the CDC, for example, heart disease is the leading cause of death for men, women, and people in general of most racial and ethnic groups in the United States. It's also the leading cause of death globally according to the World Health

Organization. One person dies every 34 seconds in the United States from cardiovascular disease. An estimated 17.9 million people died from cardiovascular disease in 2019, representing 32% of global deaths. Of these deaths, 85% were due to heart attack and stroke. It's important to detect cardiovascular disease as early as possible so that management with counseling and medicines can begin. And that's why we have a special guest today, Dr. David Planer, Director of Interventional Cardiology here at Hadassah.

Let's welcome our guest. Hello, Dr. Planer.

Dr. David Planer:

Hello, Maayan, and thank you for the kind invitation to be your guest.

Maayan Hoffman:

Of course. We're so happy to have you. Now we're going to want to talk about the signs and symptoms of heart disease and of course some preventative actions that we can take. But before we jump into Heart Month specifically, I actually want to talk a little bit more about your department. You're really doing some very innovative out-of-the-box work. I just saw last month, for example, in January that a 69-year-old patient was rushed to Hadassah Hospital Ein Karem, suffering from pulmonary embolism, a blood clot that travels to the lungs, blocking the blood flow and usually people die. But that didn't happen here because you did something very unique. Tell me what that was.

Dr. David Planer:

So that was indeed a 69-year-old gentleman, generally healthy, that was rushed to Hadassah Mount Scopus, the other campus of Hadassah, with a pulmonary emboli that was high risk pulmonary emboli. That means that his saturation of oxygen in the blood was very low, he was hardly breathing, and his blood pressure was on borderline of being shocked. Unfortunately, a day before he had a chest trauma that... He had actually three broken ribs. So, the treatment with thrombolytics, medication that actively dissolved the clot is contraindicated in these cases. So, we had to think about a solution that will improve his condition immediately without giving him too much medication that will put him in danger of chest bleeding.

Maayan Hoffman:

And now I know that the system that you use is FDA approved, but it was the first time in Israel that such a system was used. Is that correct?

Dr. David Planer:

Yeah. This system just recently got the approval from Ministry of Health of Israel to be used in acute pulmonary emboli. And we thought, I mean, we weren't on call this night and we got the call in Friday, 10:00 PM that the patient needs treatment and nobody knows how to treat. So, we said, "Okay, this is the right treatment for this patient." We were able to call from home

people who were involved in the procedure, Dr. Gabi Elbaz, Dr. Mota Golumb and myself, and we transferred the patient from Mount Scopus directly to our cath lab.

Meanwhile we brought the company with the support team from abroad online, and we organized the case, and we started the case around midnight Friday night just to say... So, we got two calls in parallel from Magen David Adom, the emergency services. They're bringing in two acute MI cases. So, we had the four rooms working in parallel treating two patient in critical condition and two acute MI patients. We managed to retrieve the clot from the main pulmonary artery of this patient. And the patient was amazing, improved immediately on the table. He said, "Okay, now I can breathe." His blood pressure was improving, and we felt that he's in good condition, we were able to see all the clots that were taken out of his pulmonary arteries, and he was transferred to the ICCU and recovered uneventfully for the next few days and was discharged from them uneventfully.

Maayan Hoffman:

And you weren't nervous to use a procedure for the first time in Israel?

Dr. David Planer:

We weren't nervous because we were excited, actually. We weren't nervous because we feel very comfortable with the team. You are using a new tool, but you've been there before, so you feel comfortable in doing all the access and all getting the big introducers into the pulmonary artery. And I know that the team is very professional and know exactly what are the pitfalls and how to manage not to get into these pitfalls, and to go through even a new procedure without any complication. We had the support of the company to tell us about all the technical details, how to do the procedure in the most efficient way, and that was very helpful.

Maayan Hoffman:

If you're enjoying this episode, you'll want to check out our previous episode with Dr. Hagai Levine, head of Environmental Health at the Hadassah Hebrew University Braun School of Public Health and Community Medicine. He talks about a new study that shows sperm counsel have declined worldwide over the past decade by around 60%. You'll hear what's contributed to this drastic drop, which can impact fertility, including negative exposures in the womb.

Dr. Hagai Levine:

But what about other health measures? And here I found miraculously that sperm count are not only the best indicators that we have for fertility for men, for [inaudible]. It's not perfect, but that's the best indicators that we have. But also an indicator of men's general health.

Maayan Hoffman:

Do you want to know about the serious problem we have on our hands, and what Dr. Levine recommends we do to stop it? You can find that episode of Hadassah On Call on Apple Podcast,

Google Play or wherever you get your podcasts, or on the web at hadassah.org/HadassahOnCall. That's hadassah.org/HadassahOnCall. And now back to our conversation with Dr. David Planer, director of the Department of Interventional Cardiology.

Maayan Hoffman:

It's really incredible, but it seems to be a trend in your department that you think out of the box, you're doing procedures that most hospitals in the state of Israel wouldn't do. Maybe give us a couple of other examples of what's gone on this year. I mean, this was in January, so that was in 2023, but in 2022 I think there were several of these incidents.

Dr. David Planer:

Yeah, I can say without reservation that we are a unique department. I think our uniqueness is the team, first, that we are able to get people from different disciplines and work together and provide the best treatment for the patient. We're also very active in the structural heart interventions and peripheral, including complex aortic intervention. That gives us the multidisciplinary approach to every patient that needs not a straightforward treatment. Another very important point is I can proudly say that our equipment in the cath lab and the infrastructure is the leading, cutting edge, what you see in the most advanced places in the world. So, we're able to do hybrid procedure in the cath lab and to bring people from different disciplines working together. Just a couple of examples.

Maayan Hoffman:

Yeah, tell us some examples.

Dr. David Planer:

We had an extreme case of a patient came in with bacteremia, which means that she has bacteria in the blood that actually hit two places in her cardiovascular system. The aortic valve and descending to [inaudible], which is the main artery of the body.

Maayan Hoffman:

Is that like an infection if she has bacteria in her blood?

Dr. David Planer:

Yes. It was intravascular infection that actually was localized in two places simultaneously, and that caused practically a rupture of the aorta and the valve was non-functional anymore. She deteriorated and became in cardiogenic shock, which is a life-threatening condition with above 50% mortality left untreated. The standard solution for these patients is surgical, fully surgical replacement of the valve and of the aorta, which is two separate surgeries done practically in the same setting. One is sternotomy and one is left thoracotomy. This is two major procedures, which means in her condition we evaluated it in the halting meeting. 100% mortality. Left untreated, same chances.

Maayan Hoffman:

And how old was she?

Dr. David Planer:

She was 67.

Maayan Hoffman:

Wow, very young.

Dr. David Planer:

Yeah. And healthy until this event. We thought that we can offer her a treatment for the thoracic aorta in the cath lab. For that we recruited or brought all the aortic team, which means Amit Khorach the vascular surgeon, Ellen Bloom the head of interventional radiology, Gabi Elbaz and myself from the cath lab. And we fixed endovascularly with TEVAR, the thoracic aorta.

We knew that her condition, cardiogenic shock with non-functional aortic valve, can make it complicated to recover from the procedure. The anesthesiologist reports that during the case, that she's deteriorating and she's giving her more and more adrenaline in order to keep her blood pressure stable. And that we thought about troubleshooting before the case, and we decided in case she's deteriorating we will do an emergency TEVAR, just as a bridge for a formal surgery for aortic valve replacement. We did this TEVAR what we call under fire, in an emergency situation. The patient is deteriorating and we're able to implant the valve in place. The patient went out of the cath lab after both the aortic and the TEVAR were done in the same procedure, and she was recovering very quickly. She was extubated two days after the procedure and recovered, her kidney functions recovered and actually she went home a week after the procedure. She's still healthy and didn't need any other surgery since then.

Maayan Hoffman:

It's incredible. Now I want to go to another example, but maybe some of our listeners don't know what a TEVAR is. Can you just quickly explain that for the listeners?

Dr. David Planer:

TEVAR is percutaneous replacement of the aortic valve, which is done today in more and more cases. Initially it was done for high-risk patients, the elderly and patient that were not candidate for open heart surgery. Nowadays we can offer this solution for intermediate and even low risk patients, and this is the trend worldwide. I mean, going from invasive open-heart surgery towards percutaneous procedure.

Maayan Hoffman:

Okay, fascinating. That's so helpful I think for our listeners to understand what that is. But I think there's even maybe some other examples. Would you mind sharing another one example

before we move on, because I'd love to hear some of the other exciting things you did this year?

Dr. David Planer:

So, another example recently was a few weeks ago that a patient, 12 years old was hit in a motor vehicle accident, in a car accident, like 40 minutes from Jerusalem. He was brought by helicopter, military helicopter to our center. And after initial evaluation in the trauma center, he went straight to the CT scan. They found head trauma, but what put him in most danger was the rupture of the aorta from the high energy accident. Actually, by the time that they called us, the kid was almost shocked with a blood pressure of 60 millimeters of mercury and unconscious, intubated.

We saw the CT; we actually were on the way home and then we made a U-turn. And by the time we brought the patient from the CT scan directly to the cath lab, it took him 15 minutes from trauma to the CT and up to the cath lab. Again, the aortic team, Ellen Bloom, Amit Khorach, Gabi and myself were in the lab. And within 20 minutes the aorta was fixed and the patient, the kid was then, due to the head trauma, had some prolonged hospitalization. Then he was transferred to ALYN, a rehab center, and we're very happy to know that he was discharged from ALYN, intact neurologically and obviously the aorta was fixed back then. He's now at home and recovering from his life-threatening injury and doing very well. We're in touch with his father on a weekly basis, actually.

Maayan Hoffman:

It's really an amazing story. Wow. It's the kind of stories we like to hear. So, in order for everybody to be able to stay healthy we do need to talk a little bit about American Heart Month and how we can stay safe, stay healthy, protect ourselves going forward. Because obviously the situations you're talking about are very extreme situations, but there are day-to-day ways that people get sick and have heart disease. Men are often considered to be the most likely to have a heart attack or suffer from heart disease, but it seems that women are becoming more and more likely. We don't need to speak about the exact numbers, but is it true that there is an increase in women suffering from heart disease and heart attacks in recent years?

Dr. David Planer:

So, I think what changed in the last few years is their awareness of women being also affected same as men by cardiovascular, life-threatening condition. Here at Hadassah, we have the Pollin Wellness Cardiovascular Center for Women Health, headed by Donna Zwas, who is really taking as a mission to treat and to detect and to follow women with a cardiovascular disease. And I think this really changed our vision of how do we treat women who are at risk or are suffering from heart disease.

Maayan Hoffman:

When we return, Dr. Planer discusses at what age heart disease starts, the impact of the COVID-19 virus on patients with cardiovascular disease, and much more

Maayan Hoffman:

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And now back to our conversation with Dr. David Planer, director of the Department of Interventional Cardiology.

Maayan Hoffman:

At what age do you think that it's important to start being checked? When can heart disease start?

Dr. David Planer:

Heart disease... The pathophysiology can start in the twenties. So, it means that every woman, same as every man, should be checked and evaluated for risk factors, for the traditional risk factors: hyperlipidemia, diabetes, hypertension, and smoking. All these risk factors should be treated and should be aware of.

Maayan Hoffman:

So, one thing that's obviously impacted us globally is COVID-19. We've been suffering, for lack of a better term, from COVID-19 for the last three years, but it's also had an impact on other aspects of our health. One of them being, from what I understand, cardiovascular disease. Tell me, have you seen more patients coming with more severe heart disease because they weren't checked during the pandemic?

Dr. David Planer:

Obviously. I think COVID influenced our whole life and cardiovascular health in several aspects. If we concentrate only on the awareness and good access to medical or health services, that obviously influenced the population. People there, especially the elderly, were afraid to go out of home and they were less active. So, I think first, the symptoms were ignored because people said, "Okay, it's because of the COVID. I wasn't doing my regular exercise. Probably my physical fitness is less good than it was before." And didn't give enough attention to the real symptoms that were there.

Actually, when we inquire and you ask them specifically, and you heard that they suffered but they weren't... Part of it was fear from being exposed to the disease and part of it was just ignorance and just being, "Okay, let's wait till things are getting better." And we obviously met people in worse condition than before COVID-19.

Maayan Hoffman:

And what about the impact of COVID-19 on heart disease? Now there's all these new things coming out. The FDA and the CDC are evaluating whether, in older adults, the vaccine potentially causes myocarditis or early stroke. People have reported that the virus itself has led to myocarditis or other forms of heart disease. What is your take on that? Are you seeing that play out in the actual hospital?

Dr. David Planer:

Yeah, well now our awareness to these conditions is significant increasing and we see these patients often. I think one of the leading scientists that had a major contribution in this field is Professor Dror Mevorach that published-

Maayan Hoffman:

Also from Hadassah,

Dr. David Planer:

Also, from Hadassah. Not also, he's from Hadassah Medical Center, who was I think one of the major contributors to our knowledge and assessment and treatment given to these patients. Published in the New England Journal of Medicine and really has continued work with our Heart Institute, with Offer Amir and Rabir Alsalad, that contributed to our knowledge of this condition.

Maayan Hoffman:

And with all of that, would you encourage, discourage people from taking the vaccine today?

Dr. David Planer:

Obviously, we will not discourage people from getting... The vaccine is very, very safe, even for people who suffer cardiovascular conditions. Okay? So, you should hear whatever the authorities said about the need to be vaccinated. And after all, giving it the right proportions, the vaccine is safe and is lifesaving.

Maayan Hoffman:

You're clearly one of the foremost experts here in the country. So, before we conclude I do want to get a little bit more information just about you, if possible. Tell me a little bit about your backgrounds and how long you've been at Hadassah, what you love about being here.

Dr. David Planer:

I studied here in the Hebrew University Medical Center in Hadassah back in the nineties. I did my internal medicine residency in Hadassah Mount Scopus, which I think is one of the leading telemedicine wards in this country. Then I did general cardiology at Hadassah Ein Karem. In

2009 I went to Columbia University Medical Center, did two years of interventional cardiology. And after debating and was getting the offer of staying there, I decided to come back to Hadassah. 2011 I came back with a family. Since then, I'm attending in intervention cardiology. In 2020 I became the head of the intervention cardiology department in Hadassah.

Maayan Hoffman:

Amazing. So, your medical career has really grown up at Hadassah in many ways. Amazing. Is there any research that you're working on that we didn't talk about that you think you should be sharing? Or do you have a vision for research that is going to happen in the next five, 10 years that could really change the way you do treatment?

Dr. David Planer:

Yes. So, I'm involved in a couple of startup initiatives of novel devices that are being offered to sick patients that hadn't had any medical solution or less invasive solution in the past. One of the project that I'm most proud of is an endovascular solution for aortic Angio pathologies. I just returned today at 5:00 AM from an emergency procedure done in Switzerland, in Zurich, implanting this device in a 56-year-old lady that had a connective tissue disease and deteriorated. And we brought this device, a new model of this device from Israel. And I was doing the surgery there with Professor Miol Asha in Zurich, and just arrived this morning.

Maayan Hoffman:

Wow. We really appreciate you recording the podcast when you just arrived this morning at 5:00 AM. So, thank you very much for that. Anything else that you want to share?

Dr. David Planer:

So, there's another recent, ongoing research, part of the other job that I have as a reserve combat physician in the IDF. We are developing a solution for combat injuries, cardiovascular or vascular injuries in the battlefield that cannot be treated, obviously, in the battlefield. And we are doing a solution called REBOA, it's endovascular occlusion balloon of the aorta. And this solution hopefully will bring solution for our mission to save soldiers who cannot be transferred in this condition, and we can save, or we can help to treat patients who have a life-threatening condition in the field, helping to bring them to the hospital where we can give the definite care.

Maayan Hoffman:

Well thank you so much Dr. Planer for being with us here today, telling us about some the out-of-the-box, groundbreaking things that you're doing in your department, unexpected, lifesaving procedures, in addition to helping to educate people about the need to prevent heart disease, how to take care of heart disease, in a month that is thinking all about the heart. So, I really appreciate your time.

Dr. David Planer:

Thank you so much, Maayan, for the opportunity and let's all of us be healthy. And I hope nobody will need our services anymore.

Maayan Hoffman:

So, I hope so too. And thank you so much to our listeners, this has been Hadassah On Call: New Frontiers in Medicine. I'm Maayan Hoffman. Have a wonderful month.

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