PODCAST: Worsening Heart Failure

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Edited slightly for readability.

Anil Gupta
Welcome to this podcast series hosted on MD listen entitled Worsening Heart Failure. My name is doctor Anil Gupta. This podcast series was developed by the Canadian Collaborative Research Network and receive financial support from Bayer Canada. This podcast explores what defines Worsening Heart Failure along with appropriate management strategies. It's my pleasure to discuss this topic with my colleague Dr Justin Ezekowitz. He's a Professor of Medicine in the Division of Cardiology, Director of the University of Alberta Cardiovascular Research Institute, and Co-Director of the Canadian Vigor Centre at the University of Alberta. Justin, welcome.

Justin Ezekowitz
Thanks so much Anil, pleasure to be here.

Anil Gupta
Let's jump right into today's topic: Worsening Heart Failure. Let's say I have this patient I haven't seen in about a year. He's 66 years old, has NYJ class one to two symptoms, with an injection fraction of around 35%. He's fairly stable, I'm putting that in air quotes, but then three to four weeks ago he was admitted to hospital with volume overload and diagnosed with heart failure. He was not on all foundational therapies according to recent guidelines, and I'll get back that part later, but does this patient qualify for this new entity called Worsening Heart Failure?

Justin Ezekowitz
Anil, yes, he does. That's the easy answer, because he does have a worsening of his chronic heart failure and indeed has chronic heart failure, and now it's Worsening Heart Failure. The combination of these two terms is what we're trying to get at. This new entity, Worsening Heart Failure or WHF, really captures those patients who are hospitalized or attending the emergency department. That is most of the patients we see in consultation in the ER or as cardiologists or in internal medicine. In Canada, about 80 to 90% of patients who are admitted from the emergency department into the hospital to a cardiology ward or internal medicine, are the individuals we considered to be having Worsening Heart Failure. There are some direct to inpatient wards, these are uncommon but do happen once in a while, and they would also fall under this entity of Worsening Heart Failure. The key there is it's a prime opportunity to really improve their care and hopefully prevent the next event.

Anil Gupta
Absolutely. How about a patient who simply needed more diuretic therapy on an outpatient basis?

Does it matter if that increase in Lasix was oral or IV? Does that count?

Justin Ezekowitz
Anil, the simple answer is yes, and the reason for that is these patients are really showing signs of decompensation and, while well managed as an outpatient, they're still meeting the criteria in a very modern context. We need to move people away from what people used to say, "just a touch of diuretics and remove the fluid" and the under appreciated risk that these patients have.

Anil Gupta
Earlier I told you my patient was stable, or sometimes they use word chronic; but whenever I hear a talk from a heart failure expert, like yourself, you always start with this slide that shows us the trajectory of repeated admissions and how that can negatively impact their prognosis. Why does this happen? Is it medication noncompliance, dietary indiscretion, just worsening disease or worsening pathology? What are these triggers for Worsening Heart Failure? What is your experience? What does the literature tell us?

Justin Ezekowitz
There are many factors that alter the trajectory for these patients, and they really do include all of those things you just mentioned; including progressive ischaemia, arrhythmias, coinfection, and other parts of their medical condition that are not as clinically stable per say. We want to move away from just thinking about those individual patient factors, which are important, such as medication compliance, or inadvertent non-steroidal use, or even dietary indiscretion. For dietary indiscretion, it's a very commonly thought of issue but there's less convincing evidence of this. I would highly encourage people to start thinking much more broadly when they're seeing a patient rather than focusing solely on the diet. It's often best to start with the medications, both prescribed an over-the-counter, ensure their other medical conditions are well managed and stable, then think about the other cardiovascular disease issues that they may have, such as existing or new onset atrial fibrillation, or existing or new worsening ischemia.

Anil Gupta
Great points. Let's say this patient of mine was in in the emergency room, like he was, and I needed to manage his volume status. How do I choose the right Lasix dose in the emergency room and then later, when I'm trying to get him back onto oral medications? How do I down titrate the Lasix?

Justin Ezekowitz
This is a great old question and I think we've all asked, or answered, or taught this. Now, typically as we provide guidance in the Canadian Cardiovascular Society Heart Failure Guidelines where we have a really nice practical guidance on how to do this, it really does have a nice chart on the how to do this. Typically, we recommend doubling oral dose of diuretics and or switching to IV diuretics, and sometimes just switching to IV is all that's needed given the existing gut congestion. Often, we target 0.5 to about 1.0 kilograms of weight loss per day as well as adequate urine output. It's also outlined in that figure that we have, that's included in the guidelines, as we highlight what to do if you don't achieve those, and what changes you can make if you are achieving those. Once the patient is back to what we call clinical euvolemia, as best you can assess, then switching them back to their oral dose of diuretic and then watching them for 24 hours is recommended, since often we are under diuresing people and not appreciating that they have extra volume that's can still come off. I always encourage

people to switch back to what you think is the best guess of a diuretic, watch them for 24 hours, and then they're probably ready to go home and will be much easier to manage when they do get home.

Anil Gupta
It sounds ideal giving those daily weights in the hospital, that's a challenge but it's important. Earlier I talked about that slide that we often used, about the impact of admission and how that affects future survival rates. Is simply needing admission and requiring IV Lasix for a few days, because the patient had a high-salt diet over Thanksgiving dinner, or they went out to a restaurant one weekend, is that really a concern and a set up for a bad trajectory and a negative impact with respect to survival?

Justin Ezekowitz
Anil, I think the old school of thought was that those things didn't really matter so much but now, after countless datasets, are really demonstrating that these matter more than we first thought and we need to be much more aggressive and attentive on how we manage these patients and put them on optimal medical therapy. If they are simply thrown off by a single one Thanksgiving dinner, this also highlights the tenuous nature of their condition, so we need to pay much more attention to these episodes.

Anil Gupta
I agree. To put on a slightly different hat here, when it comes to cancer, the medical community, families, all sort of rally together and make sure that intensive and timely medical resources are applied to manage that patient's care. I feel that we also need to do this, and emphasize the urgent need to apply foundational therapy, to prevent future decompensation in heart failure which leads me to the next question. What about treatments, guidelines, or clear foundational therapy? How practical is it to optimize patients during a hospital admission? How do we prioritize that?

Justin Ezekowitz
This is a great question and often it's difficult. We need to think it through from the very time that the patient is admitted. The goal is always to look at what the patient is already on, what can be optimized in terms of the foundational classes, and whether it needs to be a change in medications or even up titration of a dose now. We may have not thought this was all practical, but remember, when people are in hospital, most patients in Canada are about a median of seven to eight days in hospital for a heart failure admission. Depending on the risk of the patient, increasing the dose or adding a new medication every day is quite feasible, and they are under your direct supervision, so it's a great opportunity to make those changes. We often leave the increase in the beta blocker as a much slower titration, and for the outpatient world, but making sure they're at least on it is really important. Then we can also then focus on the MRA and SGLT2 switching to ARNI. As our focus now, in terms of safety, the Pioneer Trial really shows we can safely switch from an ACE inhibitor or ARB to an ARNI, such as Sculptra or Valsartan, and with the Empulse Trial we can do the same for an SGLT2 in hospital. These are safe to do in hospital, prevent re-admission and death, are well tolerated from a blood pressure perspective, and protect the kidneys, so what are we waiting for?

Anil Gupta
Good point. What about when the patient is discharged? Obviously there's blood pressures, there's lots of things going on in the hospital, you can't always do all of that in the hospital in the duration of the treatment. When someone goes home, how intense does the outpatient treatment really need to

be? Do we know some don't have time, or should we still implement the same level of urgency to get them on foundational therapy?

Justin Ezekowitz
I think in an ideal world we would really make this much more seamless, from the in-hospital care, to the outpatient care. We can be much more aggressive especially in those first weeks, 30 days, 60 days, where I think we often see those bounce back admissions because we haven't optimized things fast enough. We do have a nice new set of evidence, the Strong HF trial, which really is about how rapidly you can up-titrate the appropriate medical therapy after a hospital discharge for those with heart failure. With all titration trials, the key is what you can implement locally. It is very important to look at a trial like strong HF, which applied all low levels of each of the medications, and then allowed them to be rapidly up titrated in about four and a half visits over the next period of time, and showed a reduction in morbidity and mortality. For those changes that you do not make in hospital, a wrap-it-up titration strategy means making sure that each week the patient is being seen, either in-person or virtually, and either additions or dose increases are made. It's not OK to leave these things for others to do either. We have to take that on and we have to allow a few weeks, rather than three to six months, to make that happen. The time is now to make those changes, and that's a real key to why we are paying much greater attention to patients with heart failure in trials like strong HF.

Anil Gupta
Does it matter, Justin, the order for which of the four therapies we should apply, or is it patient factors that determine that?

Justin Ezekowitz
I think the ordering is probably less important, and I think as long as we can get those medical therapies on board quickly, there are going to be certain patient factors which will drive one versus another first or second. I think that matters probably less than getting them on board quickly at lower doses and then up titrating according to what you feel is going to be the easiest to get on board faster, and then you can really be bespoke with the patient factors.

Anil Gupta
Right, I couldn't agree with you more Justin. I think in future podcasts we might have an opportunity to dive into newer therapies in a little bit more detail. It's been a great pleasure speaking with you today and I'd like to thank you, Justin. And for our listers, before signing off please complete a brief evaluation of today's session. This will pop up on your screen in just a few moments. You can also find the handout with the key messages from our discussion today on the Program page under the Program Material tab. Thank you very much for joining us today and thank you, Justin.

Justin Ezekowitz
Thanks, Anil, my pleasure.

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