

SUDHIR

So destination therapy is considered for patients who are generally age 65 or more or have other

KUSHWAHA:

contraindications to transplantation. They want to be active. They have reasonable renal function. Generally speaking, the ejection fraction is less than 25%. And generally speaking, the heart size is greater than 65 millimeters left ventricular and diastolic dimension. And they're clearly symptomatic with New York Heart Association class three to four heart failure. Peak VO₂, less than 12 to 14 and limited six minute walk distance despite optimal medical therapy.

And the key is to try and recognize these failing patients before they present in a moribund state with morbidities and end organ complications from their heart failure. Then, we're in a difficult position because we know that the outcome is not going to be so good.

When we look at survival of left ventricular assist device therapy recipients, this is data on the left from the published data from *New England Journal 2007*. And then data on the right is our Mayo Clinic survival data for bridge to transplant patients. So generally speaking, over 1 and 1/2 year period, we have a greater than 80% survival compared to the national figures, which are 12 month survival of about 70%.

And then destination therapy, we have published data on the left and then the Mayo Clinic data on the right. And we can see that we have a pretty comparable, if not better, three year survival compared to the two year survival on the left.

So once we decide that LVAD therapy is indicated, there's a whole variety of tests and procedures which we think about. And the whole team, in particular the LVAD coordinators, start to get involved. And with that, I'm going to hand over to my colleague Sarah Schettle who is going to discuss further the next few slides. Thank you.

SARAH

Thank you, Dr. Kushwaha. When we think about whether the LVAD is indicated, there are certain criteria, as Dr.

SCHETTLE:

Kushwaha has previously mentioned, that are important for us to consider to ensure that the patient will have appropriate insurance coverage for their device. The ejection fraction for a DT patient must be less than 25%. In addition, they must be New York Heart Association class IIIB or IV. They must have failed optimal medical management for 45 of the last 60 days. And we often see or hear of phone calls from referring centers when their patients have these warning signs-- frequent hospitalizations, intolerant to medications, requiring hospitalizations for IV diuresis, or requiring additional diuresis at home, when their VO₂ has fallen, and they become symptomatic and are unable to perhaps walk as far as they previously had, and when their echo or catheterization parameters become concerning.

Contraindications for LVAD therapy are as follows. The age of greater than 75 is a relative contraindication, as we certainly have implanted some patients that have very few co-morbidities with a slightly higher age. The oldest patient that we have implanted thus far at our center was implanted at the age of 82 and was just seen in clinic this last week and is doing very well. The BMI of greater than 35 is also a relative contraindication as elevated BMIs can increase the risk of infection after LVAD and can be challenging to allow this patient to rehab after this device is placed. We also try to correct people's creatinine beforehand. But if their kidney disease is such that it requires dialysis, they may not be a good candidate for an LVAD. In addition, we don't want to implant patients with severe lung disease, GI disease, or active cancers. If the cancer has been in remission for several years, we do consider these patients occasionally for left ventricular assist devices. We also would not want to implant someone who has a contraindication to anti-coagulation as all of our patients are on warfarin and often aspirin in addition. We also would look for other co-morbidities, such as strokes or peripheral vascular disease in our consideration.