



High Hopes for Heart Failure Help

— By Narendra Singh, MD —

Since my original article on heart failure in the December 2012 issue of this magazine we have come a long way in terms of the treatment of heart failure. Heart failure is categorized into groups. The most common is called heart failure with reduced ejection fraction (HFrEF) where the heart is unable to pump the blood forward effectively. The next most common is heart failure with preserved ejection fraction (HFpEF) where the left ventricle is stiff and does not fill well. In addition, there is also right sided heart failure which is associated with pulmonary hypertension and lung disease.

The techniques used to diagnose heart failure have not changed much and I would refer you to my previous article.

We now often do a blood test called BNP or NT proBNP – brain natriuretic peptide. When this is elevated it suggests that heart failure is present. A normal ejection fraction is > 60%.

Once the diagnosis of heart failure is made a series of tests are done to try and understand the underlying cause for heart failure, which can be related to clogged arteries, high blood pressure, valvular abnormalities, congenital disorders, viral infections, toxic drugs, or radiation exposure. Then comes the treatment phase. Some of the treatment is specific to the underlying cause. However, for patients who have heart failure with reduced ejection fraction, multiple drugs play an important role. Beta blockers (carvedilol, metoprolol) are used to reduce the work of the heart by lowering heart rate. If this is not sufficient, then a drug called ivabradine can be used to lower the heart rate further.

Next are drugs called ACE inhibitors (enalapril, lisinopril) or angiotensin receptor antagonists

(losartan, valsartan) which are used to lower the blood pressure so as to make it easier for the heart to pump the blood forward. In the process the heart heals and the ejection fraction goes up. The third drug that is added to this regimen is called spironolactone; it works as a gentle diuretic while remodeling the heart muscle. In the African American population a combination drug called Bidil (hydralazine + nitrate) is also beneficial.

Two new drugs have made a major impact in our ability to improve the quality of life for heart failure patients as well as increase survival. The first is a drug called Entresto (valsartan/sacubitril) which replaces the ACE inhibitor or ARB. This drug improves ejection fraction, quality of life, exercise tolerance and the need for repeat hospital admissions. It is a life-saving medication that reduces the chances of dying by over 16% within two years.

The second major advancement is a class of medications that was first used in diabetic patients called SGLT2 inhibitors. Jardiance (empagliflozin) and Farxiga (dapagliflozin) have both shown a significant reduction in the development of

heart failure as well as the need for heart failure hospitalizations. Dapagliflozin in a large clinical trial also showed a 17% reduction in mortality over a two year time frame. There are ongoing trials with these agents to assess whether they will also help patients with heart failure and preserved ejection fraction.

While preventing heart failure is still our most important objective, it is gratifying to see that some of the clinical research we participated right here in Forsyth County has resulted in valuable new therapeutic options to help when needed most!

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