

Managing Heart Failure in the 21st Century - systems, not tech.

Dr Adam Loke Consultant Cardiologist Glenfield Hospital

The guest speaker was introduced by Vice-President Dr Darren Jackson

Firstly 'I am truly cynical of modern medicine'

Dr Loke introduced the subject of Heart Failure by explaining exactly what it is. By definition it is "the inability of the heart to pump sufficient oxygenated blood to the metabolising tissues despite an adequate filling pressure".

In essence there are two types viz. heart failure with a reduced ejection fraction (HFREF) and that with a preserved ejection fraction (HFPEF). The ejection fraction is the amount of blood pumped out of the ventricle as a percentage of the total amount of blood in the ventricle.

The condition is one of the elderly occurring in 7% of over 75 year olds and 15% of over 85 year olds in which group there will commonly be comorbidities. The incidence is increasing (as due to medical advances we are all living longer) and the mortality rates in patients with acute heart failure are 22% within a year of hospitalisation, and 42% within 5 years. Regrettably mortality as an end point distorts the benefits of treatment. Historically treatment has included leeches, bed rest, venesection and digitalis. There have been many therapeutic initiatives over the last 4 decades including treatment with Hydralazine and Isosorbide, Angiotensin Converting Enzyme Antagonists, beta blockers and Digoxin. It would appear to be important to establish which patients have a preserved ejection fraction as the mortality rates are lower. Treatment modifies those outcomes in those with a reduced fraction (excluding digoxin).

With respect to newer treatments, Dr Loke described as 'high tech', Entresto, IV Iron, and SGLT2 inhibitors (used in Type 2 Diabetes). New gadgets to assist include a pulmonary monitor (17 out of 100 in UK have been inserted in Leicester to date), a Mitra Clip and a Left Ventricle Assist Device (LVAD). For patients with amyloid (which can be identified by MRI scanning) associated with HFPEF there is good news in the form of a new drug, Tafamidis.

The NHS appears to be focussed on 'high tech' but can ill afford to do so.

In 'old tech' rehabilitation and exercise demonstrate a significant improvement of quality-adjusted life-years (QALY) but no difference in mortality or admission rate. Rehabilitation achieves the same results as biventricular pacing and HFPEF seems to have the same aetiology as diabetes - the product of a sedentary lifestyle and obesity. Exercise has a profound effect on other health issues too such as a reduction in all cause mortality and reduction in cancer rates as well as Type 2 diabetes. But there are delays in the system. Heart Failure Consultants are scarce, the nursing workforce variable in supply, and administrative and pharmaceutical support often lacking. The cost of rehabilitation is considerably lower than some of the new tech options. Tafamidis (for amyloid) costs an astonishing £360,000 per patient per month and a LVAD £90,000 and ongoing costs. Regrettably 'old tech' is boring and hard work, new tech is fun, brings money and is "tweetable".

Lastly 'Inside every cynical person, there is a disappointed idealist'

A vote of thanks was given by the President Professor Jo Dias