TRANSPLANT QUIZ

From combined heart-kidney to kidney transplantation program: What nephrologists should know about dilated cardiomyopathy

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CASE

A 42-year-old hemodialysis (HD) patient was investigated in our department for symptomatic heart failure (HF) despite daily home dialysis. He had a history of living donor kidney transplantation at the age of 18 that lasted 7 years. Home dialysis was then started. At the age of 40, he developed acute heart failure symptoms.

Echocardiography revealed severe dilated cardiomyopathy (DCM). Coronarography and myocardial perfusion scintigraphy showed no abnormal findings. Betablockers were administrated and RAAS inhibitor dosing was optimized. Dyspnea persisted and patient was referred to our department.

At admission, blood pressure was 116/82 mmHg, and pulse 68 beats/min. No peripheral edema was observed. Dry weight was 62.5 kg. Patient was anuric. Hemoglobin level was 9.8 g/dl, highly sensitive troponin level was 62 ng/ml and BNP level 1527 ng/ml. The liver enzymes levels as were normal. C-reactive protein was 4.2 mg/ml. Vitamin level, zinc levels and thyroid function were normal.

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Quiz

1. Which treatment would have the best efficacy to rapidly improve symptoms of HF in this context?

A. SGLT2 inhibitors
B. Spironolactone
C. Daily ultrafiltration
D. Hydrochlorothiazide
E. Dual RAAS blockade

Despite achieving a normal dry weight and decreasing the BNP level, the left ventricular ejection fraction (LVEF) remained low (20%) and the cardiac index was 1.53 l/min/m². Medical treatment includes administration of betablockers and RAAS inhibitor at optimum dose.

2. Which diagnosis do you suspect?

A. Diabetic cardiomyopathy
B. Ischemic cardiomyopathy
C. thiamine deficiency
D. idiopathic DCM
E. auto-immune DCM
F. Chagas disease

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3. An autoimmune dilated cardiomyopathy is suspected. Which antibodies are strongly associated with this condition?

A. Anti-DNA antibodies
B. Anti-Sm antibodies
C. Anti-CCP antibodies
D. Anti-beta1adrenergic receptor antibodies
E. Anti-SSA antibodies

4. Laboratory tests confirmed the diagnosis of autoimmune dilated cardiomyopathy. Which specific treatment has shown the best level of evidence in this condition?

A. Immunoadsorption
B. Cyclophosphamide
C. Mycophenolate mofetil
D. Intravenous immunoglobulins
E. Glucocorticoids

5. If symptoms of heart failure and LVEF do not improve after the above-mentioned treatment, which treatment would you consider based on current evidence?

A. Plasma exchange
B. Hemoperfusion
C. Dual heart-kidney transplantation
D. IdeS (Specific Immunoglobulin G (IgG)-Cleaving Enzyme from *Streptococcus pyogenes)*
E. Azathioprine
F. Rituximab

To see the answers, go to page 1573