**Introduction**

Hypertrophic cardiomyopathy (HCM) is a genetically determined heart muscle disease with a prevalence of 1 out of every 500 adults [1]. It has an autosomal dominant inheritance pattern and patients are at an increased risk for sudden cardiac death (SCD) [2][3].

**Patient Profile**

We report the case of a 39-year-old caucasian male who was found dead at home unexpectedly. He had a cardiac transplant for congenital heart disease at the age of 12 and was maintained on immunosuppression ever since with good cardiac function and right bundle branch block. Consent for research was obtained from the deceased’s next of kin.

At autopsy the heart was enlarged with a weight of 591g and had fibrous adhesions of the pericardium with endothelialised sutures in the atria and great vessels (Fig 1a and 1b) in keeping with the bicaval approach of heart transplantation [4]. In this technique, the circumferential stitching in both the aorta and pulmonary trunk as well as atria use a polypropylene suture (Fig 1a and 1b). There was focal septal hypertrophy noted on short axis cut (Fig 1c). There was diffuse thickening of the coronary arteries but no significant stenosis was noted.

On microscopic examination of the heart, sections of right and left ventricle showed myocyte hypertrophy with extensive widespread myocyte disarray and replacement fibrosis (Fig 1d). There was no infarction or significant transplant vasculopathy. The histological appearance was that of hypertrophic cardiomyopathy which was responsible for his sudden unexpected death.

**Discussion**

This post-mortem diagnosis of hypertrophic cardiomyopathy in a transplanted heart has major implications for the donor family due to the inherited nature of the condition. HCM is caused by mutations in 11 or more genes encoding thick and thin contractile myofilament protein components of the sarcomere or the adjacent Z-disc [3]. Follow up with the donor family is essential in this unique case.

This case highlights the importance of autopsy in transplantation death cases. This autopsy revealed underlying genetic heart disease which was responsible for the death of the patient and has significant implications for the donor family. HCM in the donor heart most likely did not manifest phenotypically at the time of transplantation in this case as the majority present in adolescence and early adulthood, rarely in childhood. This is first report of such a case.

**Limitations**

Given the nature of this case as a post-mortem study, the authors do not have access to the patient’s investigations in life but acknowledge that access to clinical investigations such as electrocardiogram (ECG) and echocardiogram would prove very useful in retrospectively determining if there was any evidence of HCM in the transplanted heart. The authors postulate that regular cardiac surveillance with ECG and echocardiogram for recipients of heart transplants could prove very useful in detecting abnormalities in life and preventing premature death.

**References**

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**Figure Legend**

Figure 1, The donor heart showing hypertrophic cardiomyopathy. A) Atrium showing reendothelised stitching (yellow arrow) in keeping with transplantation, B) Macroscopic image of the greater vessels showing stitching, C) Midventricular slice showing asymmetric septal hypertrophy in keeping with HCM, D) Myocyte disarray confirming HCM (Haematoxylin and eosin).