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THE COMPARATIVE ANALYSIS OF ECG BETWEEN ISCHAEMIC CARDIOMYOPATHY AND DILATED CARDIOMYOPATHY

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Objectives To analyse the difference of ECG between ischaemic cardiomyopathy and dilated cardiomyopathy.

Methods Collect and analyse the clinical data, ECG data and hyper-acoustic data of the patients who had been given the CAG (Coronal Artery Angiography) in the first auxiliary hospital of xin-jiang medical university between the year of 2008 to 2011 on account of distensible heart and heart failure. And all of the patients were diagnosed ICM or DCM explicitly by CAG.

Results We find the average age of ICM is older than DCM (61.333 ± 8.904 vs 52.967 ± 10.376); attack rate of chest pain or myocardial infarction in past time of ICM group is higher than DCM group (It takes up 45 cases of 60 in ICM and 6 cases of 60 in DCM who had chest pain, as it takes up 9 cases of 60 in ICM and 0 case of 60 in DCM who had myocardial infarction); the situation of merging with diabetes is 10 cases of 60 in ICM and 2 cases of 60 in DCM; the situation of merging with hyperlipaemia of ICM is more than DCM (22 cases of 60 in ICM vs 8 cases of 60 in DCM with Tall Triglyceride, 11 cases of 60 in ICM vs 1 case of 60 in DCM with Tall Cholesterol, $p < 0.05$). The value of R_{v6}/R_{max} and R_{v6}/R_{III} of DCM higher than ICM. $R_{v6}/R_{max} \geq 3$ takes up 10 cases (16.67%) in ICM, but in DCM it takes up 40 cases (66.67%), $p < 0.05$. $R_{v6}/R_{III} \geq 5$ in the group of ICM takes up 22 cases (36.67%), but in DCM it takes up 50 cases (83.33%), $p < 0.05$. The incidence of pathologic Q wave of ICM is higher than DCM (35% in ICM vs 8.33% in DCM, $p < 0.05$). And the change of ST-T in ICM all higher than DCM ($p < 0.05$): the depressed ST segment with or without change of T wave is 63.33% in ICM vs 35% in DCM; the elevated ST segment with or without change of T wave is 23.33% in ICM vs 5% in DCM; the single change of T wave is 21.67% in ICM vs 6.67% in DCM. But the incidence of fragmented QRS has no difference between the two groups (20% in ICM vs 8.33% in DCM, $p > 0.05$).

Conclusions $R_{v6}/R_{max} \geq 3$, $R_{v6}/R_{III} \geq 5$ are useful for diagnosing the DCM: the sensitivity and specificity of $R_{v6}/R_{max} \geq 3$ are 66.67% and 83.33%, as the sensitivity and specificity of $R_{v6}/R_{III} \geq 5$ are 83.33% and 63.33%. But the pathologic Q wave or the change of ST-T (especially ST segment lower with or without inverted T wave) on the ECG are significant to diagnose the ICM: the specificity of pathologic Q wave is higher relatively (91.67%), the sensitivity and specificity of depressed ST segment with or without change of T wave are lower relatively (63.33% and 65%).