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Spectral Analysis of Heart Rate Variability for Normal and Preeclamptic Pregnants

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Abstract : Preeclampsia is a pregnancy disorder associated with increase in blood pressure and excess amount of protein in the urine. HRV analysis has been used by many researchers to identify preeclamptic pregnancy from normal pregnancy. A study in this regard to identify preeclamptic pregnancy in Oman from normal pregnant was conducted on 40 subjects (20 patients and 20 normal). The subjects were collected from two hospitals in Oman. A Fast Fourier transform (FFT) spectral analysis has shown that patients with preeclamptic pregnancy have a reduction in the power of the HF band and an increase in the power of the LF band of HRV compared with subjects with normal pregnancy. The accuracy of identification obtained was 80%.

Keywords : preelampsia, pregnancy hypertension, normal pregnant, FFT, spectral analysis, HRV
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