Paper Title

**(3)A Study of the Processes Involved in ECG Signal Analysis**

1. **Preprocessing: Filtering & Segmentation**

wavelet transforms (IIR Notch filter)

1. **Feature Extraction**

feature here is QRS complex and accurate detection of QRS complex .

1. **Classification & Classifier**

Acharya et al [6] have used HRV signal as a reliable indicator of heart disease. They used neural network classifier and the fuzzy classifier as diagnostic tools to aid the physician in the analysis of heart diseases. These tools yield results with 80 – 85% accuracy and not 100%.

Surendra Dalu et al [10] have done classification of QRS and ST segment using Long Vector Quantization (LVQ) neural network. As a new approach LVQ which belongs to the class of competitive long networks, was developed particularly for classification problems.

1. **Accuracy**

1. **Two Leads or One Lead ? In case of two leads .. how classification of two leads is merged to have final decision ?**
2. **Classes**

|  |  |  |  |
| --- | --- | --- | --- |
| Dextrocardia | | Inverted P-wave | |
| **2** | Tachycardia | | R-R interval *<* 0*.*6 s |
| **3** | Bradycardia | | R-R interval *>* 1 s |
| **4** | Hyperkalemia | | Tall T-wave and absence of P-wave |
| **5** | Myocardial | | Ischaemia Inverted T-wave |
| **6** | Hypercalcaemia | | QRS interval *<* 0*.*1 s |
| **7** | Sinoatrial block | | Complete drop out of a cardiac cycle |
| 8 | Sudden cardiac death | | Irregular ECG. |

NOTES:

* normal QRS is not greater than 3 mm or 0.06 to 0.12 seconds.