Heart Disease Predictor

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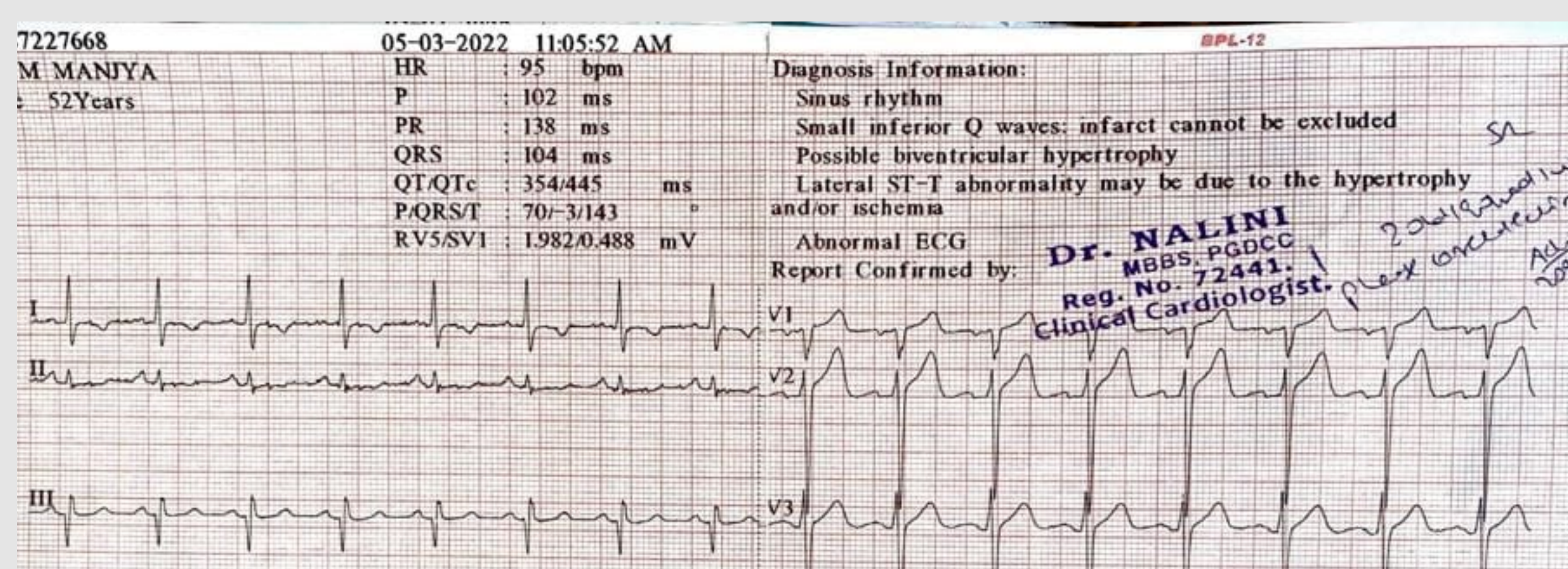Mentor Prof. Pankaj Tyagi, CIC, DU

Introduction

In health care industry, predicting heart disease is a challenging issue . In early days medical tests such as Electrocardiogram (ECG) and blood tests have been used for predicting heart diseases. In addition to clinical tests, computer aided diagnosis systems, namely, patient information, medical diagnosis and medical images are being used for predicting heart diseases. Machine learning algorithms have significant role in predicting diseases . In this project we used knn algorithm to predict the disease.

Attributes

1. Cp—chest pain type - 0,1,2,3.
(iii) Trestbps—resting blood pressure. The normal range is 120/80.
(iv) Chol—serum cholesterol shows the amount of triglycerides present. Triglycerides are another lipid that can be measured in the blood. It should be less than 170 mg/dL.
(v) Fbs—fasting blood sugar larger than 120 mg/dl (1 true). Less than 100 mg/dL (5.6 mmol/L) is normal, and 100 to 125 mg/dL (5.6 to 6.9 mmol/L) is considered prediabetes.
(vi) Restecg—resting electrocardiographic results: 0 - No; 1 - yes
(vii) Thalach—maximum heart rate achieved.
(viii) Exang—exercise-induced angina (1 yes). Angina is a type of chest pain caused by reduced blood flow to the heart. 1 - Yes ; 0 - No

Reports

Algorithm Used

We used The KNN(K-Nearest Neighbour) Machine Learning. Algorithm in this project. K-Nearest Neighbour is one of the simplest. Machine Learning algorithms based on Supervised Learning technique. K-NN algorithm assumes the similarity between the new case/data and available cases and put the new case into the category that is most similar to the available categories. K-NN algorithm stores all the available data and classifies a new data point based on the similarity. This means when new data appears then it can be easily classified into a well suite category by using K-NN algorithm. K-NN algorithm can be used for Regression as well as for Classification but mostly it is used for the classification problems. K-NN is non-parametric algorithm, which means it does not make any assumption on underlying data.

Future Directions

Heart diseases are a major killer in India and throughout the world, application of promising technology like machine learning to the initial prediction of heart diseases will have a profound impact on society. The early prognosis of heart disease can aid in making decisions on lifestyle changes in high-risk patients and in turn reduce the complications, which can be a great milestone in the field of medicine.

Results

Results :
Sorry to say, chances of having heart disease is more, please consult a Doctor.