

عنوان مقاله:

Designing and evaluation of a decision support system for prediction of coronary artery disease

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خلاصه مقاله:

Introduction: Since human health is the issue of Medical Research, correct prediction of results is of a high importance. This study applies probabilistic neural network (PNN) for predicting coronary artery disease (CAD), because the PNN is stronger than other methods. Methods: In this descriptive-analytic study, The PNN method was implemented on 150 patients admitted to the Mazandaran Heart Center, sari. For designing the network, 80% of the data were used for stage of network training, and the remained 20% were used for stage of network testing. In order to implement the network, facilities and functions existing in MATLAB 7.12.0 were used and simulation was conducted in a PC with configurations of corei5 CPU, 2GHz processor, 4GB ram, under operating system of Windows 7. Results: After 5 times simulation and comparison of the models produced, sensitivity and specificity rates obtained were 1 and 1. In the end, model correctly categorized some healthy subjects who did not need angiography and the treatment related to coronary artery disease. Conclusion: Due to the high specificity index, this model prevents side effects of angiography in patients who don't need such treatments. Moreover, due to high sensitivity, it can diagnose the patients .who really need such diagnostic measures

کلمات کلیدی:

Coronary Artery Disease, Prediction, Probabilistic Neural Network, Coronary Artery Disease, Prediction, Probabilistic Neural Network

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