O R I G I N A L   P A P E R

Proposed Electronic Medical Record with Emphasis on Hepatitis Diagnosis

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Abstract

Introduction Medical domain is characterized, like many other domains, by an exponential evolution of the knowledge. There are a lot of tools which try to reduce the risk of error apparition in medical life. Medical decision becomes a very hard activity because the human experts, who have to make decisions, can hardly process the huge amounts of data. Diagnosis has a very important role here. It is the first step from a set of therapeutic actions, an error at this level can have dramatic consequences.
The aim of this paper is to present a new electronic medical system for using it on patients with hepatitis virus infection.
Results: Hepatitis is a very complicated disease with numerous different types many of them can lead to serious diseases like cirrhosis and liver cancer. An early correct diagnosis and an adequate treatment could reduce the risks of liver cancer apparition or other severe diseases. The main goal of the system is to use artificial intelligence in order to offer predictions about patients infected with hepatitis virus and also to follow the health condition of the patient reevaluating at every time the initial diagnosis and suggesting tests and treatment. Our effort is to present a new electronic medical record that will "borrow" data from the standard health record of the patient and other resources where information is saved and will process it and give suggestions for the diagnosis and treatment of the patient and at the same time will use a simple operating environment, such as the internet, thus making it easy to use.
Conclusions The medical record is a big step in improving health services in public hospitals. The proposed EMR with the use of artificial intelligence is the next logical step that will help in the diagnosis and early treatment of disease.

Keywords: Artificial intelligence, Neural networks, Fuzzy logic, hepatitis, HAV, HBV, HCV.