ARTIFICIAL NEURAL NETWORKS IN STROKE PREDISPOSITION SCREENING

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ABSTRACT

On the one hand there are stroke events that cannot be avoid, which stem from unchangeable processes like aging, sex, family or medical history. In particular, elderly people have a higher risk of stroke, with almost 80% of strokes occurring in individuals over 60 years of age, and at an earlier age than in women, although women are catching up fast (in fact more women than men die from heart incidents). Stroke diseases have severe consequences for the patients and for the society in general, being one of the main causes of death. On the other hand these facts reveal that it is extremely important to be hands-on, being aware of how critical is the early diagnosis of this kind of diseases. Indeed, this work will focus on the development of a diagnosis support system, in terms of its knowledge representation and reasoning procedures, under a formal framework based on Logic Programming, complemented with an approach to computing centered on Artificial Neural Networks, to evaluate stroke predisposing and the respective Degree-of-Confidence that one has on such a happening.

KEYWORDS

Stroke Disease; Healthcare; Knowledge Representation and Reasoning; Logic Programming; Artificial Neural Networks