APPLICATION OF FUZZY EVIDENCE THEORY TO STUDY THE CAUSES OF HEART DISEASE

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The fuzzy set provides us with an intuitively pleasing method of representing forms of uncertainty specially when they are of different types. We use the Fuzzy Evidence Theory in this paper to study the major prevalent causes of heart disease in any patient. In general, an expert (Doctor) gives the main causes of heart disease as - High Blood Pressure (Hypertension), cholesterol, overweight, stress or may be due to congenital reasons. Heart diseases, broadly classified into congenital and acquired disorders, constitute a large proportion of illness and death, especially in industrialized countries. Most heart diseases are associated with inadequate blood
supply to body tissue or overwork of the heart muscle. The cause for the heart disease in a person may be uncertain. It can be due to one of the causes mentioned above, or as in most cases a combined effect of the many of the above causes. It is up to the expert to find it out as all the patients cannot be given uniform treatment. Thus this uncertainty in each case must be studied properly. To do so we suggest them to adopt the opinion of several experts and use the evidence of predominance of each of the causes from two or more independent experts. We apply Dempster’s rule and get the combined evidence of each of the causes.