

糖尿病線上決策及檢測輔助系統

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摘要

糖尿病發生率逐年增加，近來已備受關注與研究，而因疾病本身不易檢測且初期症狀不明顯，往往會因不易察覺而被忽略，一旦罹患便須長期治療控制，因此若能及早發現並預防，即可有效降低或延緩糖尿病的發生。然而，引發糖尿病的危險因子非常多，因此本研究利用人工智慧技術中之類神經網路，配合模糊專家系統推論以釐清相關因素，藉此發展一套可用於線上查詢及診療系統，檢測出糖尿病之嚴重程度，提供醫師作為診療依據的參考與病患了解病情的資訊，以便有效評估及給予適當處置並給予正確生活調適與衛教指引。

關鍵字：人工智慧、類神經網路、模糊專家系統、糖尿病

Abstract

The incidence of diabetes has increased every year, it has been concerned with and study recently. It is difficult to detect the disease because the early symptoms are not obviously, so it is often overlooked because it is unconsciously found. Once suffering the disease, people must be controlled for long-term treating. Therefore, if early detection and prevention may be done, it can effectively reduce or delay the incidence of diabetes.

However, there are many risk factors for causing diabetes. This study using employs Neural Network with fuzzy expert system inference in artificial intelligence technology to clarify the relevant factors, it can be used to develop an online query and clinic system for detecting the serious degree of diabetes, and provide a physician for a more precisely diagnosis in the meantime letting patients understand the information about disease, so that, the proper assessment and the right disposal and the guidelines of health education and lifestyle adjustment can be given.

keyword : Artificial Intelligence, Neural Network, Fuzzy Expert System, Diabetes.