藥物交互作用資料庫對於臨床醫療行爲之影響

The Effect of Drug Interaction Database for the Clinical Behavior in Medicine

中文摘要

醫師開立處方的原則通常是根據其專長科別與疾病治療的常用組合，一般而言這些處方應該是安全無虞的。然而，爲因應病患症狀差異和病灶本身的複雜性，醫師有時也會開出科內較少使用到的藥品，若醫院診間醫令系統或醫院資訊系統無法適時地提供藥物交互作用之預警，則可能造成的不良反應的發生率增加。即便是精研藥理作用的專家，在面對可能引起交互作用的處方時，仍有可能百密一疏。本研究以北部某家教學醫院最近二年門診處方醫令爲調查範圍，針對藥品交互作用作回顧分析，藉以瞭解臨床上發生配伍禁忌的機率，並且藉由病患記錄的分析，尋求原因及因應之道。

藥物交互作用的產生是根據臨床上歸納出來的數據，這部份有許多參考書或科學文獻爲佐證。在醫療行爲時，可能因爲種種原因，臨床醫師不得不開立會發生交互作用的處方，尤其是某些用藥較複雜的科別，通常會有較高比率的交互作用發生，並不完全歸於醫師的疏忽。交互作用資料庫是否能夠放入醫療資訊系統內，也是需要經過合理的評估，在學理上，藥物交互作用資料庫的內容是有其重要性的，對於病患用藥的安全及都有影響，因此，是需要相當謹慎使用的，若此資料庫能放入醫療資訊系統內，則未嘗不是提供了一項良好的決策輔助工具。

本研究乃根據民國 88 年 10 月 1 日至 90 年 4 月 30 日的醫院門診處方資料庫，總計有 1,644,894 位看診人次。本研究先取部份資料，經過初步的計算和統計之後，顯示門診處方交互作用的發生率中，一級交互作用的發生率爲 0.47%。然後再運用電腦叢集（PC Cluster）的技術，將所有資料做快速運算及比對，並且分科統計各種交互作用的發生情形。本研究選取五個門診專科，交由臨床藥師篩選出病歷，並且設計出問卷調查表，交由臨床醫師以同行檢視的方法審視。最後運用 McNemar''s Test 統計方法，結果發現臨床醫師的用藥行爲，確實受到交互作用提示的協助而有所改變，也就是說，藥物交互作用資料庫在臨床用藥可以扮演很重要的角色。最後評估的結果，可能會產生只有部份交互作用的資料庫，但那些已經過醫師考慮後仍會使用的藥物交互作用，亦有其存在的價值。相信經由藥物交互作用資料庫的提示，在醫師臨床上執行醫療行爲時，必定有相當程度的影響力。

英文摘要

Physicians often prescribed according to the combination of their expertise and the patient’ s condition. These prescriptions are usually safe, however, because of the differences and complicated degree of patients’ disease, physicians may use

unusual drugs. If the Health Information System cannot provide proper alerts to reduce the error probabilities, then it is possible that some serious drug interactions will happen. Thus, patients may suffer from these contraindications. Therefore, even an expert for some complicated case, may make some mistakes. In this research we focused on outpatient prescriptions from a teaching hospital in two years. We categorize drug interactions into five different degrees. Then we screen all data thoroughly in each case. We find out there are a huge amount of severe drug interactions. Furthermore, we try to find the solution and reason of these drug interactions. We conclude that a drug interactions database is beneficial to clinical prescriptions.

Drug interaction database was produced by generalizing conclusions from a collection of the clinical instances. The evidences depend on the clinical bibliography or scientific literature. However, in some cases, the physicians have to violate some rules for clinical reasons. Consequently, there are more drug interactions occurred in complicated regimens. It is not physician's fault to ignore these drug interactions. Evaluations are needed to implement drug interactions into Medical Information System. Drug interactions are very important for qualities and safety of patient's treatment. Drug interaction database will be a helpful decision support tool in the medical information system.

We obtained a hospital' s outpatient prescriptions from October 1,1999 to April 30,2001. Totally, there are 1,644,894 prescription profiles were reviewed. By retrieving data, we made some preliminary analysis. The probability of the drug interaction for the first degree is 0.47%. After Comparing and calculating all data by the PC Cluster technology, we've chosen ten medical experts. Then, the clinical pharmacists select specific patients records according to their drug interactions, and design a questionnaire for clinical physicians to peer review. Finally, we use McNemar's test to analyze the data. We found the prescriptions of clinical physicians have changed after drug interaction alerts. That is to say, the drug interaction database plays a indispensable role. The result appears that a few drug interactions will remain because clinical physicians consider they are valuable. In summary, the drug interactions database alert system will fairly affect the physician's prescription in many aspects during their practice.