

※ 注意：請於試卷上依序作答，並應註明作答之大題及其題號。

一、 配合題

當病患使用下列 7 種藥品時，藥師應定期追蹤療效與不良反應，主要需監測的檢驗項目 (laboratory parameters) 包括最右欄中的哪幾個？請將檢驗項目的英文代碼填於答案卷上各題號之後，注意每題答案可能不只一個，但檢驗項目可重複使用。答對一個檢驗項目得兩分，每個錯誤答案倒扣一分。(30%)

題號	答案	藥品	檢驗項目
1	Captopril		A. Serum drug concentration
2	Digoxin		B. Liver transaminases
3	Erythropoietin		C. Serum BUN, creatinine
4	Furosemide		D. Serum potassium
5	Cefazolin		E. Complete blood count (CBC) and leukocyte differential
6	Phenytoin		F. Serum iron, TIBC, serum ferritin, transferrin saturation
7	Simvastatin		G. Serum creatine kinase (CK)
			H. Low density lipoprotein (LDL)

二、 简答题

1. 一名藥學生以 SOAP 分析並計畫一位 58 歲男性糖尿病病患的藥物治療，其中至少有五項重要錯誤，請指出並更正之。(10%)

Subjective: hyperglycemia

Objective: foot numbness, blurred vision, AC 156 mg/dL, 2 hour PC 218 mg/dL, HbA1C 12.6%, BUN 28 mg/dL, serum creatinine 2 mg/dL. Height 170 cm, Weight 90 kg. Current medications include metformin 500 mg tid pc and pioglitazone 30 mg daily.

Assessment: (1) Metformin decrease hepatic glucose synthesis and increases peripheral insulin sensitivity. It may benefit on lipid profile and promote weight loss. This patient has no contraindication for continuation of metformin.

(2) Pioglitazone is a thiazolidinedione which has similar mechanism of action as metformin. The dose should be increased to 30 mg bid for better management of blood sugar.

Plan: (1) Continue metformin and increase daily dose of pioglitazone.

(2) Monitor preprandial and postprandial glucose, HbA1C, BUN, serum creatinine, liver function tests, LDL, HDL, TG, and body weight.

(3) Patient education: Teach patient the importance of medication adherence. As long as he takes current medications regularly, his blood sugar should be under control, and macrovascular and microvascular complications will be prevented. He needs to be caution regarding symptoms of hypoglycemia.

2. 請閱讀以下短文並回答問題：(10%)

A. Typical 與 atypical antipsychotic agents 的不同處為何？各包括哪些藥品？

B. 你認為這篇研究報告對臨床上使用 antipsychotic agents 的衝擊為何？

見背面

Background

Users of typical antipsychotic drugs have an increased risk of serious ventricular arrhythmias and sudden cardiac death. However, less is known regarding the cardiac safety of the atypical antipsychotic drugs, which have largely replaced the older agents in clinical practice.

Methods

We calculated the adjusted incidence of sudden cardiac death among current users of antipsychotic drugs in a retrospective cohort study of Medicaid enrollees in Tennessee. The primary analysis included 44,218 and 46,089 baseline users of single typical and atypical drugs, respectively, and 186,600 matched nonusers of antipsychotic drugs. To assess residual confounding related to factors associated with the use of antipsychotic drugs, we performed a secondary analysis of users of antipsychotic drugs who had no baseline diagnosis of schizophrenia or related psychoses and with whom nonusers were matched according to propensity score (i.e., the predicted probability that they would be users of antipsychotic drugs).

Results

Current users of typical and of atypical antipsychotic drugs had higher rates of sudden cardiac death than did nonusers of antipsychotic drugs, with adjusted incidence rate ratios of 1.99 (95% confidence interval [CI], 1.68 to 2.34) and 2.26 (95% CI, 1.88 to 2.72), respectively. The incidence-rate ratio for users of atypical antipsychotic drugs as compared with users of typical antipsychotic drugs was 1.14 (95% CI, 0.93 to 1.39). Former users of antipsychotic drugs had no significantly increased risk (incidence rate ratio, 1.13; 95% CI, 0.98 to 1.30). For both classes of drugs, the risk for current users increased significantly with an increasing dose. Among users of typical antipsychotic drugs, the incidence-rate ratios increased from 1.31 (95% CI, 0.97 to 1.77) for those taking low doses to 2.42 (95% CI, 1.91 to 3.06) for those taking high doses ($P < 0.001$). Among users of atypical agents, the incidence-rate ratios increased from 1.59 (95% CI, 1.03 to 2.46) for those taking low doses to 2.86 (95% CI, 2.25 to 3.65) for those taking high doses ($P = 0.01$). The findings were similar in the cohort that was matched for propensity score.

Conclusions

Current users of typical and of atypical antipsychotic drugs had a similar, dose-related increased risk of sudden cardiac death.

Ray WA, Chung CP, Murray KT, et al. N Engl J Med 2009;360:225-35.

三、 請閱讀下列短文並回答問題：(30%)

- 試分析 Hillary 病情或所需之療護為何？
- Obama 可思考、整理或學習提供之藥事照護服務項目及內容該包括些什麼？
- Obama 該如何學習或運用團隊合作機會，讓病人 Hillary 接受最好的療護？

Junior Obama, a first-year student of the Graduate Institute of Clinical Pharmacy, is part of an inter-professional group of students. The group includes students of nursing, social work, and medicine. The group is asked to look at the case study below and state what specific input their professional group could provide in the overall care package for this patient.

Case Study

Hillary is 45 years old and has recently been discharged from hospital after an overnight stay following an acute episode of asthma. She lives in a rented two-bedroom flat with her husband and 14-year-old daughter. The flat is damp and has inadequate heating. Hillary has difficulty sleeping and smokes over 10 cigarettes a day. She has tried to give up smoking on several occasions but without success. Her husband is also a smoker and works on the night shift at a local warehouse. Hillary works part-time in an accounts office but in the past year has had a lot of absence from work due to various colds and chest infections. An added problem is that Hillary has a body mass index of 30 and finds it very difficult to exercise due to her asthma. She often feels quite low and sometimes finds it difficult to sleep. Hillary feels that she has little support in the home from her husband and daughter.

Her discharge medication from hospital is as follows:

- Prednisolone (5 mg/tab) 30 mg daily for 5 days
- Salbutamol inhaler (100 µg/dose) 2 puffs prn
- Beclometasone inhaler (40 µg/actuation) 2 puffs bid

四、請就下列處方回答問題：(20%)

- A. 請問此張處方缺乏哪些資訊？你還需要哪些資訊才能評估此處方的適當性？
- B. 處方有何問題？合理的處方應該如何？
- C. 請問你如何發揮專業處理這張處方的問題？
- D. 處理完處方，你應完成哪些藥師專業應做的工作？
- E. 目前小兒用藥開方常見的問題有哪些？如何解決？

臺大醫院		國立台灣大學醫學院附設醫院	
⊕NTUH		院址：台北市中山南路7號 台北市常德街一號	
		網址： http://ntuh.mc.ntu.edu.tw	
98/02/28 1715		台大醫院門診調劑單	
病患姓名	胡 XX	先生	領藥窗口 03
年齡	03	性別 F	15 Kg 身份 N01
科別	PED	醫師	許 XX
診斷		Otitis media	病患姓名 胡 XX
			處方日期 98/02/18
			病歷號碼 225xxxx
			結帳號碼 530xxxx
調劑藥師	張 XX	複核藥師	楊 XX
		第 次領藥	
----- 共 03 種 -----			
Y 01	AUGMENTIN 1 G/TAB	PO 1/4 TAB TID	11 TAB
	(875 mg amoxicillin & 125 mg clavulanic acid/tab)		
Y 02	PARAMOL 500 MG/TAB	PO 1/3 TAB QID PRN	6 TAB
	(acetaminophen TABLETS)		
Y 03	NACID 500 MG/TAB	PO 1/2 TAB QID PRN	6 TAB
	(hydrotalcite TABLETS)		
第 01 頁 共 01 頁			