

# 99年度社區藥局用藥照護 個案報告

第八組 主講者:景好藥師藥局

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99/10/01

## 個案基本資料

- 86歲女性
- 身高 153cm / 體重 44kg BMI 18.8
- 與未婚女兒(約50歲,乳癌0~1期)同住,聘外籍看護一名
- 中度多重障礙,單手拐杖需協助移位
- 由口進食軟質食物
- 目前病史: 中風(80年),心臟病(82年),關節炎(98年)

## 第一次訪視

99/06/15 am 10:00~12:30

- 個案問題

近三個月體重減輕 1~2公斤,食慾精神不佳, 想了解是否由目前的用藥所引起

- 過去病史

1. 於民國56年間手術切除甲狀腺時副甲狀腺有部分受損
2. 氣喘
3. 黃斑部病變

- 建立用藥資料：

藥品過敏史：無

藥品不良反應既往史：無

服藥狀況： 可自行吞服錠劑或膠囊

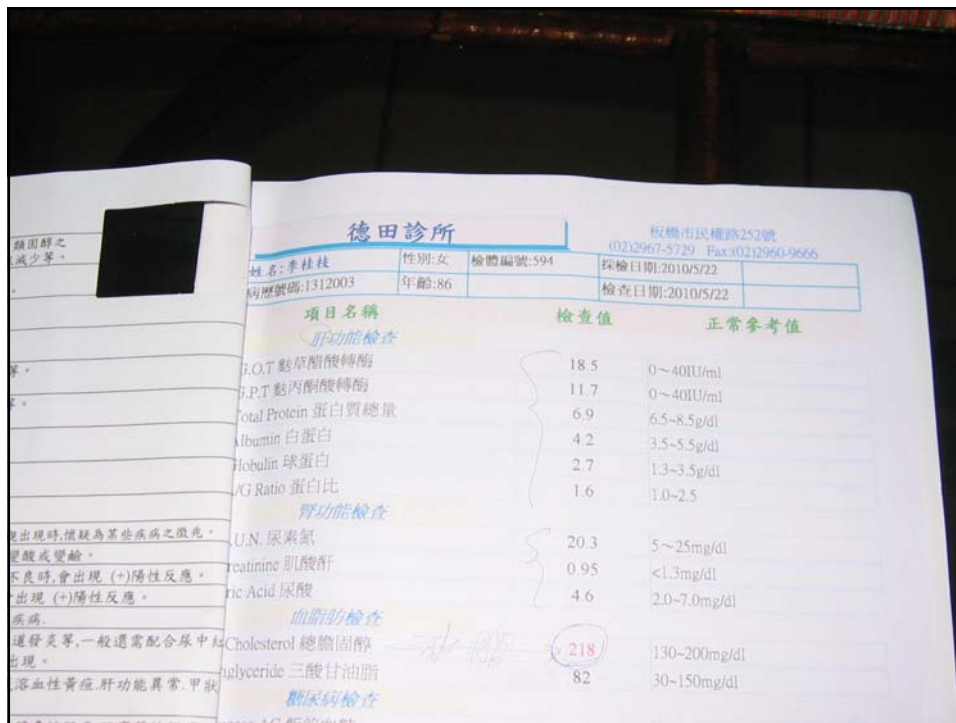
家屬協助用藥

- 檢視藥品儲存狀況：

藥品儲存地點：餐廳 專用盒 其它 甘草止咳水置冰箱

藥品儲存環境： 藥師協助改善





### 醫師處方藥品

醫療院所/科別/醫師	調劑處所	商品名	學名	含量/劑型	劑量/用法	實際用法
亞東醫院 神經內科	穎川藥局	Espin	Aspirin	100mg/cap	1# QD	1# QD
		Solantin	Dipyridamole	25mg/tab	1# TID	1# TID
		Imdur	Isosorbide 5-mononit	60mg/tab	1# QD	1# QD
		Ulcerin-p	AL(OH) <sub>3</sub>	233mg/tab	2# TID	2# TID
		CaCO <sub>3</sub>	CaCO <sub>3</sub>	500mg/tab	1# TID	1# TID
		Verapamil	Verapamil	40mg/tab	1# TID	未服
		Natrilix	Indapamide	1.5mg/tab	1# QD	未服
		Tritace	Ramipril	2.5mg/tab	1# PRN	1# PRN
		Bensau	Benzonatate	100mg/soft cap	1# TID	未服
		亞東醫院 胸腔內科	亞東醫院	B.M. Solution		
Lomidine	Loratadine			10mg/tab	1# QD	未服
Xanthium	Theophylline			200mg/cap	1# QD	未服
北榮 胸腔內科 彭瑞鵬	北榮	B.M. Solution			10ML QID	未服
		Bisolvon	Bromhexine	8mg/tab	1# QID	1# QID
		Actein	Acetylcysteine	600mg/tab	1# BID	未服
縣板 骨科	縣板	Viartil-s powder	Glucosamine sulfate	1500mg/pack	1 pack QD	1 pack QD

# 交互作用 / Drug Interaction Facts

## / 兩兩比對結果

交互作用藥品	危害等級	作用速度	嚴重程度	文獻記載
	Significance	Onset	Severity	Document
1 Aluminum Hydroxide <=> Aspirin 爾胃適寧一普錠 <=> "永勝" 安心平腸溶微粒膠囊 1 0 0 毫克 (阿斯匹林)	3	Delayed	Minor	Probable
2 Verapamil <=> Calcium Carbonate 必得命糖衣錠 4 0 公絲 (唯律脈必利) <=> 碳酸鈣錠 5 0 0 毫克	2	Rapid	Moderate	Suspected
3 Verapamil <=> Theophylline 必得命糖衣錠 4 0 公絲 (唯律脈必利) <=> 善寧持續性藥效膠囊 2 0 0 公絲	4	Delayed	Moderate	Possible
4 Aspirin <=> Ramipril "永勝" 安心平腸溶微粒膠囊 1 0 0 毫克 (阿斯匹林) <=> 心達舒膠囊 2 · 5 公絲	2	Rapid	Moderate	Suspected

## Aluminum Hydroxide <=> Aspirin

Salicylates		Antacids	
Aspirin* (eg,Bayer)		Aluminum Hydroxide (eg,Amphojel)	
Choline Salicylate* (Arthropan)		Aluminum/Magnesium Hydroxide*	
Magnesium Salicylate (eg,Doan's)		(eg,Maalox)	
Salsalate (eg,Disalcid)		Magnesium Hydroxide (eg,Milk of	
Sodium Salicylate		Magnesia)	
Sodium Thiosalicylate (eg,Tusal)			
Significance	Onset	Severity	Documentation
3	☆ Rapid ★ Delayed	☆ Major ☆ Moderate ★ Minor	☆ Established ★ Probable ☆ Suspected ☆ Possible ☆ Unlikely
<b>Effects:</b> Serum SALICYLATE concentrations may be reduced.			
<b>Mechanism:</b> ANTACID-induced increase in urinary pH reduces the renal reabsorption of SALICYLATE, increasing SALICYLATE clearance.			
<b>Management:</b> Patients stabilized on large doses of SALICYLATES may require monitoring of serum SALICYLATE concentrations and tailoring of dosage when ANTACID therapy is either initiated or discontinued.			
<b>Discussion:</b> While single doses of antacids are unlikely to have a significant effect, <sup>2,6</sup> chronic therapy with antacids can increase urinary pH in a dose-dependent manner. <sup>1,2,4,5</sup> This effect persists for at least 1 day after the last dose of antacid. <sup>7</sup> Three boys with rheumatic fever being treated with aspirin demonstrated 30% to 70% reductions in serum salicylate concentrations when a magnesium and aluminum hydroxide combination antacid was administered. <sup>8</sup> Similar, although less impressive, results were noted in nine healthy male adults receiving choline salicylate with or without Maalox, 120 mL/day. Six of the subjects achieved serum salicylate levels higher than 10 mg/dL while receiving choline salicylate alone. The mean serum salicylate concentration of these six subjects declined by 20% (from 19.8 to 15.8 mg/dL) during antacid administration. <sup>9</sup>			

# Aspirin <==> Ramipril

Significance	Onset	Severity	Documentation
2	★ Rapid	☆ Major	☆☆ Established
	☆☆ Delayed	★ Moderate	☆☆ Probable
		☆☆ Minor	★ Suspected
			☆☆ Possible
			☆☆ Unlikely

**Effects:**  
The hypotensive and vasodilator effects of the ACE INHIBITOR may be reduced.

**Mechanism:**  
Inhibition of prostaglandin synthesis.

**Management:**  
If both agents are necessary, monitor BP and hemodynamic parameters. If an adverse effect on hemodynamic parameters is noted, consider one of the following options: reduce ASPIRIN dosage to less than 100 mg/day, convert to nonaspirin antiplatelet agent; or continue ASPIRIN and convert patient from ACE INHIBITOR to angiotensin-receptor blocker.

- ACE Inhibitors**  
Benazepril (eg, Lotensin)  
Captopril (eg, Capoten)  
Enalapril (eg, Vasotec)  
Fosinopril (eg, Monopril)  
Lisinopril (eg, Prinivil)  
Moexipril (eg, Univas)  
Perindopril (Aceon)  
Quinapril (eg, Accupril)  
Ramipril (eg, Altace)  
Trandolapril (eg, Mavik)
- Salicylates**  
Aspirin (eg, Bayer)  
Bismuth Subsalicylate (eg, Pepto-Bismol)  
Magnesium Salicylate (eg, Doan's)  
Salsalate (eg, Amigesic)  
Sodium Thiosalicylate

**Discussion:**

In 18 patients with severe heart failure, a single dose of aspirin 350 mg appeared to attenuate the vasodilator and other prostaglandin-dependent effects of enalapril for more than 24 hours.<sup>1</sup> No clinical deterioration was noted in this 3-day study. Although reports regarding this interaction are contradictory, some extrapolations can be made: low-dose aspirin (less than 100 mg/day) may cause fewer interactions; the interaction may occur in patients with hypertension, coronary artery disease, or heart failure; interindividual susceptibilities are probable.<sup>2,6</sup> No adverse effect has been seen with coadministration of ACE inhibitors and aspirin in heart failure<sup>7-10</sup>; however, in 1 study, mortality was higher in patients receiving ACE inhibitors and aspirin in doses of 325 mg or more daily.<sup>3</sup> Studies are needed to assess the effects of long-term aspirin administration and lower doses of aspirin (eg, 81 mg/day) on ACE inhibitor therapy.<sup>2,3,11,12</sup>

# Verapamil <==> Calcium Carbonate

Significance	Onset	Severity	Documentation
2	★ Rapid	☆☆ Major	☆☆ Established
	☆☆ Delayed	★ Moderate	☆☆ Probable
		☆☆ Minor	★ Suspected
			☆☆ Possible
			☆☆ Unlikely

**Effects:**  
Clinical effects and toxicities of VERAPAMIL may be reversed by CALCIUM.

**Mechanism:**  
Pharmacologic antagonism.

**Management:**  
CALCIUM may be used therapeutically to reverse VERAPAMIL actions. For stabilized patients use adjunct CALCIUM carefully and monitor for loss of VERAPAMIL effectiveness.

**Discussion:**  
In dogs, calcium can reverse some verapamil effects in a dose-related manner.<sup>7</sup> Verapamil-induced changes in cardiac output, blood pressure, and AH intervals were all reduced by calcium, but slowing of sinus rate and atrioventricular block were not. This antagonism has been used advantageously in clinical situations. Calcium salts have been used successfully to treat verapamil overdose,<sup>1,8,9,11</sup> treat acute hypotension from verapamil,<sup>8,9,12</sup> and prevent initial hypotension in patients requiring verapamil for whom decreases in blood pressure could be

- Verapamil**  
Verapamil\* (eg, Calan)
- Calcium Salts**  
Ca Acetate (eg, PhosLo)  
Calcium Carbonate (eg, Os-Cal 500)  
Calcium Chloride\*  
Calcium Citrate (CitraCal)  
Calcium Glubionate (Neo-Calgluon)  
Calcium Gluceptate  
Calcium Gluconate\*  
Calcium Glycero-phosphate  
Calcium Lactate  
Calcium Levulinate  
Tricalcium Phosphate (Posture)

## Verapamil <==> Theophylline

Theophyllines  
 Aminophylline\*(eg,Phyllocontin)  
 Oxtriphylline(eg,Cholellyl SA)  
 Theophylline\*(eg,Slo-Phyllin)

Verapamil  
 Verapamil\* (eg,Calan)

Significance	Onset	Severity	Documentation
4	☆ Rapid	☆ Major	☆ Established
	★ Delayed	★ Moderate	☆ Probable
		☆ Minor	☆ Suspected
			★ Possible
			☆ Unlikely

### Effects:

The effects of THEOPHYLLINES may be increased.

### Mechanism:

Inhibition of hepatic metabolism of THEOPHYLLINES.<sup>5</sup>

### Management:

Monitor serum THEOPHYLLINE concentrations and the patient for signs of THEOPHYLLINE toxicity. Adjust dosages as needed.

### Discussion:

An elderly woman was admitted to the hospital for evaluation and treatment of paroxysmal supraventricular tachycardia.<sup>1</sup> She was taking digoxin(eg,Lanoxin) and theophylline. Verapamil 240 mg/day was initiated, but 2 days later her heart rate had increased and remained so, despite increases in verapamil (360 mg/day) and digoxin. She also complained of nausea and vomiting; theophylline levels on day 6 were 27.9 mcg/mL, and theophylline was discontinued. Symptoms resolved, and the patient was maintained on lower doses of all 3 drugs. Conversely, verapamil interactions may be used therapeutically.<sup>5</sup> A 75-year-old female patient hospitalized for pneumonia experienced paroxysmal episodes of supraventricular tachycardia with elevated theophylline concentrations (serum concentrations, 16.5 to 22.1 mcg/mL).<sup>2</sup> She was converted to a normal sinus rhythm on 2 separate occasions by IV administration of verapamil 5 mg. In a study involving 9 healthy volunteers, verapamil 80 mg every 8 hours for 4 days did not significantly change theophylline disposition.<sup>3</sup> In a single oral-dose study in healthy volunteers, 7 days of pretreatment with verapamil caused an 18% decrease in total theophylline clearance and an increase in theophylline half-life.<sup>4</sup> Similarly, a study of 12 healthy volunteers given verapamil 40, 80, or 120 mg 3 times daily for 4 days found a dose-dependent decrease in theophylline clearance ranging from 8% to 18%.<sup>6</sup> The magnitude of these changes is small but could cause toxicity in patients maintained in the upper therapeutic range of theophylline.

## 非醫師處方的藥品（指示藥、中草藥）或保健食品

使用動機	商品名(含成份)	含量/劑型	劑量/用法
綜合維他命	銀寶善存		1# QD
醫師建議	葉黃素	30mg	1# QD
脹氣	新表飛鳴	乳酸菌	PRN

## 藥師建議表 (For 個案家屬)

- 個案於民國56年間手術切除甲狀腺時副甲狀腺亦有部分受損建議至內分泌科追蹤血鈣濃度
- **ACTEIN EFFERVESCENT TABLETS 600MG** 為發泡錠需溶解於約 100ML 水中後方可服用,可輔助減少喘咳症狀
- 未服用的藥品,下次回診請醫師評估是否續用

感謝大家聆聽