

# 失智症常合併精神作用藥物介紹

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# 大綱

- Behavior and psychological symptoms of dementia (BPSD)
- 失智相關精神行為症狀的處理流程
- 失智症精神行為症狀之藥物治療
- 結論

▶ **什麼是失智症之精神行為症狀**  
**Behavior and psychological symptoms of dementia (BPSD)**

# 失智症之精神行為症狀

- ▶ Alzheimer 1907年首次發表。
- ▶ 51 y/o 女性，認知功能障礙，伴隨妒忌妄想及聽幻覺。
- ▶ **Behavior and psychological symptoms of dementia (BPSD)**

# Psychosis

- ▶ Psychosis is “loss of contact with reality.”
- ▶ Hallucinations and delusions are core “positive” features.
- ▶ “Negative” features include apathy and psychomotor retardation.



# 神經精神評估量表

## Neuropsychiatric Inventory, NPI

表 12、神經精神評估量表

項目	有無此症狀		頻 率				嚴重性		
	是	否	偶爾	時常	經常	常常	輕	中	重
妄想	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
幻覺	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
激動 / 攻擊行為	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
憂鬱 / 情緒不佳	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
焦慮	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
怡然自得 / 欣快感	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
冷漠 / 毫不在意	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
言行失控	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
暴躁易怒 / 情緒易變	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
異常動作 ( 主要指重複性動作 )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(失智症診療手冊，衛福部，2017)

# 失智症之精神行為症狀常見徵兆

- ▶ 「近的記不住，舊的一直講」
- ▶ 「躺著睡不著，坐著打瞌睡」
- ▶ 「到處漫遊走，出門就迷路」
- ▶ 「東西一不見，直覺被偷走」
- ▶ 「問話重覆說，行為反覆做」
- ▶ 「情緒欠穩定，憂鬱最早現」
- ▶ 「當面對質問，謾罵攻擊出」

(黃正平：臨床老年精神醫學)

# 失智症的精神行為症狀-BPSD

<b>Affect</b>	憂鬱
	焦慮
	躁症
	易怒
<b>Behavior</b>	自言自語
	反覆衝動
	坐立不安
	傷人或自傷
<b>Cognition</b>	妄想
	幻覺
<b>Drive</b>	失眠或嗜睡
	食慾高或低
	性慾過高或不適切的性行為



# 失智症精神行為症狀(1)

## ➤ 憂鬱症狀

- 發生率為40-50%之間。
- 無助感、無望感、無價值感
- 血管型失智症 > 阿茲海默氏失智症

## ➤ 焦慮症及恐懼症：

- 即將來臨的事反覆提問
- 害怕、恐懼獨處(常見)

# 失智症精神行為症狀(2)

## ➤ 妄想症狀

- 被偷妄想
- 被害妄想
- 忌妒妄想

## ➤ 錯認(Misidentification)

- 被冒充取代

## ➤ 幻覺(Hallucination) :

- 視幻覺 > 聽幻覺 > 觸、嗅、味幻覺

# 失智症精神行為症狀(3)

## ➤ 行為障礙(behavioral disturbances)

- **攻擊行為**：發生率為54.7%。對負面感覺忍耐力降低、喪失是非判斷能力，容易誤解別人。
- **睡眠障礙**：發生率為60.5%。日夜節律顛倒、白天睡覺晚上失眠。
- **迷路**：發生率為61.7%。失智症中後期出現較多。
- **重覆現象**：發生率62.7%。失智症早期已出現，重覆行為及言語。

# 失智症精神行為症狀(4)

## ➤ 行為障礙(behavioral disturbances)

- **漫遊**：發生率為45.3%。方向及地點之定向感逐漸喪失，容易在家裡及鄰近社區四處遊走
- **飲食改變**：發生率為36.0%。貪食(最常見)、口味改變...
- **病態收集**：發生率為27.5%。收集項目和失智嚴重度有關。
- **不恰當性行為**：發生率為15%。性暴露、不恰當性接觸。

# 失智症精神行為症狀(5)

- ▶ 日落症候群 (Sun-down syndrome)：病患早上頭腦清醒，大約從下午3點到晚上11點出現精神混亂、激躁行為。

# Identify BPSD Symptom Clusters

## Psychosis



Delusions  
Hallucinations  
Misidentification  
Suspicious

## Aggression



Defensive  
Resistance to care  
Verbal  
Physical

## Agitation



Dressing/undressing  
Pacing  
Repetitive actions  
Restless/anxious

## Depression



Anxious  
Guilty  
Hopeless  
Irritable/screaming  
Sad, tearful  
Suicidal

## Mania



Euphoria  
Irritable  
Pressured speech

## Apathy



Amotivation  
Lacking interest  
Withdrawn

# ▶ BPSD的處理\_ DCBA

# 失智相關精神行為症狀的處理流程

找出引起BPSD的可能原因，  
例如環境、譫妄、疼痛、藥物等。

失智症的精神行為症狀的治療仍以非藥物的治療為優先，須使用藥物時由低劑量，單純的藥物開始，隨時檢討藥物使用的必要性。

成效不足時，再考慮結合與藥物治療的協同治療模式。

1. Use of Antipsychotics in Behavioural and Psychological Symptoms of Dementia (BPSD). Discussion Guide. Centre for Effective Practice. April 2016. Version 2.
2. 失智症診療手冊，衛福部，2017



# BPSD處理

- ▶ 1.優先: **D**身體問題或譫妄
- ▶ 2.其次: **C**認知功能
- ▶ 3.再其次: **B**行為及情緒問題
- ▶ 4.最後: **A**日常生活功能。
- ▶ 不論非藥物或藥物治療，以「增進失智症患者獨立功能與生活品質」及「減輕照護者負荷、增進其因應技巧與照護能力」為目標。

# ▶ 失智症行為精神症狀之藥物治療

# Psychosis in old ages

Characteristic Features	Delirium	BPSD	Late onset psychosis
Length of maintenance of antipsychotic medication	Brief	Brief	Long term

(Gautam S, Jain A, et al, 2018)

# BPSD 藥物治療原則

- ▶ 非藥物治療效果不佳時，再加上藥物處理。
- ▶ 藥物劑量能低就低，種類能少就少，減少藥物對身體造成的負荷與副作用。
- ▶ 老年失智症病人，神經精神類藥物的使用原則為低起始劑量、緩慢調整 ( **start low, go slow!** )

# Use of antipsychotics to treat BPSD

Steps	Recommended procedures
Assessment of BPSD	<ol style="list-style-type: none"><li>1. Patients with dementia should be assessed for the type, frequency, severity, clinical pattern, and timing of the symptoms (IC)</li><li>2. Assess for pain and other potentially modifiable factors and for subtypes of dementia that may influence the choice of treatment (IC)</li><li>3. Use quantitative measures to assess agitation and psychosis, if present (IC)</li></ol>
Development of comprehensive treatment plan	<ol style="list-style-type: none"><li>4. Individualized treatment plan includes appropriate nonpharmacological and pharmacological interventions (IC)</li></ol>
Assessment of benefits and risks of antipsychotic treatment for the patient	<ol style="list-style-type: none"><li>5. Antipsychotic medication should be used for treatment of agitation or psychosis only when symptoms are severe or dangerous and/or cause significant distress to the patient (IB)</li><li>6. Review response to nonpharmacological interventions prior to use of an antipsychotic medication (IC)</li><li>7. If feasible, discuss risk/benefit with the patient and obtain his/her or the caregiver's consent (IC)</li></ol>
AP treatment – dosage, duration, and monitoring	<ol style="list-style-type: none"><li>8. Initiate at a low dose to be titrated up to the minimum effective dose as tolerated (IB)</li><li>9. If significant adverse effects occur, review the patient's status and taper or discontinue the antipsychotic medication (IC)</li><li>10. If no significant response occurs after 4 weeks of an adequate dose, taper and withdraw the medication (IB)</li><li>11. If positive response occurs, consider and discuss tapering the dose with the patient/surrogate regarding experience with tapering attempts (IC)</li><li>12. If adequate response occurs, the dose of antipsychotic medication could be tapered or withdrawn, unless the patient experienced recurrence of symptoms with prior attempts at tapering (IC)</li><li>13. If the dose of antipsychotic medication is being tapered, assess the symptoms at least monthly for a minimum of 4 months after discontinuation to identify recurrence of symptoms (IC)</li></ol>
Use of specific antipsychotic medication, depending on clinical context	<ol style="list-style-type: none"><li>14. In the absence of delirium, haloperidol should not be used as a first-line agent (IB)</li><li>15. Long-acting injectable antipsychotics should not be used, unless it is indicated for co-occurring psychotic disorder (IB)</li></ol>

(Masopust J, et al, 2018)

# 治療失智症患者之行為精神症狀的藥物

	劑量	適應症	常見副作用
非典型抗精神病藥物			
Quetiapine (Seroquel)	睡前12.5 – 300 mg	妄想、幻覺、激躁	鎮靜嗜睡、巴金森氏症、血糖升高、體重增加、心電圖變化(QT間隔延長)。美國食品藥物管理局警告使用者可能發生腦血管病變。
Risperidone (Risperdal)	睡前0.5-1.5 mg		
Olanzapine (Zyprexa)	睡前2.5-10 mg		
傳統抗精神病藥物			
Haloperidol (Haldol)	每日1.2-3.5 mg	妄想、幻覺、急性激躁	鎮靜嗜睡、巴金森氏症、遲發性運動不能、肌張力不足、神經藥物惡性症候群、體重增加、光敏感、心電圖變化。
乙酰膽鹼酶抑制劑			
Donepezil (Aricept)	睡前10 mg	激躁、冷漠	噁心、嘔吐、腹瀉。
Galantamine (Reminyl)	6-12 mg每日兩次		
Rivastigmine (Exelon)	3-6 mg每日兩次		
抗癲癇藥物			
Carbamazepine (Tegretol)	每日200-600 mg	激躁、攻擊性、去抑制現象	鎮靜、運動失調、血鈉過低、顆粒球過低。
Valproic acid (Depakine)	每日375-1375 mg		
抗憂鬱藥物			
Citalopram (Cipram)	每日10-40 mg	憂鬱、激躁	腹瀉、頭痛、性功能異常、血鈉過低、厭食、煩躁不安。
Fluoxetine (Prozac)	每日5-40 mg	憂鬱	
Sertraline (Zoloft)	每日25-200 mg	憂鬱	
Trazodone (Mesyrel, Cirzodone)	睡前25-300 mg	睡眠障礙	鎮靜嗜睡。
抗焦慮藥物			
Buspirone	每日15-30 mg	焦慮、激躁	頭痛、噁心、暈眩、煩躁不安。
Lorazepam (Ativan)	每日0.5-5 mg	急性激躁、焦慮	鎮靜、運動失調、精神混亂、憂鬱、跌倒

# 抗精神病藥物使用在BPSD– Schizophrenia–like syndromes

藥品名稱	BPSD 常用劑量	Schizophrenia 建議劑量	備註
*Risperidone	0.25-2mg/d	Initial, 2 mg/day orally, to a usual dosage of 4 to 8 mg/day.	Dose-related EPS
*Olanzapine	2.5-10mg/d	Initial, 5-10mg/day orally, MAX, 20 mg/day	1. 劑量小於5mg，EPS副作用發生機率低 2. 需注意metabolic side effects。
*Quetiapine	25-150mg/d	Initial, 25mg/day orally, MAX, 800 mg/day	可能與白內障的發生有關，建議每六個月 進行裂隙燈檢查。
*Aripiprazole	2-5mg/d initially, max 30mg/d	Initial, 10-15mg/day orally, MAX, 30 mg/day	藥效達到穩定狀態需要2週，故在服藥達2 週前不應該增加劑量。
*Amisulpride	50-200mg/d	400-1200mg/d	CrCl 30-60ml/min劑量應降為 1/2。 CrCl 10-30ml/min，則劑量應降為 1/3。

American Geriatrics Society Guideline: Management of psychotic disorders in older adults. [https://www.nhqualitycampaign.org/files/AGS\\_Guidelines\\_for\\_Telligen.pdf](https://www.nhqualitycampaign.org/files/AGS_Guidelines_for_Telligen.pdf)  
Amisulpride in Refractory Behavioral and Psychological Symptoms of Dementia. Ann  
Alzheimers Dement Care. 2017.1(1): 001-006. UpToDate/Micromedx



# 抗精神病藥物使用在BPSD-Schizophrenia-like syndromes

藥品名稱	BPSD 常用劑量	Schizophrenia 建議劑量	備註
Clozapine	25-150mg/d	Initial, 12.5mg/day orally, MAX, 900 mg/day	1. 可用於parkinsonism和tardive dyskinesia的病人。 2. 可能造成顆粒性白血球缺少。前18週使用時，每週需作白血球檢驗，使用18週後，每月作一次白血球檢驗。
Paliperidone	3-12mg/d	Initial, 6mg/day orally, MAX, 12 mg/day	CrCl 51-80ml/min, max 6mg/d; CrCl≤50ml/min, max 3mg/d
Ziprasidone	20-80mg/d	Initial, 20 mg twice daily, up to 80mg twice daily	可能造成QTc延長，需定期監測EKG。

American Geriatrics Society Guideline: Management of psychotic disorders in older adults. [https://www.nhqualitycampaign.org/files/AGS\\_Guidelines\\_for\\_Telligen.pdf](https://www.nhqualitycampaign.org/files/AGS_Guidelines_for_Telligen.pdf)  
Amisulpride in Refractory Behavioral and Psychological Symptoms of Dementia. Ann Alzheimers Dement Care. 2017.1(1): 001-006. UpToDate/Micromedx



# 抗憂鬱藥物使用在BPSD-depressive features

藥品	老人建議劑量(mg/d)	作用	注意事項
選擇性血清回收抑制劑 (Selective Serotonin Reuptake Inhibitor, SSRI)			SSRI類藥品副作用：EPS、低血鈉、自殺風險(用藥早期)、腸胃不適、增加上消化道出血機率、失眠
citalopram	10-40mg	抗憂鬱、抗焦慮	SSRI中交互作用最少藥品。有文獻支持可降低病人Agitation。須注意QT間隔延長。
Escitalopram	5-20mg	抗憂鬱、抗焦慮	須注意QT間隔延長。
Fluoxetine	10-40mg	抗憂鬱、抗焦慮	半衰期長。CYP450 2D6的強效抑制劑
Paroxetine	10-40mg	抗憂鬱、抗焦慮	CYP450 2D6的強效抑制劑。抗膽鹼副作用。
Sertraline	25-100mg	抗憂鬱、抗焦慮	
血清素正腎上腺素回收抑制劑 (Serotonin-Norepinephrine Reuptake Inhibitor, SNRI)			
Duloxetine	20-60mg	治療重鬱症、抗焦慮	噁心、口乾、暈眩、高血壓。CrCl 30-60ml/min需降低劑量，禁用於CrCl < 30ml/min
Venlafaxine	25-150mg	抗憂鬱、抗焦慮	可能導致血壓持續性升高(dose-dependent)與QT間隔延長。

American Geriatrics Society Guideline: Management of psychotic disorders in older adults. [https://www.nhqualitycampaign.org/files/AGS\\_Guidelines\\_for\\_Telligen.pdf](https://www.nhqualitycampaign.org/files/AGS_Guidelines_for_Telligen.pdf)

# 抗憂鬱藥物使用在BPSD-depressive features

藥品	老人建議劑量(mg/d)	作用	注意事項
<b>多巴胺與正腎上腺素回收抑制劑 (Dopamin-Norepinephrine Reuptake Inhibitor, DNRI)</b>			
Bupropion	75-225mg	抗憂鬱。可用於活力降低或性功能障礙的病人。	容易降低癲癇發作閾值
<b>血清素調節劑 (serotonin modulator )</b>			
Trazodone	25-150mg	抗憂鬱。鎮靜、助眠。	鎮靜、低血壓
<b>正腎上腺素和血清素調節劑 (Norepinephrine Serotonin Modulator, NSM )</b>			
Mirtazapine	7.5-30mg	抗憂鬱、助眠、促進食慾	鎮靜、低血壓、促進食慾

American Geriatrics Society Guideline: Management of psychotic disorders in older adults. [https://www.nhqualitycampaign.org/files/AGS\\_Guidelines\\_for\\_Telligen.pdf](https://www.nhqualitycampaign.org/files/AGS_Guidelines_for_Telligen.pdf)

# 抗癲癇藥物使用在BPSD-Manic like features

藥品	老人建議劑量 (mg/d)	副作用	備註
Carbamazepine	200-1000mg/d	噁心、疲倦、皮膚疹、史帝強生症候群、視力模糊、低血鈉	老年人耐受性較差。監測CBC、肝功能、電解質。
Lamotrigine	25-200mg/d	皮膚疹、史帝強生症候群、顆粒性白血球減少	與Sodium valproate併用會增加副作用。
Lithium	150-1000mg/d	噁心、嘔吐、細微動作顫抖、運動失調	老年人耐受性較差。監測甲狀腺與腎功能。
Sodium valproate	250-2000mg/d	噁心、腸胃不適、鎮靜、運動失調	監測CBC、血小板、肝功能。老年人耐受性較其他藥物好。

主要使用於“ 像躁症” 的病人

American Geriatrics Society Guideline: Management of psychotic disorders in older adults. [https://www.nhqualitycampaign.org/files/AGS\\_Guidelines\\_for\\_Telligen.pdf](https://www.nhqualitycampaign.org/files/AGS_Guidelines_for_Telligen.pdf)

# 藥物治療BPSD-agitation

症狀	藥物及常用劑量
Angitation in context of psychosis	Aripiprazole 2.5-12.5mg/d, Olanzapine 2.5-10mg/d, Quetiapine 12.5-100mg/d, Risperidone 0.25-3mg/d
Angitation in context of depression	SSRI, eg. Citalopram 10-30mg/d
Anxiety, imild to moderate irritability	Bupropion 15-60mg/d, Trazodone 50-100mg/d
Agitation or aggression unresponsive to first-line treatment	Carbamazepine 300-600mg/d, Sodium valproate 500-1500mg/d
Sexual aggression, impulse-control symptoms in men	SGAs, Sodium valproate 500-1500mg/d
Agitation in Lewy body or parkinson's dementia	Possible Cholinesterase inhibitors, very low dose quetiapine or clozapine

American Geriatrics Society Guideline: Management of psychotic disorders in older adults. [https://www.nhqualitycampaign.org/files/AGS\\_Guidelines\\_for\\_Telligen.pdf](https://www.nhqualitycampaign.org/files/AGS_Guidelines_for_Telligen.pdf)

# Comparison of Antipsychotics

Drug Generic (Brand)	Efficacy or evidence in BPSD therapy	↑ BP <sup>32</sup>	Ach	Sedation	EPS	TD <sup>33</sup>	Diabetes	Weight Gain <sup>27</sup>	Usual Dose	
Atypicals	<b>Risperidone*</b> (Risperdal) <sup>25, 26, 34</sup>	<ul style="list-style-type: none"> <li>Indicated for severe dementia of the Alzheimer type (Health Canada)</li> <li>Evidence for efficacy in agitation, aggression &amp; psychosis</li> </ul>	++	++	++	++	+	++	↑↑↑ (0.7lb/month)	0.125mg – 2.0mg/d QHS (or divided BID)
	<b>Olanzapine*</b> (Zyprexa) <sup>25, 26, 34</sup>	<ul style="list-style-type: none"> <li>Off-label use in BPSD</li> <li>Evidence for efficacy in agitation &amp; aggression</li> </ul>	+	+++	+++	++	+	+++	↑↑↑ (1.0lb/month)	1.25mg – 7.5mg/d
	<b>Aripiprazole*</b> (Abilify) <sup>34</sup>	<ul style="list-style-type: none"> <li>Off-label use in agitation or aggression<sup>18</sup></li> <li>Evidence for efficacy in agitation &amp; aggression</li> <li>Not eligible for dementia or BPSD in the elderly<sup>(ODD criteria, Therapeutic Note)</sup></li> <li>Not for psychosis<sup>(same as placebo)</sup></li> </ul>	+	+	++	+	+	–	↑	2.0mg – 12.5mg QHS
	<b>Quetiapine</b> (Seroquel) <sup>25, 26, 34</sup>	<ul style="list-style-type: none"> <li>Off-label use in BPSD</li> <li>Lacks evidence for efficacy in BPSD agitation, aggression &amp; psychosis</li> <li>Consider in Lewy Body dementia, Parkinson's (low EPS)</li> <li>Note: although used, not indicated, and lacking evidence for insomnia</li> </ul>	++	+++	+++	+	+	+++	↑↑ (0.4lb/month)	12.5mg – 200mg/d (divided QHS-TID)
Typicals	<b>Haloperidol</b> (Haldol)	<ul style="list-style-type: none"> <li>Useful short term in acute BPSD or delirium</li> </ul>	+	+	+	+++	+++	++	↑↑	0.25mg – 2.0mg/d
	<b>Loxapine</b> (Loxapac, Xylac) <sup>2</sup>	<ul style="list-style-type: none"> <li>Consider if other agents have failed and severe, persistent, dangerous behaviour continues</li> <li>Severe, acute BPSD</li> <li>Not to be used long-term due to adverse effects</li> </ul>	++	++	+++	+++	+++	+	–	5.0mg – 10mg BID

Use of Antipsychotics in Behavioural and Psychological Symptoms of Dementia (BPSD). Discussion Guide. Centre for Effective Practice. April 2016. Version 2.

# 抗精神病藥物的副作用

<b>Table 2. Adverse Events of Second-generation Antipsychotics</b>							
	<b>Aripiprazole</b>	<b>Clozapine</b>	<b>Olanzapine</b>	<b>Paliperidone</b>	<b>Quetiapine</b>	<b>Risperidone</b>	<b>Ziprasidone</b>
<b>Cardiovascular</b>							
<b>Level of Evidence</b>	CR	CR	RCT	RCT	RCT	RCT	CR
Hypotension	?	0/+++	+	+	+++	+	?
QTc prolongation*	?	+	+	+	+	+	++
<b>Endocrine/Metabolic</b>							
Weight gain	?	+++	+++	++	++	++	?
Diabetes	?	+++	+++	++	++	++	?
Hypertriglyceridemia	0	+	+	?	0	?	0
Hyperprolactinemia	?	?	?	+++	?	+++	+
<b>Gastrointestinal</b>							
Nausea, vomiting, constipation	0	?	0	?	+	?	?
<b>Neurologic</b>							
Extrapyramidal symptoms	++	+	+	+++	+	+++	+
Seizures	?	+++	?	ND	?	ND	ND
Sedation	?	+++	+	+	+	+	?
<b>Systemic</b>							
Anticholinergic	0	+++	++	0	+	0	?
Neuroleptic malignant syndrome	ND	+	ND	ND	ND	+	ND
*QTc upper limit of normal = 44 millisec							
CR = case reports; RCT = randomized clinical trials; ND = no data							
? = uncertain effect							
0 = no effect							
+ = mild effect; ++ = moderate effect; +++ = severe effect; 0/+++ = no effect to severe effect in the case of drug interactions							



# 抗精神病藥物的副作用及處理方法

副作用	處置
藥物引發的帕金森氏症 (Drug-induced parkinsonism)	降低劑量(通常是dose related)；換藥；避免使用抗膽鹼藥品 (anticholinergic agent)
靜坐不能 (Akathisia)	考慮使用 $\beta$ -blocker(例如：propranolol 20-40mg/d)或是低劑量BZD(例如：lorazepam 0.5mg q12h)
低血壓 (Hypotension)	慢慢調升其治療劑量(slow titration)；降低劑量；換藥
鎮靜 (Sedation)	降低劑量；換藥；睡前給藥
遲發性運動不能 (Tardive dyskinesia)	停用藥品；考慮使用SGAs中EPS風險較小的藥品，例如： aripiprazole、quetiapine。

# 失智症BPSD治療比較

	阿茲海默症	血管性失智症	額顳葉失智症	路易體失智症
抗精神病藥物的使用	抗精神病藥物有效，但長期增加中風與死亡風險；高劑量抗精神病藥要減藥時須緩慢減藥，以避免復發。	儘量短期低劑量使用，對幻覺妄想可能有效。	抗精神病藥物對躁動不安無實證支持。	對所有抗精神病藥都十分敏感，容易產生帕金森症副作用或抗精神病藥物惡性症候群，建議考慮使用極低劑量 <b>quetiapine</b> ，並緩慢加藥。
乙醯膽鹼酶抑制劑的使用	有效；輕、中、重度可以使用。	部分個案有效	無效	有效

(失智症診療手冊，衛福部，2017)



# Drug interactions

Drugs	Metabolism	Drugs increasing levels	Drugs decreasing levels	Pharmacodynamic interactions
Donepezil	CYP3A4 and 2D6	Fluoxetine Ketoconazole Itraconazole Erythromycin Quinidine	Rifampicin Phenytoin Carbamazepine Alcohol	Anticholinergic medication – An Cholinomimetics (succinylcholine) – S Peripheral ChE-I (neostigmine) – S Beta blockers – CV Amiodarone – CV Ca channel blockers – CV
Rivastigmine	Extrahepatic	–	–	Anticholinergic medication – An Cholinomimetics (succinylcholine) – S Peripheral ChE-I (neostigmine) – S Beta blockers – CV Amiodarone – CV Ca channel blockers – CV
Galantamine	CYP3A4 and 2D6	Paroxetine Fluoxetine Fluvoxamine Amitriptyline Ketoconazole Erythromycin Ritonavir Quinidine	?	Anticholinergic medication – An Cholinomimetics (succinylcholine) – S Peripheral ChE-I (neostigmine) – S Beta blockers – CV Amiodarone – CV Ca channel blockers – CV
Memantine	Primarily extrahepatic, renal excretion	Cimetidine Ranitidine Procainamide Quinidine Nicotine Urine alkalizing drugs <sup>b</sup>	?	Increase in effect of L-dopa, dopaminergic and anticholinergic medication Amantadine, ketamine, dextromethorphan – FTP It is necessary to adjust the dosage of spasmolytic medication, dantrolene, and baclofen

(Masopust J, et al, 2018)

# ▶ 結論

# 藥物使用前的考量

- ▶ 安全性與藥效(safety and efficacy)—需要用藥嗎?
- ▶ 起始劑量，有效劑量與維持劑量
- ▶ 足夠劑量到有治療效果所需的時間
- ▶ 使用頻次/半衰期，代謝
- ▶ 副作用(side effect or adverse effect)
- ▶ 服藥規律性(compliance/adherence)
- ▶ 多久該減藥或停藥
- ▶ 藥物交互作用

# 抗精神病藥物使用前考量

- 診斷、適應症 — 建立治療性關
- Target symptoms(目標症狀)
- Initial dose (starting dose, 起始劑量)
- Target dose(目標劑量)
- Maintenance dose(維持劑量)
- Days to mid-target dose (藥物調整間隔)
- Days to effect(等待藥效開始的時間)
- Days to maintenance dose(減至維持劑量的時間)
- Full dose, Full term (考慮有效的最大劑量及時間)

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