Becoming Confident in Promoting ACP Discussion by Health and Social Care Professionals: the local experience of palliative care model for patients with Motor Neuron Disease and their caregivers

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- \* Shared Role among
  - \* Neurologist
  - \* Rehabilitation Specialist
  - \* Respiratory physician
  - \* GI physician
  - \* Allied Health: PT / OT / ST / Dietician
  - \* Palliative Care team

## Early PC integration

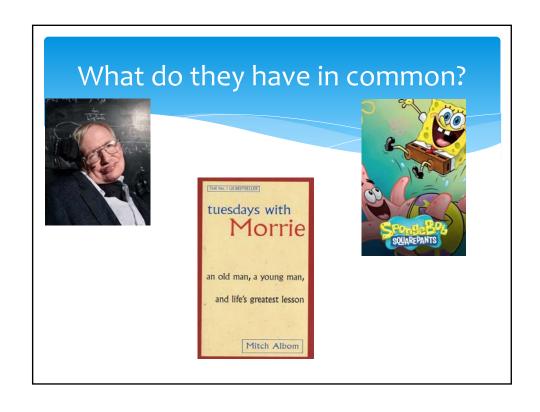


#### 運動神經元疾病

#### Motor Neuron Disease- MND

- \* 運動神經元漸進性退化
- \* 造成全身肌肉萎縮及無力的疾病
- \* 肌萎縮性脊髓側索硬化症(ALS)是成人最常見的運動神經 元疾病
- \* 「漸凍人」
- \* 因病患脊髓、腦幹或大腦運動皮質區之運動神經元漸進 性的退化
- \* 引起全身肌肉萎縮和無力,而導致疾病末期的全身癱瘓、 呼吸衰竭和死亡。





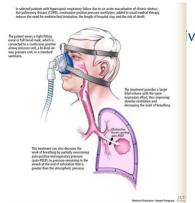


HOSPITAL AUTHORITY New Territories West Cluster Department of Medicine & Geriatrics (Rehabilitation block) ALS Functional Rating Scale (Chinese version)			For Hospital Admitted Patient, please use "HN" Label. For AE/OP attendance, please use AE/OP Label Name: HKID: HN/OP No.: Sex/D.O.B: Dept: Hospital: * CPH / POH / SLH / TMH				
肌肉萎縮性側索硬	化症功能評估量表修正版 (ALSFRS-R)	* Pls circle as appropriate					
項目	取較低分數計分	ł			日期		
· 、語言	(4) 正常語言功能 (3) 可發養到有語言功能障礙 (2) 直覆以改可讓人聽懂 (1) 訓結衛件隨非語言性的溝通 (0) 完全喪失功能性語言						
<b>、</b> 唾液	(4) 正常 (3) 口中噴實有稍多的唾液,晚間可能會流口水(註:白天不會流口水 (2) 中度過多的唾液,可能小量流口水 (1) 顯著過多的唾液,會有些流口水 (0) 顯著的流口水,當不斷的使用紙巾或手帕	k)					
、吞嚥	(4) 可正常的吞噬日常食物 (3) 初期飲食異常一個而會會到 (2) 需改變食物均黏稠度 (1) 需要從無食管補食食物 (0) 不由口雖食(咎節由解脈內注射或經腸遺灌食)						
1、寫字	(4) 正常 (3) 緩慢或液草: 但所有的字皆可辨識 (2) 並非所有的字可辨識 (1) 可握筆, 但無法寫字 (0) 無法選筆						

五、切割食物及使用 對沒有胃造口的 (Oral)	18	t	
對胃造口的患者 (NG or PEG)	<ul> <li>(4) 正常</li> <li>(3) 革指担可自行獨立完成所有操作</li> <li>(2) 需品助加强或計結</li> <li>(1) 能均微检测原體者</li> <li>(0) 無法執行任何任務</li> </ul>		
六、穿著衣褲與個》	(3) 能獨立完成自我照顧,但費力或效率低 (2) 需問數性地幫助或採用替代方式 (1) 需有變態助自我照顧 (0) 完全倚賴他人		
七、床上翻身與調	(3) 有點緩慢與笨拙,但不需別人幫忙 (2) 可自己翻身或調整床單,但動作相當困難 (1) 有初步動作,但無法獨自完成翻身或調整床單 (0) 無法執行		
八、步行	(4) 正常 (3) 初期出現步行困難 (2) 使用輸且,起路 (1) 無法走路・只有功能性動作 (0) 沒有出現有意義的離動		

八、步行	(4) 正常 (3) 初期出現步行困難 (2) 使用輔展走路 (1) 無法走路,只有功能性動作 (0) 沒有出現有意義的額動			
九、上樓梯	(3) 環境 (3) 環境 (2) 精微不種或皮乏 (1) 需要協助 (0) 無法執行			
十、呼吸困難 (新)	(3) 参行下列一或多項時發生,吃飯、洗澡、穿衣(日常生活) (1) 依行下列一或多項時發生,吃飯、洗澡、穿衣(日常生活) (1) 休息時發生,靜坐或賴清時呼吸阻離 (9) 明顯呼吸阻離,考慮使用機械式呼吸支持系統			
十一、端坐呼吸(新)	(4)無 (3)有時內間因呼吸短促而他眼困難,但通常不需使用兩個枕頭 (3)有時再個以上枕頭地眠 (1)只能端坐地眼 (1)與海上眼			
十二、呼吸換氣不足(新)	(4) 無 (3) 間斷使用雙相氣道正壓呼吸(BPAP) (2) 夜間持續使用雙相氣道正壓呼吸 (1) 白天與夜間持續使用雙相氣道正壓呼吸 (0) 需播管或就切及(使使用是人性呼吸器			
總分				
Assessed by (Signature	/ nurse chop)			

# (I) Respiratory failure



ve ventilation)

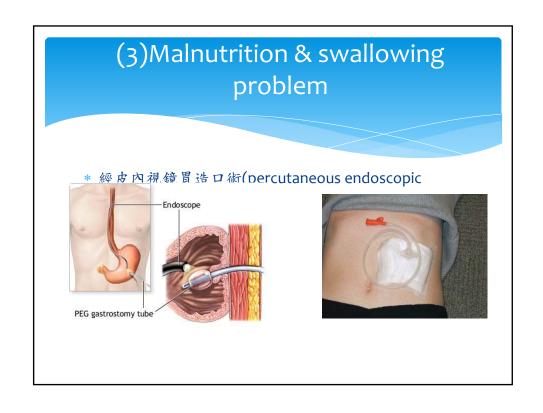
# (2)Loss of motor function

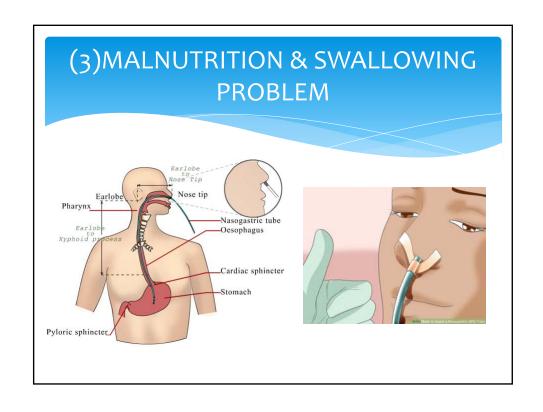


復康治療。利用物理治療和職 業治療,及多種輔助儀器來改 善病人的活動能力。

家居探訪。護士透過家訪,為病人舒緩徵狀 和疼痛,並提供心理支持,指導及協助家人 照顧病人。







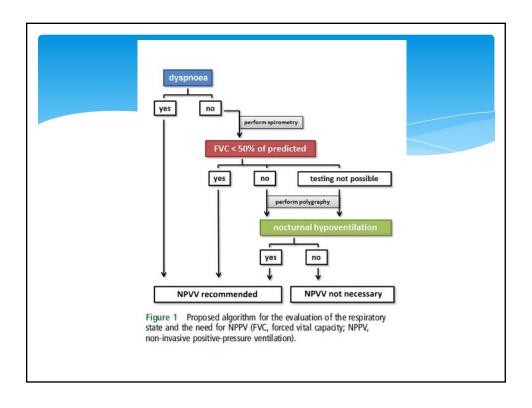
# Respiratory Failure



RESEARCH PAPER

Assessment of pulmonary function in amyotrophic lateral sclerosis: when can polygraphy help evaluate the need for non-invasive ventilation?

Tino Prell, Thomas M Ringer, Kara Wullenkord, Philipp Garrison, Anne Gunkel, Beatrice Stubendorff, Otto W Witte, Julian Grosskreutz



### Invasive ventilation via tracheostomy

- \* o% in UK
- \* 1-14% in USA
- \* 3% in Germany
- \* 2-5% in France
- \* 11% in Northern Italy
- \* 27-45% in Japan
- \* (End of life management in patients with ALS, Lancet Neurology Apr 2015)

Nutritional problem in MND

#### Nutritional problem in MND

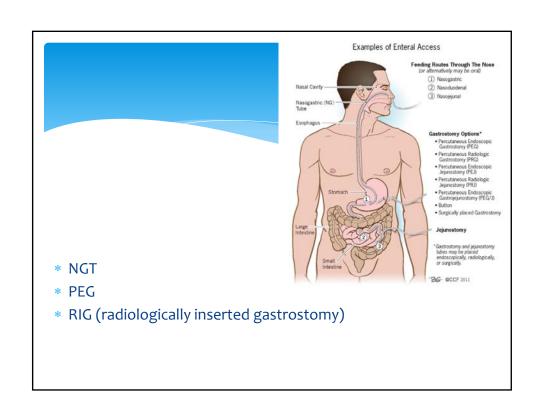
- \* Malnutrition is a significant problem in MND.
- \* A significant & independent prognostic factor for survival time in ALS/MND.
- \* BMI<20 is a independent predictor of life expectancy, relative risk of death is 7.7-fold over non-malnourished counterparts.

#### Timing of PEG

- \* There is no study on the timing of PEG
- \* If PEG placement is delayed until pt can absolutely not able to take orally, patient may be nutritionally depleted.
- \* Better survival in pt who received a PEG at a higher BMI.
- \* Delaying PEG may result in additional risk due to further decline in pulmonary status.
- \* A diminished FVC is a key prognostic indicator of worsening ALS/MND.

### Method of enteral tube feeding

- \* There is little evidence to support any specific approach
- \* A case series (Gregory et al 2002) of 33 pt with FVC<50%, PEG placement using NIPPV with nasal mask for ventilatory support.
- \* RIG is a possible alternative, fluoroscopy guided without use of sedation. A retrospective study comparing pt with FVC<50% showed more favorable outcome with RIG than PEG(Chio et al 2004). Problem: RIG has smaller caliber, greater chance of obstruction.



#### PEG vs RIG

- \* PEG
- \* Procedure time ~30 min
- \* Endoscopy guided
- Increased risk with pulmonary decline FVC <50%</li>
- \* RIG
- \* Procedure time ~ 60mn
- \* Fluoroscopy guided
- More favorable for declined pulmomary status

\* PEG is associated with improved nutrition and should be inserted early. The operation is hazardous in patients with VC <50%: RIG may be a better alternative.

- \* Non-invasive positive pressure ventilation improves survival and quality of life.
- \* Maintaining the patient's ability to communicate is essential.

- \* During the course of the disease, every effort should be made to maintain patient autonomy.
- \* Advance directives for palliative end of life care are important and should be discussed early with the patient and relatives.

- \* PEG placement is not for everyone
- \* The decision not to have PEG should be respected
- \* Patient my be too late in the disease course for PEG when the resp function declined
- \* While patient waiting for the procedure or during the procedure, a more upright posture is better – patient is not comfortable lying flat due to excessive secretions in the oropharynx.

#### **Advance Care Planning**

#### \* Advanced Care Planning

- \* Feeding (Oral / Ryle's Tube / PEG)
- Ventilator use in Respiratory failure (O2 supplement / NIPPV / intubation+/tracheostomy)
- \* DNACPR
- Management of Other reversible factors (e.g. anticoagulation in DVT, antibiotics use in infections)

# 預設照顧計劃 (Advance Care Planning-ACP)

- \* 若生命即將走到盡頭,盡力搶救是否是病者心中的選擇呢?除了搶救,是否已經再無選擇呢?
- \* 在最後一段人生旅程,好的生活質素遠比靠高科技維持生命更為重要。
- \* 有些末期病者表達他們希望一切順其自然,讓生命自然及有尊嚴地結束。

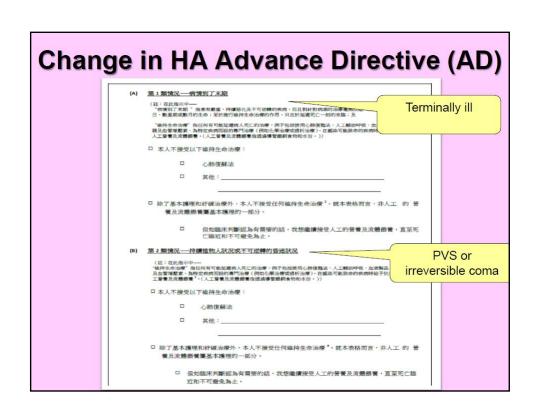
#### 「預設醫療指示」

必須有兩名見證人見證,簽署

- + 其中一名見證人必須是醫生
- + 兩名見證人均不是遺產受益人
- + 「預設醫療指示」是在病人喪失自決能力時才生效
- + 在啟動任何「預設醫療指示」前最少有兩名醫生確認和核證
- + 醫生會根據及尊重有效的「預設醫療指示」來提供治療



New AD Short Form	姓名:	預設醫療指示 (當病情到了末期時拒絕心肺 復甦術) 此預設醫療指示作出者的詳細個人資料 身份證號碼: 出生日期:	
	療作出的	(請清獎填上姓名)年滿 18 8 向所有預設醫療指示(如有的話),並自關作出 的主診醫生及最少另一名醫生診斷,證實本人 問醫護及治療的決定,則本人對自己的醫護及 便受心都復舊額 定此預設醫療指示第 II 部所述的兩名見證人 或本人所約有的任何采錄單、或本人所訂立場	下 並類啟醫療指示。  是網情到了末期。以致無法參與作出關 台療的指示如下:  (2)
		(患有藥棄、持續居化及不可證轉的疾病、而且對針對病源的治疗維持生命治療的作用,只在於延遲死亡一刻的來臨。	HA0613MR   HR   HR   HR   HR   HR   HR   HR



	ge in HA Advance Directive (A
New	第3類情况-其他晚期不可逆轉的生存受限疾病,即: End-stage irrevers
	(註:在此指示中 -
	"其他晚期不可經轉的生存受限疾病" 拍不劃人第 1 或第 2 類的嚴重、持續惡化及不可經轉疾病,而病情已到了晚期, 及生存使限,例子包括:
	(1)晚期賢養場病人、晚期運動神經元疾病或晚期慢性阻塞性肺病病人。因爲他們可能用透析治療或輔助呼吸治療維持生命。而不劃人第1類:以及
	(2) 不劃人第2類的不可塑轉主要指功能喪失及機能狀況極差的病人。
	"維持生命治療"指任何有可能延續病人死亡的治療。例子包括使用心肺復甦法、人工輔助呼吸、血液製品、心臟起 排器及血質排器素、為特定疾病而設內書門治療(例如化學治療或透析治療)、在威染可能致命的疾病時給予抗生素、 以及人工營養及流體銀養。(人工營養及流體銀養指語場等管銀與食物和水份。)
	□ 本人不接受以下維持生命治療:
	心肺復蘇法
	D
	<ul> <li>除了基本護理和舒緩治療外,本人不接受任何維持生命治療<sup>5</sup>。就本表格而言,非人工的營養 及流艚銀養屬基本護理的一部分。</li> </ul>
	□ 但如臨床判斷認為有需要的話,我想繼續接受人工的營養及流體繼養,直至死亡臨



#### Abstract

Background: Motor neuron disease is a fatal disease, characterised by progressive loss of motor function, often associated with cognitive deterioration and, in some, the development of frontotemporal dementia. Life-sustaining technologies are available (e.g. non-invasive ventilation and enteral nutrition) but may compromise quality of life for some patients. Timely commencement of 'Advance Care Planning' enables patients to participate in future care choices; however, this approach has rarely been explored in motor neuron disease.

Aim: We aimed to investigate caregiver perspectives on the acceptability and impact of advance care planning, documented in a letter format, for patients with motor neuron disease and caregivers.

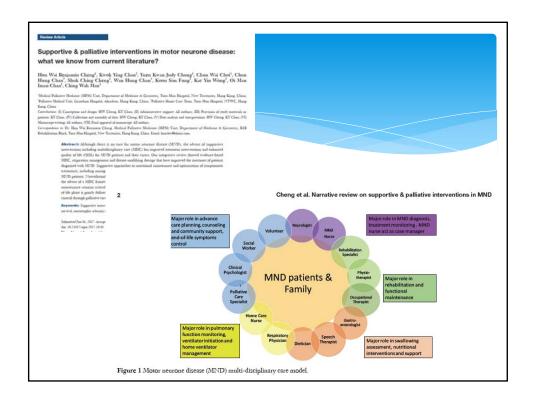
 $\textbf{Design:} \ This \ is \ a \ qualitative \ cross-sectional \ study. \ Data \ were \ analysed \ by \ a \ narrative \ synthesis \ approach.$ 

Participants and setting: Structured interviews were held with 18 former caregivers of deceased patients with motor neuron disease. A total of 10 patients had created a disease-specific advanced directive, 'Letter of Future Care', and 8 had not.

Results: A total of four global themes emerged: Readiness for death, Empowerment, Connections and Clarifying decisions and choices.

Many felt the letter of future care was or would be beneficial, engendering autonomy and respect for patients, easing difficult decision-making and enhancing communication within families. However, individuals' readiness' to accept encroaching death would influence uptake. Appropriate timing to commence advance care planning may depend on case-based clinical and personal characteristics.

Conclusion: Advance care planning can assist patients to achieve a sense of control and 'peace of mind' and facilitates important family discussion. However, the timing and style of its introduction needs to be approached sensitively. Tools and strategies for increasing the efficacy of advance care planning for motor neuron disease should be evaluated and implemented.



nals of Palliative Medic	,		;
Pable 2 Symptom manager Symptoms approaching nd-of-life	ment for MND patients approac Pharmacological treatment option	hing end-of-life (82,83)  Dosage and route at treatment initiation	Additions & non-pharmacological treatment option
yspnea	Strong opioids	Morphine 5-10 mg PO/NG tube/PEG/SC	Electric fans
	Benzodiazepines	Fentanyl 25–50 microgram SC	Non-invasive ventilation
Respiratory secretions	Hyoscine butylbromide Hyoscine butylbromide 20–40 mg SC		Cough augmentation
	Glycopyrronium		Chest physiotherapy
		Sputum suction	
Pain	Non-opioids in mild pain	, ,	Proper positioning
	Opioids in refractory pain		Transdermal opioid patch as alternative
Terminal agitation	·	Lorazepam 0.5 mg PO/NG tube/PEG	Arrangement of single quiet room
		Midazolam 2.5 mg SC	Encourage family accompany
			Continuous SC benzodiazepine infusion in refractory cases
Anxiety upon ventilation withdrawal	Opioids	Morphine 5–10 mg SC	May require continuous SC opioid/
	Benzodiazepines	Midazolam 5-10 mg SC	benzodiazepine infusion

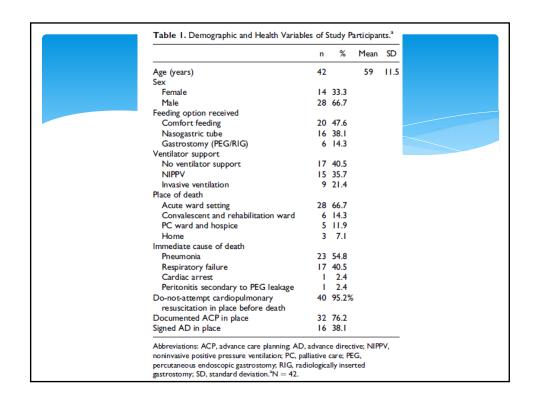
#### **End-of-life Characteristics and Palliative Care Provision for Patients With Motor Neuron Disease**

\$SAGE

Hon Wai Benjamin Cheng, MBBS, MRCP, FHKCP<sup>1</sup>, Oi Man Iman Chan, MSW<sup>1</sup>, Chun Hung Red Chan, BSc, MSc, FHKAN<sup>2</sup>, Wan Hung Chan, APN<sup>2</sup>, Koon Sim FUNG, RN2, and Kar Yin Wong, RN2

#### **Abstract**

Motor neuron disease (MND) is a neurodegenerative disease and manifested as progressive decline in physical, respiratory, swallowing and communication function, and ultimately death. Traditional model of care was fragmented and did not match with multifacet needs of patients and carers. Furthermore, there could be lack of integrated care at end of life for patients with MND in most lower- and middle-income countries or in places with inadequate palliative care (PC) coverage. In view of this, a special workgroup for patients with MND, which includes neurologist, respiratory physician, rehabilitation specialist, and PC physician was formed in Hong Kong since year 2011. In various disease phase, each specialty team plays a leading role in coordinated care of patients with MND. From July 2011 to June 2017, a total of 52 patients with MND were referred for PC; 41 deceased patients with MND were included into data analysis. Major cause of death remains pneumonia (54.8%) and respiratory failure (40.5%). Most of the patients with MND (66.7%) died in acute ward and neurology units, with only 11.9% dying in PC units and hospices. The PC team plays a major role in advance care planning (ACP), and most patients had their ACP documented at second or third PC clinic visit (93.8%). Patients with MND often have limitations in mobility, swallowing difficulty, respiratory insufficiency requiring ventilator support, and various psychosocial needs. This highlighted the importance of early PC referral.



	Riluzole (1995)	Edaravone (2017)	Relyvrio (2022)
Route and Dosage	Oral; 50mg BD	IV or oral 6omg/day for 10 days (14 days for 1 <sup>st</sup> cycle) + 14 days drug free period	Oral; 1 sachet (3g sodium phenylbutyrate + 1g taurursodiol) daily for 3 weeks then twice daily
Cost	HKD68.2/tab (~HKD4092/month)	1 <sup>st</sup> cycle (28-day): USD712.24 Subsequent cycles: USD508.74	USD158000/year
Evidenc e	Cochrane review (2013)  Based on 4 RCTs (1994-2002)  974 Riluzole treated patients + 503 placebo treated patients  Reduced risks of mortality or tracheostomy at 12 months (HR=0.83, p=0.046)  Increase in median survival by 3 months (11.8 months vs 14.8 months)  Increased probability of 1-year survival by 9% (49% vs 58%)  Slower rate of decline on both bulbar and limb functions	Edaravone (MCI-186) ALS 19 Study Group [Lancet 2017]  12-week observation period → if decrease in ALSFRS-R = 1-4 → randomization → 24- week double-blind period Edaravone group (n=68) vs placebo group (n=66) Excluded if ALSFRS-R dyspnea, orthopnea or respiratory insufficiency score ≤3 before randomization Slower decline in ALSFRS-R with a mean score difference of 2.49 (-5.01 vs -7.5, p=0.0013)	CENTAUR (89 Tx group vs 48 placebo) [NEJM 2020]: slower decline in ALSFRS-R over 24-week (p=0.03)  CENTAUR open-label extension phase (Tx up to 30 months; longest post-randomization FU = 35 months)  Reduced death risks (HR=0.56, p=0.023) with 6.5 months longer median survival (18.5 months vs 25 months) [Muscle and Nerve 2021]  Longer tracheostomy / ventilation-free survival (HR=0.53, p=0.003) and delayed first hospitalization (HR=0.56, p=0.03) [BMJ 2022]
S/E	Nausea, asthenia, elevated ALT	Abdominal discomfort, eczema	GI upset

