

Physical Morbidity and Mental Health

Brian Draper MD
University of NSW
Sydney, Australia



Outline of Presentation

- 1. Overview of links between physical morbidity and mental disorders in late life
- 2. Impact upon service delivery in late life
- 3. Management issues

Links between physical morbidity and mental disorders in late life

Prevalence of mental disorders in the community in old age

Depression	8-13%
Dementia	5% 65+ yrs 20% 80+ yrs
Anxiety	5-15%
Schizophrenia	1%
Psychotic symptoms	6%

Prevalence of Delirium

- Approximately 15% of elderly medical inpatients

Prevalence of Depression in Physically ill Elderly

General Hospital Wards

clinically significant depression 23% - 45%

Medical Outpatients

clinically significant depression 20% - 24%

Nursing Home Residents

depressive disorders approx 20%

(Ames, 1993; Borson et al, 1986; Kukull et al, 1986;
O'Riordan 1989)

Risk Factors for Depression in Late Life

- Physical Health** (Blazer et al 1991, Beekman et al 1997, Prince et al, 1997)
- Main risk factor for depression in old age
 - Increased risk with number of illnesses and illness severity
 - Minor depression most common outcome

Physical morbidity in other late life mental disorders

- **Mania** ~ 43% have some form of cerebro-organic impairment
- **Schizophrenia**
 - ~ 40% hearing deficit
 - ~ ↑↑ cerebrovascular disease
- **Psychotic symptoms** ~ 15% medical problems
- **Anxiety disorders** – not increased in physically ill elderly (in contrast with younger adults)

Mental disorders and physical illness

Relationships are varied & include:

- (1) Mental disorder biologically due to physical illness
- (2) Psychological reaction to physical illness/disability
- (3) Mental disorder due to medications
- (4) Mental disorder causes physical disorder
- (5) Coincidental

Do specific physical illnesses increase risk of mental disorders in the elderly?

Inconsistent findings with Depression:

No - (Borson et al, 1986, Koenig et al, 1991)

Chronic lung disease - (Kukull et al, 1986)

Recent myocardial infarction - (Koenig et al, 1988)

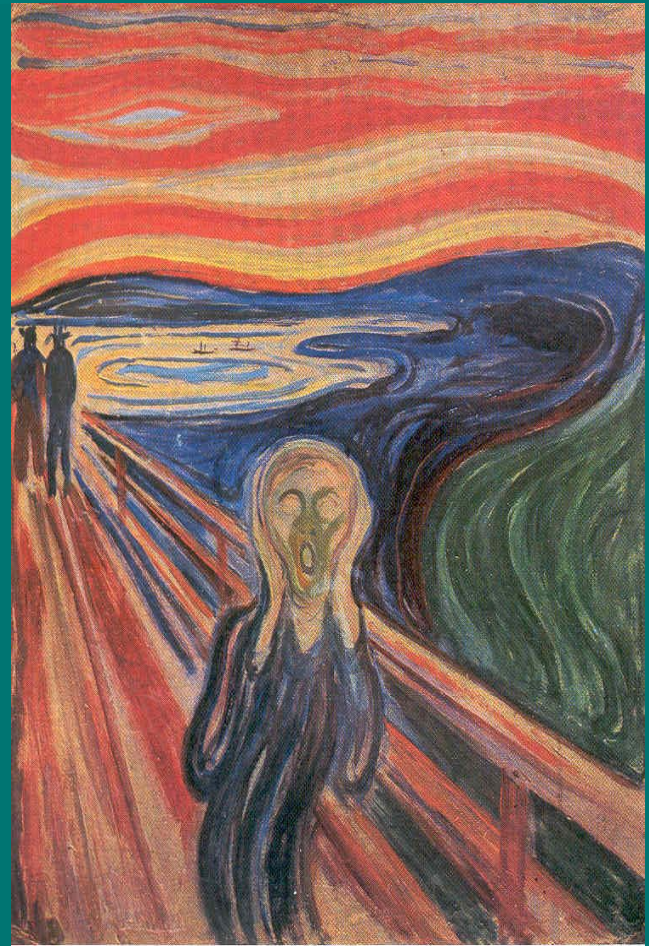
Neurological disorders - (Philpott, 1990)

Selected Medical Conditions that may cause Mental Disorders in Late Life

Condition	Mental Disorders
Parkinson's disease	Depression, Psychosis, Dementia, Delirium
Stroke	Depression, Psychosis, Dementia, Anxiety, Delirium, Mania
Thyroid disorders	Depression, Psychosis, Dementia, Anxiety, Delirium, Mania
Chronic Airways Disease	Depression, Anxiety, Delirium, Cognitive impairment
Cancer	Depression, Delirium, Anxiety
Vitamin deficiencies	Depression, Psychosis, Dementia, Mania
Brain Tumors	Depression, Mania, Dementia, Schizophrenia
Metabolic disorders	Depression, Delirium, Psychosis
Sensory Impairments	Depression, Schizophrenia, Delirium, Anxiety

Cerebrovascular Disease & Mental Disorders in Late Life

- Implicated in late-onset
 - Depression
 - Anxiety
 - Schizophrenia
 - Mania
 - Dementia
 - Delirium



Cerebrovascular Lesions & Depression in Late Life

- atheromatous and ischaemic changes in white matter of dorsolateral & prefrontal cortex (O'Brien et al, 2002)
- MRI scans – subcortical white matter hyperintensities (Hickie et al, 1995; O'Brien et al, 1998)

Psychological Reactions to Physical disorders -Agoraphobia in Old Age

- Commonly precipitated by Strokes and Falls in late-life as opposed to being associated with panic disorder
- Depression present in 40%
- Often left untreated as being an 'understandable' reaction to the physical disorder

Schizophrenia in late life

- Older schizophrenic patients perceive greater physical health problems than age-matched controls

Sciolla et al 2003

Risk Factors for Depression in Late Life

DISABILITY

- More important than illnesses (Prince et al, 1997)
- Chronic pain (Geerlings et al, 2002)
- Loss of independence
- Burden on family



Other factors that increase risk of depression in physically ill elderly



- past history of depression
- cognitive impairment
- age over 75 years
- impaired social support
- alcohol abuse
- poor education

Risk Factors for Depression in Late Life



- ✓ Alcohol – (Gazmarian et al, 2002)
- ✓ Drugs – 22 different prescription drugs implicated (Dhondt et al, 2002)

Selected Drugs implicated in causing Mania

Eastham et al 1998

- amantadine
- bupropion
- benzodiazepines
 - alprazolam, triazolam
- corticosteroids
- disulfiram
- oestrogens
- folic acid
- H2 receptor antagonists
 - cimetidine, ranitidine
- L DOPA
- MAOIs
- SSRIs
 - fuoxetine, sertraline, fluvoxamine
- TCAs

Selected Drugs implicated in causing Psychosis

- Antiparkinsonian drugs e.g. L Dopa, bromocriptine
- Steroids
- Anticholinergic drugs e.g. benztropine, tricyclic antidepressants
- Anticonvulsants
- Digoxin
- Cimetidine
- Beta Blockers

Mental Disorders causing Physical Morbidity - Depression

- Myocardial infarction (Wasserheil-Smoller et al, 1996)
- Stroke (Ramasubbu et al, 2003)
- Self - harm
- Self neglect
- Adverse effects of antidepressants

Impact of comorbid mental & physical disorders upon health service presentations in late life

Prevalence of Mental Disorders in Acute Geriatric Wards

Ames et al 1994

- 65% of patients in acute geriatric wards had a mental disorder – predominantly dementia, delirium and depression

Utilisation of health services - effects of depression

Depressed physically ill elderly:

- use more hospital inpatient services
- use more hospital outpatient services
- have greater medical costs
- do not receive more mental health services

(Druss et al, 1999; Koenig et al, 1989
Koenig & Kuchitshaatla, 1998)

Delirium, Dementia & Length of Stay

Mean LOS in general hospital

Patients with dementia 10.4 days

Patients without dementia 6.5 days

Lyketsos et al 2000

Incident delirium (not prevalence delirium) associated with increased LOS of 7.8 days

McCusker et al 2003

Poor recognition of depression in physically ill elderly medical patients

Koenig et al 1992

44% depressed patients -
68% depressed patients -
list

no note in medical record
not on active problems

Jackson & Baldwin (1993)

Sensitivity 38% specificity 79%
positive predictive value - 50%

-nurses vs GMS

Ryan et al (1995)

Poor correlation between GDS >11 and geriatrician
clinical diagnosis of depression

- Geriatricians vs GMS

Attitudes of depressed physically ill elderly

1. May refuse treatment due to belief that their symptoms are due to the physical illness (Knauper & Wittchen, 1994)
2. More likely to “give up” and request euthanasia when depressed (Hooper et al, 1996)
3. Carers and health professionals may contribute to the situation by giving “DNR” orders (Wasserman, 1989)

Effects of depression on recovery from physical illness

1. Acute Illness

Depressive symptoms predicted worse ADL, IADL and global health status at discharge of 572 acutely ill older patients.

Covinsky et al (1997)

2. Cardiac events

Depressed elderly AMI have increased risk of cardiac events in subsequent 12 months

Shiotani et al, (2002)

Effects of depression on recovery from physical illness

3. Disability

Depression predicted a higher rate of failure to recover from disability at 1 year - often preceded and predicted disability.

Gurland et al (1988)

4. Social Outcome

6 months post-stroke, depressed patients had less chance of returning to normal social function

Feibel & Springer (1982)

Unrecognised medical disorders in Acute PGUs Woo et al (2003)

- 34% of admissions had previously unrecognised medical disorders

Physical Health and Psychiatric Diagnosis in Acute PGU Draper & Luscombe 1999

<i>DIAGNOSIS</i>	<i>ACUTE ORGAN SYSTEMS</i>	<i>CHRONIC ORGAN SYSTEMS</i>
Major Depression	1.3	3.1
Dementia	1.2	3.8
Delirium	2.4	3.0
Other	1.7	3.3

Factors contributing to LOS in an acute PGU **Draper & Luscombe 1999**

<i>PRINCIPAL DIAGNOSIS</i>		<i>PSYCHIATRIC</i>	<i>SOCIAL</i>	<i>MEDICAL</i>
Major depression	(N=46)	93.5%	4.0%	2.5%
Dementia	(N=20)	76.7%	18.7%	4.6%
Delirium	(N= 7)	60.5%	22.8%	16.7%
Other	(N=15)	73.6%	21.6%	4.5%

P<0.001

Physical health measure & LOS

Draper & Luscombe 1999

- No significant associations were found between any measure of acute physical illness, chronic physical illness or disability and LOS.
- 12 month mortality predicted by acute physical illness & ADL status

Management issues

- Diagnosis
- Acute treatment
- Long term treatment

PROBLEMS WITH SELF-REPORTED DEPRESSION IN THE PHYSICALLY ILL ELDERLY

1. High rate of false positives and false negatives
2. Inability / unwillingness of some depressed patients to report symptoms
3. Non-specific diagnostic significance of depressive symptoms
4. Transient nature of depressive symptoms
5. False negative diagnoses when depression manifested by pain or other somatic symptoms.

Approaches to diagnosis of depression in physical illness

1. Etiologic: symptoms are counted only if they are felt not to be "due to a general medical condition"
2. Inclusive: counts all symptoms
3. Exclusive / Etiologic: excludes anorexia and fatigue, otherwise same as etiologic
4. Exclusive / Inclusive: excludes anorexia and fatigue, otherwise same as inclusive
5. Substitutive / Etiologic: substitutes cognitive or affective symptoms for symptoms likely to be due to medical condition, otherwise as etiologic

Effect of diagnostic system on depression prevalence in physical illness

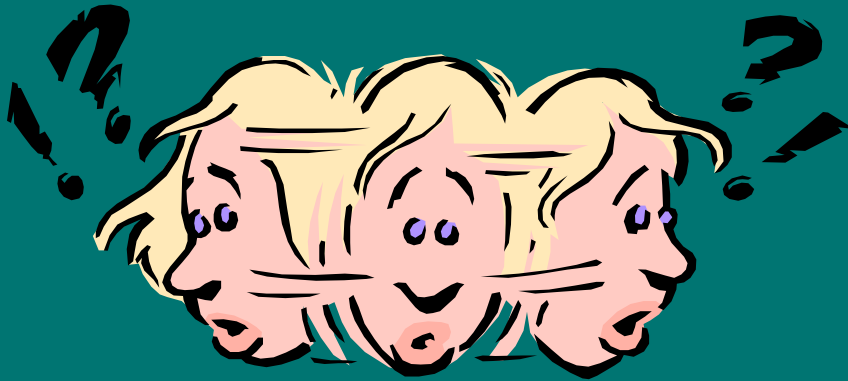
Koenig et al (1997)	(n = 460)	
	Major Depress	Minor Depress
Inclusive	20.7%	25.2%
Etiologic	16.5%	14.4%
Exclusive / Inclusive	13.5%	21.1%
Exclusive / Etiologic	10.4%	16.3%
Substitute / Inclusive	15.0%	16.5%
Substitute / Etiologic	14.6%	15.0%

Other common diagnostic problems

- Differentiation of delirium from mood disorders (depression & mania) and dementia
- Psychosis and medical illness – delirium, organic psychosis, LOS or early dementia?
- Somatoform disorder or undiagnosed physical disorder?

Treatment Outcomes

- Little research of the effects of physical comorbidity other than for depression



Outcomes of antidepressant trials in elderly with acute physical illness

Draper, 2000

- Studies have recruitment difficulties due to exclusion criteria, high drop out rates and mortality
- Depression outcomes may relate more to the course of physical illness and placebo effect than any specific medication effect.

(Schifano et al, 1990; Tan et al 1994; Andersen et al 1994; Evans et al 1997)

Recent studies of antidepressant therapy after acute strokes (1)

- Rasmussen et al (2003) - RCT double-blind placebo-controlled study of sertraline in 137 non-depressed ischaemic stroke patients.
- After 12 months, 30% of the placebo group developed depression and only 10% of the sertraline group.
- Severe adverse events including hospitalisation, further strokes and cardiovascular events were more common in the placebo group.

Recent studies of antidepressant therapy after acute strokes (2)

- Fruehwald et al, 2003 - RCT double-blind placebo-controlled study of fluoxetine treatment of post-stroke depression within 2 weeks of the stroke.
- No benefit for fluoxetine after the 3-month double blind phase. However, at 18 month open label FU the fluoxetine treated patients were significantly less depressed
- No information about treatment in the open-label period - would same outcome have been achieved if treatment were delayed until 3 months post-stroke.?

Outcomes of antidepressant trials in elderly with chronic physical illness

Draper 2000

	Intention to treat <u>Response</u>
Antidepressants	47 - 91%
Placebo	7 - 54%

Gill & Hatcher (1999)

4 patients need to be treated with antidepressants to produce 1 recovery from depression that would not have occurred with placebo

Predictors of depression outcome in physically ill elderly

Poor Outcome

- Severe depression
- More serious physical illness
- Symptoms of depression before admission
- Continuing disability
- Higher number of medical diagnoses

Prediction of antidepressant response in physically ill

Cole & Bellavance (1997)

Outcomes do not seem to vary between:

(a) Depression rating scale "cut offs" - vs - formal diagnostic criteria

(b) "etiologic" diagnoses - vs - "inclusive" diagnosis

Elevated scores on depression rating scales + history of depressive symptoms before admission may be best predictor of response

Outcomes of depression in elderly medical patients

Cole & Bellavance (1997) - meta-analysis of 8 studies

	≤ 3 months	≥ 12 months
Well	18%	19%
Depressed	43%	29%
Dead	22%	53%

Survival rates for depression in late life

Zubenko et al, 1997

		+ physical
comorbidity		
1 year	85% - 97%	53% - 79%
5 years	65% - 80%	

Standardised mortality ratio 1:2 - 1:6

CONCLUSIONS

Mental disorders are common in physically ill older people and may have an adverse effect on general health as well as posing difficulties in recognition, diagnosis and treatment

Thank You!

b.draper@unsw.edu.au