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Anxiety & depression in people with chronic obstructive pulmonary disease (COPD).

The Waikato experience

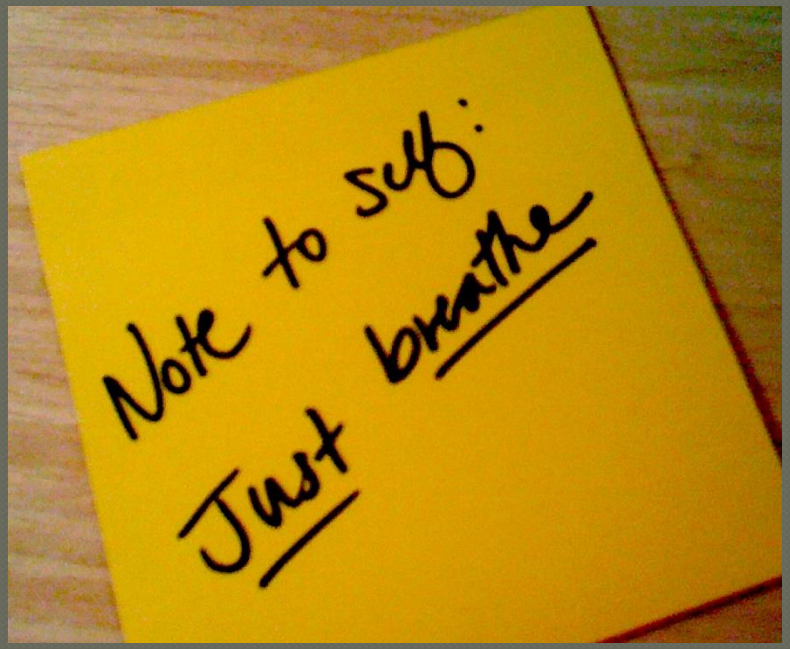
introduction

COPD exacerbations contribute significantly to morbidity & mortality, with the incidence of COPD continuously increasing world wide the need to better manage the impact of anxiety & depression in this chronic progressive disease is paramount.

People with COPD suffering from anxiety & depression have a higher risk of exacerbations .

Unfortunately current evidence about optimal approaches for managing anxiety & depression remain unclear & largely speculative.

Jacqui's perspective



"Everything was spiralling out of control"

- Panic attacks traumatic & exhausting
- Feels trapped in her own body
- Smothered
- Fear of dying
- Scared to move
- Weaker
- Losing her independence
- Daily fight
- Embarrassing

Bruce's perspective

"Most days no light at end of tunnel"

- Feelings of :
  - Despair
  - Helplessness
  - Alienation
  - Lost interest in family & friends
  - Lost hope
  - Wanting to withdraw

impact of anxiety & depression (A&D)

- Increased mortality risk
- Lower adherence to treatments
- Reduced compliance with management plans
- Patients are sicker than their counterparts
- Recover slower from exacerbations
- Patients medical costs are higher

impact

- Affects physical functioning
- Decreased quality of life
- Increased use of health resources including:
  - Primary care services
  - Community based services
  - Admission to hospital & length of stay

prevelance

No consensus

- Over all
  - 25% significant depressive symptoms
  - 40% clinical anxiety
- Stable COPD (Maurer et. al 2008)
  - 10%-42% clinically depressed
  - 10%-19% clinically anxious
- Severe disease (Maurer et. al 2008)
  - 37%-71% clinically depressed
  - 50%-70% clinically anxious

prevalence

- Higher proportion of patients with clinically relevant symptoms of A&D in GOLD stage IV compared to patients in GOLD I and II
- Two-thirds of COPD patients with depression have moderate to severe depression (Johannes, et al. 2000)
- One-fourth of COPD patients have unregonised sub clinical depression (Yohannes, et al. 2000)
- Younger people, irrespective of severity showed higher prevalence of A&D regardless of severity (Cleland et al 2007),

predisposing factors

Variables implicated include: (Maurer J, 2008)

- Physical disability
- Long term oxygen therapy
- Severe dyspnoea
- Low FEV1 %
- Poor QOL
- Presence of co-morbidities
- Living alone
- Female sex
- Current smoking
- Low social class status

anxiety

Anxiety is defined

- As an apprehensive anticipation of danger or stressful situations associated with an excessive feeling of dysphoria or somatic symptoms of tension

Characterised by:

- Excessive anxiety & worry, occurring more days than not, for >6 months, about a number of events or activities (Manual 1983)

anxiety

- Anxiety and panic tend to overlap
- Breathlessness ☞anxiety cycle
- Complex and poorly understood
- Identification & management often insufficient
- Hyperventilation, lowers the PCO_2 resulting in respiratory alkalosis, can cause dyspnoea & subsequent panic

panic

- Panic attacks have been described as intense episodes of acute anxiety that are associated with certain physical symptoms, such as dyspnoea & cognitive fears (Smoller 1998)
- Panic is ten times greater in COPD than normal population

identifying factors

- Restlessness
- Fatigue
- Irritability
- Rapid speech
- Poor concentration
- Sleep disturbance
- Physiological changes, such as tachycardia, palpitations, sweating and dyspnoea

depression

- Feelings of depression in COPD have been described as reactive to the condition
- Symptoms may range from an ‘‘adjustment disorder with depressed mood’’ to ‘‘major depression’
- Several subtypes of depression & people frequently move in and out of the diagnostic subgroups
- In chronic disabling medical conditions depression is common and justified reaction due loss imposed by disease (Dunlop , et al)

depression

- Exact cause unknown
- Theories include:
  - Smoking causative factor related to an “overspill’ of local lung inflammation into the circulation. Referred to as systemic inflammation (Al-shair 2010)
  - Hypoxia in patients with COPD had increased periventricular white matter lesions, present in people with depression (van Dijk EJ 2004)

smoking and depression

- Bidirectional interaction.
  - Depressed people
    - more likely to smoke
    - high risk of starting
    - find smoking cessation more difficult
- Conversely
  - Smokers
    - More likely to be depressed

identifying factors

- Feelings of hopelessness and pessimism
- Reduced sleep
- Decreased appetite
- Increased lethargy
- Difficulties in concentration
- Social withdrawal
- Impairment in functional abilities & performing activities of daily living
- Poorer self-reported health
- Impaired self-management of disease exacerbations
- Poor health behaviours

dyspnea

- **Dyspnea, Dyspnea**, a cardinal symptom of COPD, is a major cause of disability and anxiety associated with the disease
- Typical COPD patients describe their dyspnoea as a sense of increased effort to breathe, heaviness, air hunger, or gasping

diagnosis

- GOLD guidelines (2016)state:
  “along with a detailed medical assessment an assessment of anxiety & depression should be undertaken of people with COPD”
- Structured interview by a psychiatrist or clinical psychologist……

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overlap in symptoms between anxiety & depression

- Fatigue
- Weight changes
- Sleep disturbances
- Agitation
- Irritability
- Difficulty concentrating
- Breathlessness

screening tools

No consensus as to which tool

- Hospital anxiety depression score(HADS)
- Beck depression Index (BDI)
- General Health Questionnaire (GHQ-20)

Hospital Anxiety and Depression Score (HADS)

This questionnaire helps your physician to know how you are feeling. Read every sentence. Place an "X" on the answer that best describes how you have been feeling during the LAST WEEK. You do not have to think too much to answer. In this questionnaire, spontaneous answers are more important

A	**I feel tense or 'wound up':**	
	Most of the time	3
	A lot of the time	2
	From time to time (occ.)	1
	Not at all	0
D	**I still enjoy the things I used to enjoy:**	
	Definitely as much	0
	Not quite as much	1
	Only a little	2
	Hardly at all	3
A	**I get a sort of frightened feeling as if something awful is about to happen:**	
	Very definitely and quite badly	3
	Yes, but not too badly	2
	A little, but it doesn't worry me	1
	Not at all	0
D	**I can laugh and see the funny side of things:**	
	As much as I always could	0
	Not quite so much now	1
	Definitely not so much now	2
	Not at all	3
A	**Worrying thoughts go through my mind:**	
	A great deal of the time	3
	A lot of the time	2
	From time to time, but not often	1
	Only occasionally	0
D	**I feel cheerful:**	
	Not at all	3
	Not often	2
	Sometimes	1
	Most of the time	0
A	**I can sit at ease and feel relaxed:**	
	Definitely	0
	Usually	1
	Not often	2
	Not at all	3

D	**I feel as if I am slowed down:**	
	Nearly all the time	3
	Very often	2
	Sometimes	1
	Not at all	0
A	**I get a sort of frightened feeling like "butterflies" in the stomach:**	
	Not at all	0
	Occasionally	1
	Quite often	2
	Very often	3
D	**I have lost interest in my appearance:**	
	Definitely	3
	I don't take as much care as I should	2
	I may not take quite as much care	1
	I take just as much care	0
A	**I feel restless as I have to be on the move:**	
	Very much indeed	3
	Quite a lot	2
	Not very much	1
	Not at all	0
D	**I look forward with enjoyment to things:**	
	As much as I ever did	0
	Rather less than I used to	1
	Definitely less than I used to	2
	Hardly at all	3
A	**I get sudden feelings of panic:**	
	Very often indeed	3
	Quite often	2
	Not very often	1
	Not at all	0
D	**I can enjoy a good book or radio/TV program:**	
	Often	0
	Sometimes	1
	Not often	2
	Very seldom	3

Beck

Beck Anxiety Self Rating Scale

Your name: _____
Date: _____
For each item, 1 through 21, check the severity, 0, 1, 2, or 3, which best describes your experience today or in recent weeks

1. Numbness and tingling
   - ☐0 Not at all
   - ☐1 Mildly – It did not bother me much
   - ☐2 Moderately – It was very unpleasant but I could stand it
   - ☐3 Severely – I could barely stand it

2. Feeling hot
   - ☐0 Not at all
   - ☐1 Mildly – It did not bother me much
   - ☐2 Moderately – It was very unpleasant but I could stand it
   - ☐3 Severely – I could barely stand it

3. Wobbliness in legs
   - ☐0 Not at all
   - ☐1 Mildly – It did not bother me much
   - ☐2 Moderately – It was very unpleasant but I could stand it
   - ☐3 Severely – I could barely stand it

4. Unable to relax
   - ☐0 Not at all
   - ☐1 Mildly – It did not bother me much
   - ☐2 Moderately – It was very unpleasant but I could stand it
   - ☐3 Severely – I could barely stand it

5. Fear of the worst happening
   - ☐0 Not at all
   - ☐1 Mildly – It did not bother me much
   - ☐2 Moderately – It was very unpleasant but I could stand it
   - ☐3 Severely – I could barely stand it

6. Dizzy or lightheaded
   - ☐0 Not at all
   - ☐1 Mildly – It did not bother me much
   - ☐2 Moderately – It was very unpleasant but I could stand it
   - ☐3 Severely – I could barely stand it

7. Heart pounding or racing
   - ☐0 Not at all
   - ☐1 Mildly – It did not bother me much
   - ☐2 Moderately – It was very unpleasant but I could stand it
   - ☐3 Severely – I could barely stand it

8. Unsteady
   - ☐0 Not at all
   - ☐1 Mildly – It did not bother me much
   - ☐2 Moderately – It was very unpleasant but I could stand it
   - ☐3 Severely – I could barely stand it

9. Terrified
   - ☐0 Not at all
   - ☐1 Mildly – It did not bother me much
   - ☐2 Moderately – It was very unpleasant but I could stand it
   - ☐3 Severely – I could barely stand it

10. Nervous
    - ☐0 Not at all
    - ☐1 Mildly – It did not bother me much
    - ☐2 Moderately – It was very unpleasant but I could stand it
    - ☐3 Severely – I could barely stand it

11. Feelings of choking
    - ☐0 Not at all
    - ☐1 Mildly – It did not bother me much
    - ☐2 Moderately – It was very unpleasant but I could stand it
    - ☐3 Severely – I could barely stand it

12. Hands Trembling
    - ☐0 Not at all
    - ☐1 Mildly – It did not bother me much
    - ☐2 Moderately – It was very unpleasant but I could stand it
    - ☐3 Severely – I could barely stand it

13. Shaky
    - ☐0 Not at all
    - ☐1 Mildly – It did not bother me much
    - ☐2 Moderately – It was very unpleasant but I could stand it
    - ☐3 Severely – I could barely stand it

GHQ-20

- **Description:** A screening device for identifying minor psychiatric disorder
- **Format:** 20 items asking respondents to compare their current status with their normal situation.
- **Scoring:** Answers are scored on a 4-point Likert-type scale ranging from 0 (less than usual) to 3 (much more than usual). Scores on the GHQ 20 can range from 0 to 60.
- **Administration and Burden:** Self-administered

management

Starts with the correct diagnosis.

Word of warning….. treating during exacerbations as symptoms often transient.

Pharmacological & non pharmacological

- Pharmacological
- Cognitive behavioural therapy
- Relaxation therapy
- Pulmonary rehabilitation

Depression & pharmacological agents

- Mild –moderate depression not recommended
- Major depression recommended
  - To avoid long term effects of overall disability
  - All anti-depressants effective
  - Choice depends on the pattern of depression
    - Low side effect profile ..hypercapnia
    - Short hearth life
    - Provoke few drug interactions
    - Little effect on ventilator drive??

Anxiety & pharmacological agents

Inconclusive, contradictory & insufficient evidence

- Opiates
  - Morphine- mechanism unknown
  - Oxycodone- more potent than morphine
- Benzodiazepines
  - Lorazepam
  - Diazepam
  - Clonazepam
  - Midazolam
- Selective Serotonin Reuptake Inhibitors
  - Buspirone

treatment

- Cognitive behaviour therapy (CBT) proven in individual & groups
  - Decreased symptoms in particular when used with comprehensive pulmonary rehabilitation
  - Study by Doyle et al (2016) telephone befriending successful, cost effective & more palatable than face to face

relaxation therapy

- Statistically significant benefit
- Various forms include:
  - Purse lipped breathing
  - Sequential muscle relaxation
  - Bio feedback
  - Tai chi, yoga, singing

pulmonary rehabilitation(PR)

- GOLD (2016) Reduces anxiety and depression associated with COPD (Evidence A).
  - Improves persons ability to participate in stress reducing activity
  - Increases sense of self mastery
  - Regular contact & social support
  - Long term benefit depends totally on maintenance
- Pharmacotherapy & PR more effective

Jacqui

Bruce

Barriers to detection & management

- Stigma
- Lack of knowledge from persons pe
  & health professionals re possibility & treatment
- Lack of access to & cost of counselling
- Self blame as self inflicted
- Short clinical visit times
- Poor communication between health professionals in primary & secondary services
- Screening tools..

unanswered questions

- Number of people that have undiagnosed or under/untreated
- How to access services timely & appropriate manner
- Which screening tool....

summary

- Anxiety & depressive symptoms are common in patients with chronic obstructive pulmonary disease
- Regardless of whether they are considered separately or as a combined construct, these symptoms adversely affect health-related quality of life
- Despite the increasing awareness of the prevalence & importance of A&D symptoms in COPD, the use of instruments specifically designed to screen for these features is not widespread.
- Although the optimal regimen for treating these disorders has not been established, supervised exercise training and appropriate pharmacological therapy are effective options.
- As nurses we can contribute hugely

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