Supplementary material:

APPENDIX: Case scenario and questions

Please read the following case scenario carefully and then respond to a number of questions about how you would assess and manage the patient. Medical assessments are complex. Several responses may be "correct" and give comparable results. We are not looking for what is considered right, but **how you would actually treat the patient in your daily clinical practice.**

The questions are single or multiple choice. You must answer all questions in order to move on. You cannot go back to previous pages. Please note! Do not use the browser's "Back button" to return, as the system could freeze.

A 59-year-old [man/woman] is consulting you with respiratory problems and reduced physical capacity. Smoked previously (in total 40 pack years) but stopped three years ago. Has been troubled for 4 years by morning cough and, at times, wheezing that worsens during respiratory infections. Has severe [breathlessness/pain]. Has been unable to ascend a flight of stairs or hills without stopping for the last 3 years. Is being treated for hypertension.

Current medications: T. Paracetamol 1 g x 4. T. Enalapril 20 mg x 1 and T. Metoprolol 100 mg x 1.

Allergy/hypersensitivity: NSAID (reaction to Diclofenac).

Status findings: Silent breath sounds bilaterally with scattered rhonchi. No edema. Body mass index (BMI) 20. No other findings.

What do you think is the most likely cause of the patient's respiratory problems and reduced physical capacity? (Please read all and then select the best match)

- ○ Asthma
- ○ Cancer
- ○ Heart failure
- ○ Chronic obstructive pulmonary disease (COPD)
- ○ Chronic pulmonary emboli
- ○ Other

Other [Please specify]

How do you investigate the cause of the patient's respiratory problems and reduced physical capacity? (select all relevant responses)

- ☐ Blood tests
- ☐ ECG
- ☐ Exercise ECG
- ☐ Cardiac ultrasound
- ☐ Methacholine Challenge Test
- ☐ Oxygen saturation test
- ☐ Spirometry

☐ Sputum culture
☐ Chest x-ray
☐ Chest CT
☐ Other
Other [Please specify]

Svara

[man/woman] – The information in the parenthesis means randomisation to either a case with man or woman.
[breathlessness/pain] – The information in the parenthesis means randomisation to either a case with breathlessness or pain.

[Previous case scenario and information]

New information

Saturation: 95% on room air at rest.

Blood tests: Essentially normal blood count, CRP, sodium, potassium, creatinine, D-dimer and pro-BNP.

ECG: Sinus rhythm, heart rate of 72 beats/min, essentially normal appearance.

Chest x-ray: Essentially normal.

Spirometry after bronchodilator: $FEV_1/FVC = 0.54$; FEV_1 = 38% of predicted.

A recent chest CT scan: Emphysema and vertebral compression fracture of benign appearance.

You diagnose chronic obstructive pulmonary disease (COPD). The patient receives information about the disease as well as vaccination against influenza and Pneumococcus.

What treatment/measures do you offer as your first choice? (Please read all and then select the best match)

- ○ Dietician contact
- ○ Short-acting bronchodilators (eg. Bricanyl or Atrovent)
- ○ Long-acting anticholinergics (eg. Spiriva)
- ○ Long-acting beta-2-agonist (e.g., Oxis or Serevent)
- ○ Both long-acting anticholinergics and long-acting beta-2 agonist
- ○ Inhaled corticosteroids (eg. Pulmicort)
- ○ Triple therapy with long-acting anticholinergics and long-acting beta-2-agonist and inhaled corticosteroid
- ○ Oral Steroid course
- ○ Rehabilitation therapy
- ○ Oxygen therapy

What further treatment options do you consider? (select all that you offer)

- ☐ Dietician contact
- ☐ Short-acting bronchodilators (eg. Bricanyl or Atrovent)
- ☐ Long-acting anticholinergics (eg. Spiriva)
- ☐ Long-acting beta-2-agonist (e.g., Oxis or Serevent)
- ☐ Both long-acting anticholinergics and long-acting beta-2 agonist
- ☐ Inhaled corticosteroids (eg. Pulmicort)
- ☐ Triple therapy with long-acting anticholinergics, long-acting beta-2-agonist and inhaled corticosteroid
- ☐ Oral Steroid course
- ☐ Rehabilitation training
- ☐ Oxygen therapy

[Previous case scenario and information]

New information

The patient returns to you for follow-up after three months. The patient is reporting substantially unchanged symptoms. Is troubled by severe breathlessness/pain that markedly restricts daily activities.
The patient is on triple therapy with inhalations of long-acting anticholinergics, long-acting beta-2-agonist and corticosteroids. He/She has received assistance with her inhalation technique and states that he/she taken the drugs as prescribed. The patient has also undergone 8 weeks of customized rehabilitation training with a physiotherapist.

How do you manage the patient now? (Please read all responses and then select the best match)

- Additional diagnostic measures
- Additional treatment
- Active watchful waiting with follow-up visit
- Has optimal treatment at present, new contact if necessary

[Previous case scenario and information]

[Only for participants who chose Additional treatment]

What do you want to treat additionally in the first place? (Please read all and then select the best match)

- The COPD
- Symptoms
- Other

Other [Please specify]

[Previous case scenario and information]

Which treatment do you offer as your first choice? (Please read all responses and then select the best match)

- Changed inhalational therapy
- Intensified rehabilitation training
- Benzodiazepines (tranquilizers)
- Opioid (e.g. morphine)
- Oral steroid (e.g. prednisolone)
- Roflumilast (Daxas)
- Oxygen therapy
- Theophylline
- Other

Other [Please specify]

Which treatments are relevant? (select all that you offer)

- [ ] Changed inhalational therapy
- [ ] Intensified rehabilitation training
- [ ] Benzodiazepines (tranquilizers)
- [ ] Opioid (e.g. morphine)
- [ ] Oral steroid (e.g. prednisolone)
- [ ] Roflumilast (Daxas)
- [ ] Oxygen therapy
- [ ] Theophylline
- [ ] Other

Other [Please specify]

[Previous case scenario and information]

The main reason for not treating the patient in the case with opioids (e.g. morphine) for [breathlessness/pain]? (Please read all responses and select the one that best describes)

- Chose to treat with an opioid
- This symptom often goes away by itself or does not need to be treated
- Usually achieves adequate relief with other treatments
- There is a lack of evidence for treatment benefit
- Insufficient treatment guidelines
- Experience that opioids have insufficient benefit
- Insufficient knowledge of use/dosage
- Only relevant in more advanced disease for end of life care
- Concerns expressed by the patient and/or family members
- Risk of addiction/substance abuse
- Risk of serious adverse events
- Other

Other [Please specify]

Other factors contributing to the decision not to treat with opioids in this case for [breathlessness/back pain]? (select all that apply)

- [ ] Chose to treat with an opioid
- [ ] This symptom often goes away by itself or does not need to be treated
- [ ] Usually achieves adequate relief with other treatments
- [ ] There is a lack of evidence for treatment benefit
- [ ] Inadequate treatment guidelines
- [ ] Previous experience that opioids have insufficient benefit
- [ ] Inadequate knowledge of use/dosage
- [ ] Only for use in more advanced disease or for end-of-life care
- [ ] Concerns expressed by the patient and/or family members
- [ ] Risk of addiction/substance abuse
- [ ] Risk of confusion
- [ ] Risk of injuries from falls
- [ ] Risk of impaired breathing/respiratory depression
- [ ] Risk of premature death
- [ ] Other

Other [Please specify]

[Previous case scenario and information]

New information

The patient is limited by breathlessness of an intensity 7 out of a maximum of 10

In your opinion, does the patient in the case have significant breathlessness despite optimal treatment for underlying cause(s) (chronic breathlessness)?

Yes

No

If no, please specify the reason why it's not chronic breathlessness? Please specify:

[Previous case scenario and information]

How strong do you consider the scientific support to be for the following treatments for chronic breathlessness in severe COPD? (Note: This relates to the evidence base in general, not to this specific case)

Benzodiazepines

- None
- Low
- Moderate
- Strong scientific support

Changed inhalational therapy

- None
- Low
- Moderate
- Strong scientific support

Walking aid if necessary

- None
- Low
- Moderate
- Strong scientific support

Opioid (morphine)

- None
- Low
- Moderate
- Strong scientific support

Oral cortisone course

- None
- Low
- Moderate
- Strong scientific support

Rehabilitation training

- None
- Low
- Moderate
- Strong scientific support

Oxygen therapy

None

Low

Moderate

Strong scientific support

Other [Please specify]

Other

None

Low

Moderate

Strong scientific support

[Previous case scenario and information]

How often do you prescribe an opioid (e.g. morphine) for pain for patients with severe COPD?

- Never
- Very rarely (once per year)
- Sometimes (once a month)
- more often than monthly

[Previous case scenario and information]

How often do you prescribe an opioid (e.g. morphine) for breathlessness for patients with severe COPD?

 Never

 Very rarely (once per year)

 Sometimes (once in the month)

 More often than monthly

[Previous case scenario and information]

To what extent do you agree with the following statements?

Opioid therapy relieves chronic breathlessness

- Not at all
- A bit
- Moderate
- Very

Opioid therapy increases the risk of adverse events (hospitalization, respiratory depression or death)

- Not at all
- A bit
- Moderate
- Very

Opioid therapy causes more damage or more benefit in the treatment of chronic breathlessness?

- Much more damage
- A little more damage
- No difference
- A little more benefit
- Much more benefit