Reviewer's report

Title: A case of acute COPD exacerbation complicated by overlap syndrome in which the use of a Respironics V60 Ventilator in average volume-assured pressure support mode was useful in correcting sleep-related hypoventilation: a case report

Version: 2 Date: 11 February 2012

Reviewer: Dimitrios Lagonidis

Which of the following following best describes what type of case report this is?: Other

If other, please specify:

Findings that may shed new light on the possible management of a disease

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is the case report ethical?: Yes

Is there any missing information that you think must be added before publication?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: No

Will the case report make a difference to clinical practice?: Yes

Is the anonymity of the patient protected?: Yes

Comments to authors:

page 3 ABSTRACT case presentation .

In my opinion the sentence " A ventilator allowing...." does not make any sense. It would be preferrable to change it in "The Respironics V60 Ventilator(Philips Respironics) in the AVAPS mode was attached to the patient and resulted in improving and stabilizing the sleep-related hypoventilation by automatically
adjusting inspiratory force to within an acceptable range "

You should rewrite the first sentence. Your case report is referred to the management of a patient with acute exacerbation of COPD (not of heart failure or chronic respiratory failure in general). The main point that you should stress is the correction of the SDB and its consequences (hypoxemia, hypoventilation and obstructed apneas/hypopneas in this particular patient by using the AVAPS mode.

page 5 Case presentation

2nd line What is the stage of COPD according to GOLD classification? Any spirometric values at stable condition??

page 6 Case presentation

-1st line What are pO2, pH and HCO3 values?
- 10th line How do you explain the patient’s long stay at hospital (32 days). It would be better to put your explanation in the DISCUSSION
- Do you have any data regarding the probable nocturnal hypoventilation (blood gases just before and after sleep or TcCO2 recordings) when he was in stable condition after the first episode of acute exacerbation ??
-12th line . What are the arterial blood gases just after the second episode of exacerbation??
-line 17th How do you explain the slow response of the patient to the AVAPS mode in terms of gas exchange ?? Was it a matter of the resolution of hypoxemia or hypercapnia? Please , put your explanation in the DISCUSSION
- In my opinion you should make it clearer when exactly do you perform the PSG. It would be preferable to put a few words about the results of the PSG

Page 8 2nd line DISCUSSION please add “9 patients with stable chronic hypercapnic COPD”

Page 8 8th line DISCUSSION “in good patient compliance” Did you record any subjective indices, like dyspnea scale, comfort etc??

Page 8 12th line DISCUSSION

It would be advisable
- to further clarify that the sleep disordered breathing found in COPD patients are the hypoventilation, hypoxemia and the obstructed apneas/hypopneas
- to write a few lines about the pathophysiologic mechanisms of sleep disordered breathing (hypoventilation, hypoxemia, apneas/hypopneas) in COPD

Hypoventilation : decreased CO2 responsiveness…greater in REM sleep….significant decrease in Vt …no change in Resp rate and FRC

Hypoxemia : alveolar hypoventilation….V/Q abnormalities….decrease FRC….increased resistance in upper airways

Page 8 12th line DISCUSSION
Please add the word hypoventilation “…without taking hypoventilation and obstructed sleep apnea syndrome into consideration…”

Page 10 CONCLUSION
- You should rewrite the first sentence. Your case report is referred to the management of a patient with acute exacerbation of COPD (not of heart failure or chronic respiratory failure in general). The main point that you should stress is the correction of the SDB and its consequences (hypoxemia, hypoventilation and obstructed apneas/ hypopneas in this particular patient by using the AVAPS mode

- In the second sentence it would be advisable to write “on such occasions…may be useful in improving gas exchange and may achieve good compliance….

Quality of written English: Acceptable

Declaration of competing interests:

I declare that I have no competing interests