

DISCUSSION

One component that restricts OSAS treatment is that treatments in general involve great patient adherence. The use of a MAD or a CPAP every night (Fig 8) requires reasonable discipline: if a 60-year-old English man decides to use CPAP for the rest of his life, which is estimated at 80.2 years,³⁴ he will have to sleep with the device for 7,373 nights. Perhaps even more challenging is to lose weight^{35,36} and maintain an adequate BMI. Thus, it is not surprising that several patients discontinue treatment over the years, either the CPAP³⁷ or MAD³⁸ use or the maintenance of adequate BMI. Possibly, at the current stage of development of OSAS treatments, more important than finding the hypothetically optimal therapy for a patient, is to keep the patient in the treatment loop. In other words, when giving up one treatment option, another should be presented so that the patient benefits from being in treatment.

An important restriction to treatment access relies in the communication with patients. The current classification of apnea severity does not convey the actual severity of the disease. From the words used in the stratification of the disease — normal, mild, moderate and severe — two are suboptimal. In English, as in most languages, such as Portuguese or Italian, mild and moderate have an association with unimportant. Many patients with these AHI levels tend to underestimate the problem, and this can be a fatal error. It is for this reason that the authors of the present paper share the opinion that the nomenclature should be changed to normal and grades I, II and III.

The maxillomandibular advancement (MMA) surgery advantage is that it can be an OSAS cure for many individuals.⁸ This is not excluding the possibility that with advancing age, increased BMI, and changes of other natures, patients cannot have a future worsening of AHI.

MMA beckons as a treatment option that improves the AHI while promoting significant aesthetic and functional breathing gains³² as secondary gains. However, it is relatively expensive and comes with the inherent surgical risks. The MMA facial esthetic impact influences the fact that the level of evidence on the association between surgery and AHI reduction is not very high.³⁹ In other words, there is a limitation



Figure 8 - Photograph of a patient with severe OSAS who uses a CPAP with a nasal mask — the CPAP can be seen next to the bed.

in conducting clinical trials with ideal study designs simply because it is very difficult to randomize individuals to a treatment alternative, such as orthognathic surgery, with relevant impact on patients' self-image.

Patients who are operated on need, in most cases, an associated orthodontic treatment. The preparation for orthognathic surgery in a conventional manner should only be done when a CPAP is used, which in a practical way rarely occurs. There is an urgency to perform the surgery once it is indicated, and unfortunately the conventional preparation for the surgery takes about a year and a half.⁴⁰ Thus, patients who undergo MMA should be treated by means of the Surgery First protocol.^{41,42}

MMA is often indicated for severe OSAS;⁴³ however, patients with mild or moderate AHI can also be successfully treated with this procedure. Obviously, not everyone has an indication for MMA, and even within those who have, only an unknown percentage of patients wishes to undergo such treatment.

If MMA is a great way to treat severe OSAS, MADs are preferentially indicated for mild or moderate OSAS.²³ Patients with severe OSAS, non-adherent to CPAP and who do not undergo MMA, may also be treated with MADs with relative success. A significant reduction in cardiovascular mortality has been observed when MADs are used in patients with severe OSAS.⁴⁴ However, it is worth noting that this is not the first line of treatment for severe cases, but CPAP or MMA.

MADs are not devoid of limitations. Complaints of sialorrhea, joint and muscle pain, or simply the discomfort of sleeping with the device in the mouth