

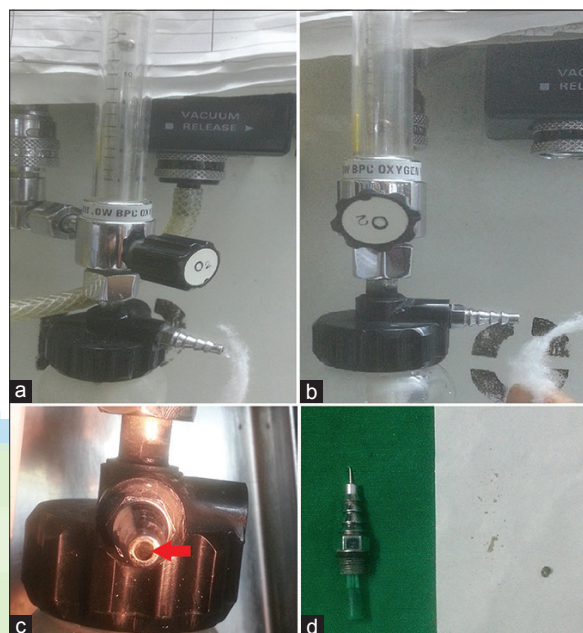
## Letter to Editor

### Hazard notice: Blocked oxygen humidifier!!

Sir,

Oxygen therapy is one of the key components of treatment for patients in high dependency unit or intensive care unit. Different techniques are used for oxygen delivery, and one of the most commonly used methods is by simple mask or Venturi mask. Hence, it is always important to have functioning oxygen humidifier assembly to supply oxygen. Possibility of human errors, malfunctioning of equipment has been reported earlier.<sup>[1,2]</sup> We report a rare scenario where nozzle of oxygen humidifier was blocked.

A patient with pneumonia was given supplemental oxygen as she was tachypneic and not maintaining adequate saturation with room air. There was no improvement in the saturation even after supplementation of humidified oxygen by mask; instead there was fall in saturation with increase in respiratory rate. Referral was given to anesthesiologist for elective intubation and mechanical ventilation. On examination, the moisture or fog content inside the mask with tachypnea made us to suspect absence of oxygen delivery to the patient as with our previous experience.<sup>[2,3]</sup> When we checked the oxygen humidifier, we noticed proper movement of bobbin, an adequate level of distilled water, and proper bubble formation in humidifying chamber but absence of oxygen flow through the nozzle. There was absolutely no flow of oxygen even after increasing the flow to 12 L/min [Figure 1a]. This made us to suspect blockade of nozzle and on testing the nozzle was blocked [Figure 1b]. The humidifier was submitted to the biomedical department where they could dislodge the block that was present in the nozzle [Figure 1c]. After the removal of the block, the oxygen flow could be appreciated even with minimal flow [Figure 1d]. The oxygen saturation and respiration pattern of the patient improved after replacing with the proper functioning humidifier hence invasive ventilation was avoided in this patient. We couldn't identify the cause of nozzle blockade; it could have been due to improper storage of the equipment that leads to dirt accumulation. The key message here is; one should have high index of suspicion of the possibility of equipment error that could



**Figure 1:** Flow of O<sub>2</sub> before (a) and after (b) releasing the obstruction (c) obstructed nozzle and (d) dirt material

avoid unnecessary invasive ventilation and unnecessary investigations like arterial blood gas analysis. It is also important to store lifesaving medical equipment in a proper way.

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