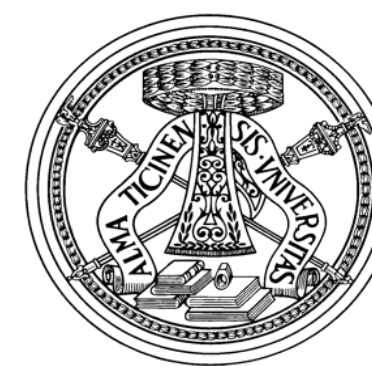


COVID-19: management of a young super-obese patient with ARDS in an OR converted into ICU



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Introduction

On February 21st, 2020 the first Italian case of Coronavirus disease 19 (COVID-19) was admitted to our hospital [1]. The number of dedicated ICU-beds was increased, finally adapting also cardiac-surgery operating room (OR) into a 6-bed ICU.

Case description:

In this setting, we managed a super-obese (body mass index, BMI 52 kg/m²) COVID-19 patient with ARDS. At admission, this 33-year-old patient presented respiratory distress and critical hypoxemia. Fever and respiratory symptoms had begun a week earlier. His comorbidities were diabetes mellitus and psoriasis. He was rapidly intubated and underwent mechanical ventilation (MV); COVID-19 was confirmed by quantitative analysis on bronco-alveolar lavage. During his stay we faced several problems:

- difficulty to obtain a computed tomography scan due to high BMI
- paucity of respiratory mechanics data provided by an anaesthesia workstation
- unfeasibility of oesophageal pressure measurement [2].

We used lung ultrasound (LUS) to quantify lung loss of aeration [3] and to set positive end-expiratory pressure (PEEP) level up to 20 cmH₂O [4]. Prone positioning cycles of 12-16 hours were performed according LUS pattern [5,6]. Percutaneous tracheostomy was performed on day 19th, to facilitate the weaning. On day 41st the patient was transferred to another of our ICU while on assisted MV since the OR was dedicated again to surgical activities once COVID-19 cases started reducing. We visited the patient on July 3rd, during a post-COVID control: chest x-ray was clean (Fig.1); he did not present any clinical sequelae except from post-traumatic stress disorder.

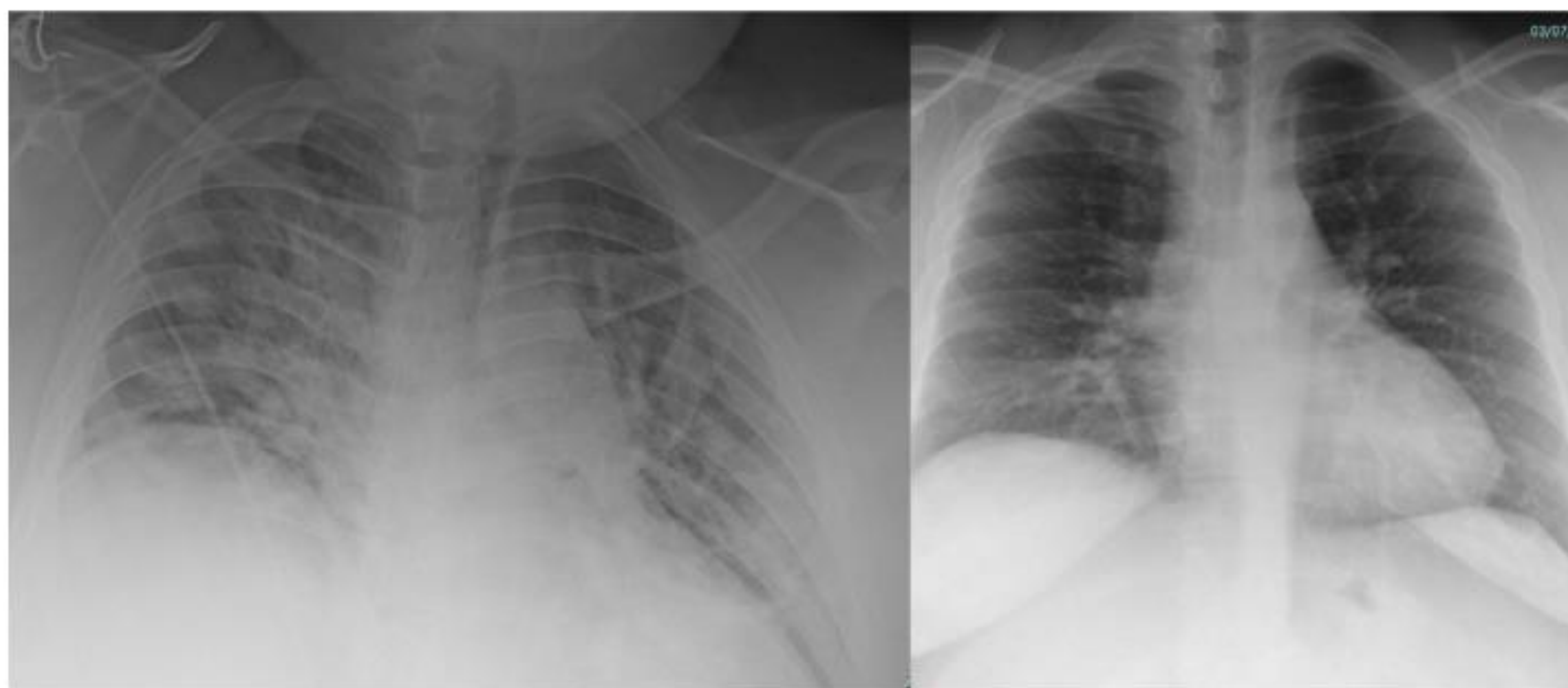


Figure 1: Chest X-ray on day 1 (left) and after discharge (right)

Conclusion:

Despite limited resources, it was possible to successfully treat a difficult patient affected by severe COVID-19 with the simple tools available in an OR converted into ICU.

