

Editorial Note

The Use of Ultrasonography in Improving The Success of Rehabilitation Process in ICU

Complications of various degenerative and genetic diseases on physical fitness can occur directly and indirectly. Indirect causes are due to prolonged immobilization, leading to reduced functional capacity. Direct causes may involve diseases that result in decreased cardiac and pulmonary function. Prolonged ventilator use in the ICU might significantly reduce cardiopulmonary function and even high risk in ventilator weaning challenging for patients. One of the newest method to assess pulmonary function in the ICU is ultrasonography, which evaluates the diaphragmatic muscle function in ventilator-dependent patients. This method has been applied in several educational hospitals and hopefully might improve our capacity as physiatrist.

Cardiorespiratory fitness is achieved through regular and continuous exercise. Cardiac and pulmonary rehabilitation is carried out from the acute phase to the community. Rehabilitation conducted in the ICU is a supportive and essential rehabilitation process. Why? Because the ICU rehabilitation stage can have a tremendous effect on improving weaning ventilation ability. Preservation and improvement of lung function and cardiopulmonary function allow patients to wean faster and increase their level of mobilization.

One method to assess cardiopulmonary function in the ICU is by evaluating diaphragmatic muscle movement during ventilator use. This can be done before rehabilitation to increase the effect of breath muscle-strengthening exercises to match the patient's ability. Assessing the quality of diaphragmatic muscle movement may also predict whether a ventilator-dependent patient can be weaned off quickly.

Overall, successful rehabilitation is not done in outpatient care alone. Patients who get rehabilitation services start from the acute phase in the hospitalization and even in the ICU. The success of the rehabilitation process in the ICU requires a multidisciplinary approach from various professionals. A physiatrist is expected to play a more significant and optimized role in providing daily care in the ICU.

Evi Rachmawati NH

Medical Staff

Department of Physical Medicine and Rehabilitation,
Faculty of Medicine University Indonesia, Hospital of
University Indonesia