Letter to the Editor

Prone ventilation: does it have a role in neonates

Sir,

In patients of various ages undergoing mechanical ventilation, it has been observed that positions other than the standard supine position, such as the prone position, may improve respiratory parameters and outcome.1 The benefits of these positions have not been clearly defined for critically ill newborns receiving mechanical ventilation.

We wish to share our experience of a thirty-two weeks preterm baby who was referred to us for management of respiratory failure. The baby was five-day old weighing 1.7 kg. There was extensive bilateral involvement, more so of the right upper zone. Conventional ventilation, chest physiotherapy, bronchoscopy along with adequate antibiotics failed to improve the child. As we did not have High frequency ventilation the only option was to send the child to a center having this facility. As a desperate measure we put the baby prone, within half an hour of this the saturations started improving. We kept the child prone for forty-eight hours, subsequently two hours prone and two hours supine. We were able to get the child off the ventillator after one week and subsequently discharge after two weeks.

Prone position improves perfusion of the lung leading to improved ventilation perfusion ratio. Shifting of heart anteriorly and movement of the diaphragm downwards improves lung compliance. It is also lung protective.1 There are several disadvantages of prone positioning like unplanned extubations and dislodgement of various catheters and experienced nursing staff needs to perform the maneuver. Prone ventilation in severe ARDS in adults is an accepted treatment modality.2

In newborns there is some data showing improvement of lung function.3,4 However, Cochrane review 2016 states that there is no evidence to suggest that any particular body positions during mechanical ventilation of the neonate is effective in producing sustained and clinically relevant improvement.5 Although not validated till now but prone ventilation can be used as a rescue therapy in centers that don’t have access to high frequency ventilation. There is need to develop protocols. Experience of today may be the standard of care in future.

Sunil Taneja*, Neha Agarwal, Ayank Tandon
Department of Pediatrics, GSVM Medical College, Kanpur, Uttar Pradesh, India

*Correspondence: Sunil Taneja
E-mail: tanejasunil17@gmail.com

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