

EVALUATION OF DIAPHRAGMATIC THICKNESS AND DYSFUNCTION BY ULTRASONOGRAPHY IN MECHANICALLY VENTILATED CHILDREN FOR ASSESSMENT OF EXTUBATION SUCCESS

AIM: To evaluate diaphragm thickness (DT) and diaphragmatic thickening fraction (DTF) in mechanically ventilated children and study the association of these measurements with extubation success

| SUBJECTS | METHODS | RESULTS | | | | |
|--|---|--|---------------------------|----------------------------|---------|--|
| Children aged 1 month to 18 years who required mechanical ventilation for more than 24 hours | Ultrasonographic measurements of DT were documented and DTF was calculated from baseline (within 24 hours of mechanical ventilation) until 14 days of MV and up to 3 days post-extubation | | Extubation Success (n=31) | Extubation Failure (n = 9) | P-value | A decrease in diaphragm thickness and diaphragm atrophy was seen in all mechanically ventilated children. Higher PEEP had moderate correlation with diaphragm atrophy rate |
| | | DTF% before extubation | 30 | 34.07 | 0.074 | |
| | | DTF %after Extubation | 31 | 34.33 | 0.702 | |
| | | i) Total ventilation duration & ii) Mean DTF% before extubation:- had significantly decreased probability of successful extubation | | | | |

CONCLUSION: Despite evidence of diaphragmatic atrophy in critically ill children receiving mechanical ventilation, there was no significant difference in DTF between extubation success and failure groups.

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