

Another point of note is that NIV use in all patients (CF and non-CF) with respiratory failure has a significant impact on the Lung Allocation Score, a system currently in use in the USA to prioritise the utility of donor lungs for all waiting recipients; thus, those with higher scores (such as CF patients using chronic NIV) gain higher priority for organ acquisition while on the transplant wait list.¹³

Finally, in the era of evidence based medicine, and third party payer expectations of such data, it is useful to have peer reviewed data from studies such as this, to support the use of this treatment modality. In practice, as the authors declare at the conclusion of their paper, only by performing multicentre studies of NIV in CF with larger numbers and perhaps longer study times will it be possible to improve and expand on the findings of this study.

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Lung alert

CT and lung function patterns in bronchopulmonary dysplasia (BPD) in the post-surfactant era

Advances in neonatal management, particularly the use of surfactant, have been associated with the emergence of a new form of bronchopulmonary dysplasia (BPD). This is thought to be a result of arrested lung development and is characterised by abnormalities of alveolar septation and microvascular maturation. This retrospective review describes chest computerised tomography (CT) and lung function patterns in 41 very low birth weight babies with symptomatic BPD who received optimal treatment including surfactant. These infants underwent CT scanning and lung function testing (VmaxFRC and FRC (functional residual capacity)) 10–20 months after birth for persistent respiratory symptoms.

All CT scans were abnormal, the most frequent patterns being hyperlucent areas (88%), linear opacities (94%), triangular subpleural opacities (71%) and bullae (53%). The number of subpleural and linear opacities, but not hyperlucency, correlated negatively with FRC and positively with duration of oxygen exposure, suggesting different mechanisms for these changes.

This study highlights the changing CT patterns in BPD, reflecting differences in management as well as pathogenesis. The association of CT opacities with low FRC suggests persistent pulmonary fibrotic lesions despite newer therapies. Several CT features are similar to those seen in the pre-surfactant era, with the notable absence of bronchiectasis, and remain associated with the duration of oxygen therapy and mechanical ventilation.

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