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Grown up (>16 years) chronic neonatal lung disease

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Definition: Lung disease associated with a history of preterm birth (usually < 32 weeks) in a patient >18 years

Causes: Preterm birth (<32 weeks or <1500g) is a strong risk factor, but occasionally babies born near term will have persistent respiratory difficulties and lung disease in adulthood. While there is limited information on other risk factors at this stage, bronchopulmonary dysplasia is probably a risk factor and disease severity in adulthood appears associated with time requiring supplemental oxygen as an infant. It is possible that the use of surfactant therapy in neonatal intensive care units from the early 1990s may modify the adult phenotype.

Clinical Presentations: Most patients present with breathlessness on exertion and exercise limitation, cough which may be productive, and wheezing. Patients may be misdiagnosed with asthma. Importantly the history of preterm birth may not come to light immediately as many infants recover significantly during early childhood. In a young adult presenting with respiratory symptoms it is important to enquire about the perinatal history.

Investigations: Full lung function usually reveals evidence of airflow limitation and gas trapping, although the total lung capacity is often normal. The diffusing capacity may be low. Chest X-ray may reveal evidence of hyperinflation. The CT-chest features are relatively specific in a young adult and include areas of hypo-attenuation representing gas trapping &/or emphysema, bullae, linear and triangular opacities which may be subpleural and, less commonly, bronchial wall thickening and areas of localized fibrosis.

Treatment: Anecdotally treatment has been similar to that prescribed for patients with asthma and/or cigarette smoking related COPD. There is no information on treatment efficacy in this disease. Transplantation has been indicated in children and adolescents with a history of chronic neonatal lung disease, but thus far there are no reports in the literature of transplantation for Grown Up Chronic Neonatal Lung Disease.

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