

# **Management of experimental pneumothorax in weanling rabbits with the use of fibrin glue sclerosant.**

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## **Abstract:**

Fibrin glue pleurodesis successfully sealed surgically created pneumothoraxes in 12 (92.3%) of 13 New Zealand white rabbits, an animal model chosen for its similarity to the thoracic configuration of the human neonate. All chest tubes were removed at 24 hours; there were no recurrences. Two rabbits, in whom human cryoprecipitate was used, died of an immunologically mediated pneumonitis. This reaction would not be expected in the human setting. Four mothers' follow-up revealed nearly total fibrin glue resorption. This 'biodegradability' is well suited to the neonate, since alveolar barotrauma, not congenital emphysematous blebs, is the usual initiator of pneumothorax. Time-limited adhesions created by fibrin glue pleurodesis should be adequate for treatment of the acute event, while avoiding persistent pleural adhesions that could interfere with subsequent thoracic surgery or cause long-term deleterious effects on pulmonary function.