Clinical examination of combined approach using Bolheal and Neoveil on closure of pulmonary fistula in chest surgery. [Japanese]

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Abstract:

Fibrin adhesives are often used following chest surgery as sealants to treat leakage caused by pulmonary resection, but their adhesive effects on tissue and preventative effects on leakage vary depending on usage. Here, we investigated the effectiveness and safety of combining Bolheal, a frictional spraying, and Neoveil, an absorbable felt, in closing leaks. In all 30 patients with leakage due to pulmonary resection or suturing, an intraoperative test following chest surgery confirmed complete closure. As to the duration of postoperative leakage, no leakage was seen in 28 patients (93.3%), while leakage lasted for two days in one patient (3.3%) and six days in another patient (3.3%). No adverse reactions or side effects were observed with this combined method and general clinical laboratory tests showed no notable abnormality, suggesting that the present method is extremely safe. In addition, the rate of remarkable and moderate or remarkable responses was very favorable at 96.7 and 100%, respectively. As it has been generally accepted that the usefulness of fibrin glues varies depending on usage, we have modified fibrin usage from the double layer method, mixing method, spray method to the frictional spray method. Also, in recent years, favorable results have been obtained using fibrin sheets, but the results of the present study show that the combination of Bolheal and Neoveil is the most effective technique in treating pulmonary fistulas.