Title	Non-steroidal anti-inflammatory drugs increase recurrence risk following surgical pleurodesis for primary pneumothorax
Author(s)	Yu, P; Lim, HCC; Yam, NLH; Sihoe, A
Citation	The 23rd European Congress on General Thoracic Surgery (ESTS 2015), Lisbon, Portugal, 31 May-3 June 2015. In Interactive CardioVasc Thoracic Surgery, 2015, v. 21 suppl. 1, p. S23-S24, abstract no. F-083
Issued Date	2015
URL	http://hdl.handle.net/10722/215343
Rights	Interactive CardioVasc Thoracic Surgery. Copyright © Elsevier Science.

NON-STEROIDAL ANTI-INFLAMMATORY DRUGS INCREASE RECURRENCE RISK FOLLOWING SURGICAL PLEURODESIS FOR PRIMARY PNEUMOTHORAX

Peter Yu, H. Lim, N. Yam, A. Sihoe

Department of Surgery, The University of Hong Kong, Hong Kong

OBJECTIVES: Non-steroidal anti-inflammatory drugs (NSAID) have been shown to reduce the histopathological quality of pleurodesis in animal studies, but their effect on pleurodesis in humans has not been investigated. METHODS: During January 1999 - January 2003 - when NSAIDs were still commonly used following pneumothorax surgery - 176 consecutive patients received video-assisted thoracic surgery (VATS) pleurodesis for primary pneumothorax (exclusions: secondary pneumothorax or previous pleurodesis). Recurrence defined as any new clinically or radiographically detected ipsilateral pneumothorax following surgery was documented. RESULTS: At the surgeon's discretion, an NSAID (Naproxen) was used for postoperative analgesia in 44 patients (25%). All major demographic and clinical factors were similar amongst the NSAID and control patients. After a median follow-up of 162.4 months (range 143-191 months), 11 patients (25%) in the NSAID group had recurrence, compared to 12 patients (9%) in the control group (HR = 2.97 [95% CI 1.14-7.79], P = 0.006). Life table analyses demonstrated no significant effect of NSAID on recurrence in the first 6 months (HR = 2.50 [95% CI 0.64-9.77], P = 0.118), but significantly higher recurrence at 9 months (HR = 3.54 [95% CI 1.01-12.48], P = 0.015) and thereafter. History of smoking is paradoxically associated with lower recurrence risk (HR = 6.17 [95% CI 2.72-13.97], P < 0.001). The effect of NSAID on recurrence is more pronounced in non-smokers (HR = 3.46 [95% CI 1.21-9.89], P = 0.003), but not significant in smokers (HR = 1.53 [95% CI 0.11-21.24], P = 0.725). The mean total dose of NSAID use showed a trend of association with recurrence (Recurrence: 2113 mg; No recurrence: 1803 mg; P = 0.053). Recurrence was not correlated with any other demographic or clinical variables. Use of NSAID failed to reduce pain scores on postoperative day 1. CONCLUSIONS: Use of NSAIDs after surgical pleurodesis for primary pneumothorax increases recurrence risk, while being ineffective in pain control. Routine NSAIDs use following surgical pleurodesis should be avoided, particularly for non-smokers.