The influence of tramadol and parecoxib on erythmyocin or bleomycin-induced pleurodesis in rabbit: a pilot study

ABSTRACT

Introduction: Recurrent pleural effusion secondary to advanced malignant diseases can lead to poor quality of life, recurrent hospital stays and increased hospital costs, which has yet to be extensively explored. Aim: To compare the effectiveness of erythromycin and bleomycin in producing pleurodesis in rabbits and to determine the influence of different analgesic drugs namely tramadol sodium and parecoxib sodium intramuscular on experimental pleurodesis induced by erythromycin or bleomycin intrapleural on the aforementioned rabbits. Ma t e r i a l and me thods : This was an experimental animal pilot study involving 28 white New Zealand rabbits which were divided into 4 groups of 7 specimens. They received different agents as follow: group A (erythromycin and parecoxib sodium), B (erythromycin and tramadol sodium), C (bleomycin and parecoxib sodium), and D (bleomycin and tramadol sodium) at the right hemithorax. The control was marked at the contralateral left hemithorax. After 30 days the rabbits were euthanized to allow for evaluation of macroscopic and microscopic pleural and parenchymal adhesions by a blinded respective pathologist. Re sul t s and di s cus s ion: The degree of pleurodesis induced by the intrapleural injection of erythromycin indicated that it was superior to bleomycin as a sclerosing agent in the rabbit sample ($P = 0.003$). The concomitant use of analgesics revealed that tramadol sodium reduces the degree of pleurodesis to a greater extent than parecoxib sodium ($P = 0.009$). Conc lus ions : The use of intrapleural erythromycin as a potent agent of chemical pleurodesis that is insensitive to the concomitant analgesic effect of parecoxib sodium has important clinical implications in relation to the effectiveness of chemical pleurodesis as a procedure.