

ABSTRACT

Effect of Re-sterilization on Lidocaine Concentration in RSUD Dr.Soetomo

Lidocaine is an anilide derivative that works as a local anesthetic. Patients undergoing surgery has high risk of infection, therefore it is very important to note that the outside part of lidocaine hydrochloride ampoule is sterile so that it does not become a contaminant by sterilization using autoclave at 121°C for 15 minutes.

The possibility of a decrease in lidocaine hydrochloride content due to the re-sterilization process causes this research to be necessary. This research was carried out under optimal and validated conditions using the High Performance Liquid Chromatography (HPLC) system the octadesilsilan (C18) as stationary phase, and acetonitrile: glacial acetic acid buffer pH 3,4 (75:25, v/v) as mobile phase, flow rate of 1.0 ml / minute, temperature of column 30°C, with a UV detector at a wavelength of 254 nm.

The sample used in this study was mixture of lidocaine hydrochloride in dextrose. The concentration of lidocaine hydrochloride for injection “x” brand before re-sterilization have a range from 5.04-5.19%, and after re-sterilization the concentration have a range from 4.93-5,06%. There was a decrease in lidocaine hydrochloride concentration after re-sterilization, but it was not significant because the levels of lidocaine hydrochloride obtained were as stated on the packaging label in the required range of Indonesian Pharmacopoeia Edition V.

Keywords: re-sterilization, autoclave, anesthesia, epidural, lidocaine hydrochloride, dextrose, HPLC, assay.