

Pharmacoeconomic analysis of heparinized saline for heparin locks

Tadao Inoue^{1), 2)*}, Kenichirou Kawana¹⁾,
Yoshio Uetsuka²⁾

- 1) Department of Pharmacy, ST.Luke's International Hospital 9-1 Akashi-cho, Chuo-ku, Tokyo 104-8560, JAPAN
- 2) Division of Health Care and Hospital Administration, Tokyo Women's Medical University 8-1, Kawadacho, Shinjuku-ku, Tokyo 162-8666 JAPAN,

(Received July 7, 2003
Accepted December 8, 2003)

Abstract :

Objectives : The aim of this study is to assess the economic impact of pre-filled syringes, in which heparinized saline adjusted to a clinically suitable concentration (100 U/mL) is contained, on pharmaceutical practice compared with preparing a heparin solution in the hospital facilities.

Methods : A cost-minimization analysis, one form of full economic evaluation, was conducted in comparison of a pre-filled syringe preparation with heparinized saline solutions (100 U/mL) dispensed at both the pharmacy and the ward as alternatives.

Results : The cost estimates with the pre-filled syringe preparation of heparinized saline (100 U/mL) was 115.3 yen less per syringe (66.2%) than the dispensation at the pharmacy, and was 39.4 yen higher per syringe (121.1%) than the dispensation at the ward. When one-way sensitivity analyses were undertaken by varying the prices of instruments and drugs in a range of 80-95% based on the prices set by either the medical technology industries or NHI-based prices, the total cost estimates for dispensing at the pharmacy was 327.6 yen with a discount rate of 5% and 286.5 yen with a discount rate of 20%. On the other hand, those for dispensing at the ward were 178.8 yen with a discount rate of 5% and 155.6 yen with a discount rate of 20%.

Conclusions : It was concluded that the pre-filled syringe preparation of heparinized saline (100 U/mL) is efficient when medical staff try to choose an appropriate intervention for preventing blood coagulation.

Key words : Pharmacoeconomics, cost-minimization analysis, heparinized saline (100 U/mL), pre-filled syringe preparation