IS-109 The cost-effectiveness of the urinary trypsin inhibitor in the treatment of the preterm labor

Department of Ob/Gyn, National Defense Medical College, JAPAN
Kenichiro SAKAGUCHI, Hideo MATSUDA, Yuichi KAWAKAMI, Keiko SAITO, Utako FUKUI, Sanshiro OKAMOTO, Naoki SASAKI, Kenichi FURUYA, Yoshihiro KIRUCHI

[Objective] Urinary trypsin inhibitor (UTI) suppresses inflammatory proteases and also depresses the production of cytokines. UTI suppository is now widely used for tocolysis Japan. The aim of this research is to evaluate the cost-effectiveness of UTI-Ritodrine-Magnesium treatment versus conventional Ritodrine-Magnesium treatment by cost. [Methods] Between December 1998, and August 2001, 56 singleton pregnant women were involved in this study. All patients were identified as having preterm labor, diagnosed by the criteria of ACOG. Tocolysis was performed with (1) intravenous ritodrine, (2) intravenous magnesium sulfate, and (3) UTI vaginal suppositories. Patients were divided into two groups, group A: patients with treatment (1) & (2), Group B: patients with treatment (1), (2) & (3), randomized to either A or B. The prolonged pregnant days were calculated. Neonatal weight (g) at delivery, cost for tocolytics were also calculated. Statistical analysis was carried out using Student’s t-test. [Results] Although there were no statistical difference in the effect of tocolysis, group A was almost twice as expensive as group B. That meant $37.6 vs. $13.8 per day (p<0.003). [Conclusion] The result tells us a combination of UTI and conventional drugs may contribute to the safer and less expensive tocolysis.

IS-110 Non-bolus administration of magnesium sulfate as supplemental tocolytic agent for ritodrine hydrochloride

Saitama Medical Center, Saitama Medical Center
Takakazu KAWAMURA1, Yoshihiko MURAYAMA1, Masatoshi HAYASHI1, Koichi KOYAYASHI1, Naoki HAYASHI2, Osamu ISHIHARA1, Satoru TAKEDA2

[Objective] Magnesium sulfate is used as uterine contraction suppressant for imminent preterm birth. Commonly, 4g bolus of magnesium sulfate is administered and then maintain dosage rate of 1-2g/hour are given. However, main side effect, dullness, dyspnea, or malaise often develop on the first day. In this study, magnesium sulfate was given by intravenous infusion without initial administration. On this method, adverse reactions was alleviated. We discuss our method of administration, adverse reactions, and the result of labor and delivery. [Methods] All pregnant women at 22-32 weeks of gestation admitted to our hospital were candidates of this study. Inclusion criteria were as follows: 1) Unable to control uterine contraction by the maximum dose of ritodrine hydrochloride. 2) Who were necessary to be discontinued of ritodrine hydrochloride. 3) Complications such as hyperthyroidism and heart disease. [Results] About 40% of the cases experienced some adverse reactions on the first day of magnesium sulfate administration. Specifically, palpitation was most prevalently observed in about 40% of the subjects, followed by choked feeling in about 15%, sensation of dizziness in 10%, and headache, malaise, and anorexia each in about 5%, respectively. [Conclusion] Our non-bolus magnesium sulfate infusion can avoid rapid increase in blood Mg concentration then alleviate adverse reactions to magnesium sulfate.

IS-111 A study on pressure profile during external cephalic version

W.Y. Fok, T.Y. Leung, L.W. Chan, D.S. Sabin, T.K. Lau
Dept. of Obstetrics and Gynaecology, Prince of Wales Hospital, The Chinese University of Hong Kong

Objective: Vaginal breech delivery has been proven to be associated with significantly higher neonatal mortality and morbidity. External cephalic version (ECV) can avoid or reduce the incidence of fetal complications due to breech delivery. Moreover, it prevents maternal complications and decreases the cost associated with caesarean section. However, ECV may lead to abruptio placenta, fetal bradycardia, fetal-maternal haemorrhage or even uterine rupture if excessive force is used. The objective of this study is to quantify the pressure / force exerted onto maternal abdomen during ECV. [Methods] We performed an ECV in 47 patients. During the procedure, we used a pair of custom made gloves with a total of 32 sensors to continuously measure the pressure exerted by the operator. We analysed the pressure profile during each attempt of ECV by a computer program designed by ourselves. [Results] The overall success rate was 83%. The number of attempt to each patient ranged from 1 to 5. A total of 94 attempts were performed among 47 patients. The median duration of an attempt was 52.1 sec (IQR: 37.6 - 74.6). The median peak pressure and total pressure of each attempt were 8.2 psi (IQR: 6.0 - 13.5) and 591.6 psi sec (IQR: 402.9 - 940.1) respectively. Regarding the whole procedure of each patient, the median duration was 82.5 sec (IQR: 42.2 - 177.3), whereas the median total pressure was 1111 psi sec (IQR: 585 - 1852). [Conclusion] We have set up a model to quantify the pressure profile of ECV. For the first time, we are able to measure the pressure objectively. With this model, we can further study the relationship between pressure exerted during ECV and the occurrence of complications, thereby enhancing the safety of this procedure.