ECONOMIC EVALUATION OF CARBETOCINE FOR THE PREVENTION OF UTERINE ATONY IN PATIENTS WITH RISK FACTORS IN MEXICO

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OBJECTIVE: To evaluate the cost-effectiveness of IMSS formulary drugs for preventing uterine atony in patients with risk factors. METHODS: A final report of a randomized pragmatic clinical trial at the Mexican Institute of Social Security (IMSS) is presented. Carbetocine and oxytocin are the only drugs within IMSS formulary for preventing uterine atony. Risk factor included fetal macrosomia, polyhydramnios, low insertion of the placenta, multiple gestation, prolonged labor, uterine myomas and chorioamnionitis. The effectiveness was defined as the reduction of the number of patients with uterine atony. The use of resources was obtained from the clinical trial and the costs were gotten from financial information from IMSS, and are expressed in US 2006 dollars. Squared ji and U de Mann Whitney test were used. Univariate and probabilistic sensitivity analyses, a Monte Carlo microsimulation with 10,000 iterations was performed using probability distribution data from the clinical trial. A 95% confidence interval of ICER was calculated by ellipse method.

RESULTS: Seventy-seven patients received carbetocine and 75 oxytocin. Both groups had similar obstetrics and sociodemographic characteristics. Uterine atony was reported in 19% in the oxytocin group compared to 8% in the carbetocine one (p < 0.0001). Multiple gestation was the most frequent diagnosis, 35% (p < 0.0001). Bleeding was less than 500 mL in the carbetocine group and 500–1000 mL in the oxytocin one (p < 0.0001). Mean cost per patient treated with carbetocine was $3525 vs. $4054 for oxytocine (p < 0.0001). Mean cost-effectiveness ratio for oxytocin was $4944, while for carbetocine $3874; ICER $4054 for oxytocine (p < 0.0001). The acceptability curve and health net benefit showed that carbetocine was superior independently of WTP. CI 99% by ellipse method showed that carbetocine was dominant in 100% of cases. CONCLUSIONS: Carbetocine was dominant in preventing uterine atony in patients with risk factors.