

PIH15

AN ECONOMIC EVALUATION OF DROSPIRENONE 2 MG / ESTRADIOL 1.033 MG VERSUS TIBOLONE 2.5MG IN THE TREATMENT OF POSTMENOPAUSAL WOMEN WITH GRADE 1 OR 2 HYPERTENSION IN KOREA

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OBJECTIVES: The purpose of this study was to assess the cost-effectiveness of drospirenone 2 mg/estradiol 1.033 mg (DRSP/E2) versus tibolone 2.5 mg in the treatment of postmenopausal women with Grade 1 or 2 hypertension in Korea. **METHODS:** A lifetime Markov model was developed for a population of postmenopausal women indicated for hormone replacement therapy (HRT) who had Grade 1 or 2 hypertension. Patients initially started on two years of HRT and progressed through the model according to their BP status and added on AHT medication as required. Patients experienced MI or stroke as determined by their BP status, which is a major risk factor for CVD. Continuation rates for HRT and antihypertensive therapy (AHT), CVD risk and utilities were obtained from published articles. Unit cost, resource use and treatment practice for AHT were based on physician interviews. Only direct medical costs were included. A discount rate of 5% was used for both costs and outcomes according to HIRA guidelines. The model reported effectiveness outcomes in quality-adjusted life years (QALYs) with a 59% premium price for DRSP/E2 over tibolone. **RESULTS:** DRSP/E2 was cost-effective compared to tibolone. The base case had an incremental cost-effectiveness ratio (ICER) of 11,105,517 KRW per QALY gained. Probabilistic sensitivity analysis showed 80.4% probability the ICER would fall below the threshold of 20 million KRW. BP lowering qualities of DRSP/E2 provide additional benefits of decreased need for AHT medication and decreased risk of myocardial infarction (MI) and stroke for postmenopausal women with Grade 1 or 2 hypertension. **CONCLUSIONS:** In Korea, DRSP/E2 proved cost-effectiveness compared to tibolone offering additional benefit of aiding BP control compared to standard HRT.

PIH16

ECONOMIC EVALUATION OF TWO ALTERNATIVE TREATMENTS FOR OVARIAN STIMULATION IN ASSISTED REPRODUCTION

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OBJECTIVES: To compare the cost-effectiveness of traditional treatment for ovarian stimulation in assisted reproduction techniques (ART) based on a combination of agonists of the Gonadotrophin released hormone (GnRH) versus a treatment based on the use of antagonist of the GnRH. **METHODS:** Cost-effectiveness analysis where both, effectiveness and costs are estimated by means of a clinical study carried out in the University Hospital Virgen de las Nieves of Granada (Spain) including patients in their first cycle. Effectiveness was measured as the number of ongoing pregnancies reached with each treatment. Direct costs were considered, for hospital and for patients as well. Markov model was used to simulate the clinical path of the compared techniques. Deterministic and probabilistic sensitivity analyses were used to analyse preliminary results. **RESULTS:** The clinical study included 274 patients, 138 treated with agonists and 136 with antagonists. No statistically significant differences were founded regarding age, cause of infertility and insemination technique used. Deterministic analysis showed the agonists' treatment to be more effective than antagonists' (33/138 versus 20/136 pregnancies respectively) but more costly (mean cost €3,204.37 versus €3,066.64€), with an incremental cost effectiveness ratio (ICER) of €14.96. Deterministic sensitivity analysis shows high sensitivity of ICER to effectiveness but not to cost of treatments. On the other hand, probabilistic analysis shows the agonist treatment to be a dominant strategy versus antagonist treatment. **CONCLUSIONS:** The use of antagonists of GnRH for ovarian stimulation in ART has been broadly discussed, but no cost-effectiveness studies have been carried out. Both, deterministic and probabilistic analyses show that, for women in the first cycle of ART, agonist treatment reports the best cost-effectiveness ratio in comparison with antagonist treatment. However, while the results of deterministic analysis are very sensitive to variations in treatment effectiveness, probabilistic analysis' results reveal a robust dominance of agonists treatment.

PIH17

ECONOMIC EVALUATION OF THE TRANSDERMAL CONTRACEPTIVE PATCH EVRA IN MEXICO: THE POPULAR HEALTH CARE SYSTEM PERSPECTIVE

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OBJECTIVES: To evaluate the cost effectiveness of Evra in Mexico from the Popular Healthcare System (PHCS) perspective, that is the recently public third-party payer created for self-employed workers and low-income families outside the social security system. **METHODS:** We developed a Markov model to assess costs and benefits associated with the use of Evra in 5-yearly age groups Mexican women. Number of pregnancies averted per 100 users was the effectiveness outcome, which was derived from expert panel estimates based on pregnancy probabilities for hormonal contraceptive methods taken from the 2006 National Demography Survey and one international paper. Contraceptive methods cost and pregnancy costs were included in the model at 2009 values. Comparators for Evra were oral contraceptives (OC's) and monthly injections, although injections only were compared for ages 30–44. A three-year time

horizon was used for base-case analysis, but one-way sensitivity analyses was performed to vary the intergeneric interval from one year to five years, using a 5% discount rate. Probabilistic sensitivity analyses were undertaken to incorporate likely distributional properties of key model parameters **RESULTS:** According to base-case analysis Evra appear as the dominant strategy compared against OC's. The largest cost-savings (€20,700) were obtained for ages 25–29 where 37 additional pregnancies were prevented, being pregnancy the main cost driver. Comparison between Evra and monthly injections produced ICER estimates in a range from €667 to €2943 per pregnancy averted for 40–44 and 30–34 age-groups respectively. Sensitivity analysis results showed robustness of model parameters. **CONCLUSIONS:** Compared with OC's, Evra represents a more effective and less costly contraceptive method for Mexican women covered by PHCS, while compared with injections, Evra is a highly cost-effective option.

PIH18

PHARMACOECONOMIC STUDY OF THE TRANSDERMAL CONTRACEPTIVE PATCH EVRA IN MEXICO: INSURANCE COMPANIES PERSPECTIVE

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OBJECTIVES: To perform a pharmacoeconomic evaluation of Evra in Mexico from the perspective of insurance companies **METHODS:** We used a Markov analytical model to assess costs and benefits associated with the use of Evra in quinquennial age-groups Mexican women covered by a private health insurance. Comparator for Evra was oral contraceptives (OC's). Effectiveness measure was the number of pregnancies averted per 100 users. These values were estimated by expert panel consensus based on pregnancy probabilities for hormonal contraceptive methods taken from the 2006 National Demography Survey and literature review. Contraceptive methods costs were calculated using the market prices, while mean values of medical reimbursement tabulator were used as proxy of pregnancy costs and adjusted to 2009 values. We assumed a 3-years intergeneric interval for base-case evaluation; however through one-way sensitivity analyses we knew the impact of varying the intergeneric interval from one year to five years, using a 5% discount rate. Probabilistic sensitivity analyses via Monte Carlo simulations were undertaken to incorporate likely distributional properties of key model parameters. **RESULTS:** Base-case results showed Evra as the dominant strategy, obtaining savings in a range of €4840 for ages 30–34 until €7454 for ages 25–29, being contraceptive method the main cost driver for both options. Also Evra enable to prevent between 10 and 14 additional pregnancies compared against OC's. From one-way sensitivity analysis cost-savings exhibited a growing pattern until year 3, and a decreasing trend towards year 5. These results were consistent for all cohorts, however certain differences were observed between 15–19 and 25–29 age-groups at year 1. **CONCLUSIONS:** Compared with OC's, Evra represents a more effective and less costly contraceptive method for Mexican women.

PIH19

COST-EFFECTIVENESS ANALYSIS OF THE NEW FERTILITY TREATMENT (rFSH+rlH)

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OBJECTIVES: This study was conducted to evaluate the cost-effectiveness of recombinant FSH (rFSH) and LH (rLH) for treatment in vitro fertilization (IVF) patients from the payer's perspective. **METHODS:** A cost-effectiveness analysis from retrospective database of women waiting to be come pregnant (1100 IVF cycles). All patients received rFSH in combination with rLH or HP-hMG or non-purified hMG. Based on ovarian reserve, initial dose varied from 150 to 450 IU of r-hFSH associated with 75 to 225 IU of rLH or 1 to 4 vials of hMG. Statistical analysis was performed using the SPSS. In addition, a probabilistic sensitivity analysis was conducted by Bootstrap simulation. **RESULTS:** Clinical and ongoing pregnancy rates (PR) per cycle were: rLH 47.16% and 44.95%; hMG 37.86% and 37.0%; HP-hMG 31.77% and 28.13%. PR with rFsh+rLH were significantly higher than with urinary products ($P < 0.05$), however mean age was significantly lower (rLH 35.27 ± 4.30 ; hMG 35.94 ± 4.69 ; HP-hMG 36.25 ± 4.64 ; $P < 0.05$). Patient age group analysis showed that <35 years had higher PR in the rFSH+rLH group compared to rFSH+HP-hMG (clinical PR: 57.47% vs 32.76%, $P < 0.01$; ongoing PR 54.71% vs 27.59%, $P < 0.01$). The non purified hMG+rFSH group had lower PR than the rFSH+rLH group (clinical PR: 46.71% and 57.47%, $P < 0.05$), but the difference in ongoing PR did not reach statistical significance (46.11% and 54.71%). Costs of gonadotropins in patients <35 years were: non-purified hMG ($6616.74 \pm €1100.97$) < rLH ($6819.71 \pm €1204.30$ or $7064.91 \pm €1246.28$ using the unit costs of combo of rFSH 150 IU + rLH 75 IU and free combination respectively) < HP-hMG 7103.36 < €1121.89. It was therefore showed rFSH 150 IU +rLH 75 IU combination is more effective than rFSH+HP-hMG. **CONCLUSIONS:** This study indicate that rFSH 150 IU +rLH 75 IU treatment is a dominant option, lower costs and higher effectiveness, with respect to HP-hMG and free combination. rFSH+rLH is the most cost-effectiveness option.