REAL-WORLD USE OF DULOXETINE FOR LOW BACK PAIN AND CHRONIC LOW BACK PAIN: TREATMENT PATTERN, DIRECT AND INDIRECT COSTS

Background: The real world role of duloxetine versus other treatment for low back pain (LBP) and chronic LBP (CLBP). METHODS: There were 733 employees identified, ages 18 to 64 years, with ≥1 LBP diagnosis, per HEDIS specifications, and ≥1 duloxetine prescription within a year after LBP diagnosis from a privately-insured claims database (2004–2007). Employees had continuous eligibility from 6 months before (baseline) and 26 months after index duloxetine prescription (study period). Using propensity score matching, duloxetine-treated employees were matched to 753 LBP employee controls (who initiated another pharmacological/non-invasive LBP treatment in the same month from LBP diagnosis). A subset (n=155 each) of matched employees with baseline CLBP (subsequent LBP diagnosis within 3–6 months after the initial LBP diagnosis) was also analyzed. McNemar tests were used to compare LBP treatment rates. Bias-corrected bootstrapping was used to compare direct (medical and drug) and indirect (work loss) costs from third-party payer perspective. RESULTS: Duloxetine-use study period, duloxetine-treated versus controls had significantly lower rates of other pharmacologic therapy (e.g., 44.0% vs. 56.4% narcotic opioids; 29.5% vs. 40.9% NSAIDs; all p < 0.001) and non-invasive therapy (22.3% vs. 38.7% chiropractic therapy; 18.9% vs. 38.0% physical therapy; 14.2% vs. 27.0% of patients underwent surgery). Back surgery-treated employee controls compared with controls (1.7% vs. 2.8%, respectively; p = 0.157). Duloxetine-treated employees versus controls had significantly lower 6-month indirect costs ($1723 vs. $2198, p = 0.004) and lower direct costs ($4935 vs. $5649, p = 0.267). Sensitivity analysis using multivariate analysis confirmed the results. Among CLBP patients, duloxetine-treated employees versus controls had a lower rate of surgery (1.3% vs. 5.2%, p = 0.058), direct ($5519 vs. $7066, p = 0.345) and indirect costs ($1996 vs. $2612, p = 0.191). CONCLUSIONS: Duloxetine treatment in LBP and CLBP employees versus other non-surgical treatment was numerically associated with reduced rates of non-surgical therapies, surgery, and lower direct and indirect costs.

COST EFFECTIVENESS ANALYSIS OF MANAGING CHRONIC GOUT WITH FEBOUOXSTAT (ULORIC) VERSUS ALLOPURINOL (ZYLOPRIM)

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OBJECTIVES: To evaluate the cost effectiveness of febuxostat compared with allopurinol for the management of chronic gout in the United States. METHODS: Using the FACT trial that compared febuxostat with allopurinol in managing chronic gout, a ‘backward induction model’ was designed using a hypothetical cohort of hypothetical patients in the US aged 40 to 80 years. Model estimates were taken from the trial and existing literature. The trial demonstrated equivalent efficacy for these drugs but the probability of a patient attaining Allopurinol Hypersensitivity Syndrome (AHS) was found to be robust and not affected by uncertainty. RESULTS: The study findings indicate that Rituximab should be utilized for the treatment of moderate to severe rheumatoid arthritis.

THE COST-EFFECTIVENESS OF PREGABALIN (LYRICA) IN THE TREATMENT OF SEVERE FIBROMYALGIA IN THE UNITED STATES

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OBJECTIVES: Fibromyalgia is a chronic condition manifesting with widespread pain, non-restorative sleep, fatigue and cognitive dysfunction. Fibromyalgia imposes high costs due to work loss and medical resource use. We built a decision-analytic model to assess the cost-effectiveness of treating severe fibromyalgia with pregabalin. METHODS: Patients considered had Fibromyalgia Impact Questionnaire scores ≥59 and pregabalin 450 mg and placebo were derived from a pooled analysis of 3 randomized trials; response was defined as a ≥20% improvement over baseline pain score and patient global impression of change rated much or very much improved. Response rates for pregabalin and placebo were derived from a published study. Conclusions: Long-term outcomes were derived from an open-label study extension of a randomised pregabalin study. The primary effectiveness endpoint was mean days in response. Resource use was estimated from published studies. Costs were calculated from a societal perspective including health care costs and productivity loss. RESULTS: At 12 weeks, people treated with pregabalin achieved 28 days in response compared to 14 with placebo. Total cost per patient was $402 higher with pregabalin 300 mg and $989 lower with pregabalin 450 mg compared to placebo. At 1 year, pregabalin 300 mg was less costly and more effective than placebo, duloxetine, milnacipran or gabapentin: the incremental cost per additional day in response compared to tramadol and amitriptyline was $43 and $10 respectively. Pregabalin 450 mg gave reduced costs and more response days than all comparators. CONCLUSIONS: Pregabalin was found to be an effective therapy for severe fibromyalgia patients and was cost-saving compared to most other fibromyalgia treatments.

ECONOMICAL EVALUATION OF ADAHILIMAB IN PATIENTS WITH RHEUMATOID ARTHRITIS

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OBJECTIVES: to perform economic evaluation of adalimumab + methotrexate vs rituximab + methotrexate and infliximab + methotrexate in patients with rheumatoid arthritis resistant to traditional methods of treatment in Russian health care system. METHODS: the modeled study was performed. Data on dosing regimen, efficacy and safety of biologics were extracted from studies ARMADA, DANCER, and ATTRACT. Effect was measured in proportion of patients receiving this combination achieved ACR 20/50/70. Cost of treatment with biologics combined with methotrexate for 24 weeks and cost-effectiveness ratio (CER) were calculated from the Russian reimburse- ment system point of view. RESULTS: adalimumab is more effective in patients achieved ACR 20 (67, 54, and 50% of patients receiving adalimumab, rituximab, and infliximab accordingly achieved ACR 20), ACR 50 (55, 34, and 27% accordingly), and it is more effective that infliximab and has nearly equal efficacy with rituximab in patients achieved ACR 70 (27, 30, and 8% accordingly). The cost of treatment was $682,229.06 rubles for adalimumab + methotrexate, 651,876.66 rubles for infliximab + methotrexate, and 472,906.20 rubles for rituximab + methotrexate, CER for effec- tiveness criteria “achieving ACR 20” for adalimumab was 1,018,252.33. It was lower than that of infliximab (1,303,753.32) but higher than for rituximab (472,906.20). CER for effectiveness criteria “achieving ACR 50” was 1,240,416.47, 1,390,900.59, and 2,414,358.00 accordingly, and CER for “achieving ACR 70” was 2,526,774.30, 2,364,531.00, and 8,148,458.25 accordingly. Incremental CER for adalimumab was $1,613,582.57 / 996,775.52 / 2,364,531.00, respectively. The cost of treatment was $205/070 compared to rituximab. CONCLUSIONS: adalimumab, used as first line of therapy with biological drugs, is more economically effective in patients with rheumatoid arthritis resistant to standard therapy, than infliximab. Rituximab seems to be