THE COST-EFFECTIVENESS OF SEQUENTIAL USE OF ANTI-TUMOR NECROSIS FACTOR AGENTS IN THE TREATMENT OF RHEUMATOID ARTHRITIS

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OBJECTIVES: Previous studies have established that etanercept is cost-effective when used for the treatment of rheumatoid arthritis (RA) following the failure of 2 DMARD therapies. This analysis explores the use of etanercept after the failure of a previous anti-tumor necrosis factor (anti-TNF) agent.

METHODS: A sequential Markov model was developed to predict the costs and health outcomes associated with different treatments for patients with RA in the UK. The model estimated the cost-effectiveness of sequential anti-TNF therapies when compared against a sequence containing no anti-TNF treatments (i.e. solely DMARD therapies). In a separate analysis, etanercept was compared against rituximab after the failure of a previous anti-TNF (i.e. solely anti-TNF) agent.

RESULTS: This study has demonstrated that etanercept is a cost-effective treatment option for patients with RA in the UK. The model estimated the cost-effectiveness of sequential anti-TNF therapies when compared against a sequence containing no anti-TNF treatments (i.e. solely DMARD therapies). In a separate analysis, etanercept was compared against rituximab after the failure of a previous anti-TNF (i.e. solely anti-TNF) agent.

CONCLUSIONS: The model predicted that etanercept was a cost-effective treatment option for patients with RA in the UK. The model estimated the cost-effectiveness of sequential anti-TNF therapies when compared against a sequence containing no anti-TNF treatments (i.e. solely DMARD therapies). In a separate analysis, etanercept was compared against rituximab after the failure of a previous anti-TNF (i.e. solely anti-TNF) agent.

COST-EFFECTIVENESS OF RITUXIMAB (MABTHERA) COMPARED WITH TNF INHIBITORS FOR THE TREATMENT OF RHEUMATOID ARTHRITIS (RA) IN POLAND

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OBJECTIVES: To evaluate the cost-effectiveness of rituximab compared with TNF inhibitors for the treatment of RA patients following the failure of 2 DMARDs and 1 TNF inhibitor in Polish setting.

METHODS: A cost-utility approach was adopted, evaluating the total direct National Health Fund costs and QALYs. Baseline patient characteristics were based on the REFLEX and DANCER phase III trials. A micro-simulation model of 50 000 RA patients estimated lifetime Health Assessment Questionnaire (HAQ) progression, QALYs, and direct costs. The starting time-point of the model was the failure of two previous DMARDs. Two treatment options were compared. Upon treatment failure it was assumed patients would follow an identical lifetime treatment strategy consisting of: TRDM—infliximab, rituximab, leflunomide and palliative care or TTDM—infliximab, etanercept, leflunomide and palliative care. Rituximab was assumed to be administered every 9 months to responding patients. ACR response rates were taken from the phase III RCTs and adjusted for placebo response. The initial HAQ drop by ACR category and longterm HAQ progression were taken from the published literature.

RESULTS: Annual drug acquisition and administration costs were lower for TRDM compared to TTDM. Discounted total lifetime direct NHF costs were 216,460 pln and 233,734 pln for TRDM and TTDM groups respectively. Total QALYs were 29,952 and 25,854 for TRDM and TTDM, respectively. TRDM is a dominant therapy over TTDM.

CONCLUSIONS: The model predicted that TRDM dominated options for RA patients who have failed DMARD therapy, with higher estimated QALYs and lower NHF costs. The results will be different when different TNF inhibitors will be taken into account.

COST-EFFECTIVENESS ANALYSIS OF RBHMP-2 IN THE TREATMENT OF OPEN TIBIA FRACTURES IN THE NETHERLANDS

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OBJECTIVES: Recombinant human bone morphogenetic protein (rhBMP2) is a novel biologic therapy that promotes bone growth at the fracture site. We analyzed the cost-effectiveness of rhBMP-2 in open tibia fractures in The Netherlands.

METHODS: An economic model comparing rhBMP-2 plus standard of care -consisting of soft tissue management and intramedullary nailing- with standard of care alone. Clinical data were drawn from the BMP-2 Evaluation for Surgery in Tibial Trauma (BESTT) trial and treatment costs were taken from Dutch national sources.

RESULTS: rhBMP-2 resulted in an incremental cost of €5,708/QALY. When indirect costs were included, rhBMP-2 treatment for grade III open tibia fractures resulted in an incremental cost of €400 per patient and an ICER of €5,708/QALY.

CONCLUSIONS: From a payer’s perspective, rhBMP-2 is a cost-effective treatment option for grade III open tibia fractures for the Dutch health care system.

COST CONSEQUENCE ANALYSIS OF RITUXIMAB TREATMENT FOR RHEUMATOID ARTHRITIS IN ISRAEL

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OBJECTIVES: The aim of this analysis was to evaluate cost consequences of rituximab (RTX) treatment in rheumatoid arthritis (RA) from the payer perspective, in a phase IV open-label study conducted by Clalit Health Services, the largest Israeli HMO, in collaboration with Roche Pharmaceuticals.

METHODS: Patients with prior inadequate response to disease-
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modified anti-rheumatic drugs (DMARDs) or to both DMARDs and anti-TNFs received the RA RTX regimen (1g×2). The clinical outcome measure was moderate/good EULAR response at 24 weeks. Responding patients were eligible to re-treatment with RTX upon disease exacerbation after a minimum of 48 weeks. Costs of RTX treatment (drug acquisition & administration) were compared to average costs of the spared anti-TNFs (infliximab, etanercept or adalimumab) that would have been provided otherwise to each patient until RTX re-treatment or end of follow-up (FU). Prices are based on Israeli tariff before VAT. RESULTS: A total of 108 patients were enrolled. Sixty-seven DMARDs failures (62%), 41 DMARDs and anti-TNF failures (38%). At time of analysis (January 2008), 89 patients completed a minimum of 24 weeks follow-up (FU). Three dropped out in less than 24 weeks. Median FU: 75 weeks. 35/89 patients (39%) received re-treatment with RTX at a median of 63 weeks. A total of 37/89 patients (42%) were (at time of analysis) still on FU with no other treatment (median FU: 93wks). Average cost in Israel of anti-TNF treatment: NIS1955 (~$560/week Cost of RTX (2g): NIS34,448 (~$9,840). The total saving per patient (up to data cutoff) results in NIS85,258 (~$24,360). Overall cost saving during this period for 92 patients was NIS7,844 million (~$2,241,120). This sum is still an underestimation since 42% of the patients still require no further treatment, and continue to spare anti-TNF therapy. CONCLUSIONS: From the payer perspective, RTX treatment is a significant cost-saving alternative for patients with RA in the Israeli public health care setting.

COSTS AVOIDED BY DIAGNOSING FIBROMYALGIA IN SPANISH PATIENTS

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OBJECTIVES: To estimate the cost savings in outpatient medical resource use associated with diagnosing fibromyalgia during the four years after fibromyalgia diagnosis. METHODS: A questionnaire was created based on the medical resources use from 2260 patients diagnosed with FM between January 1998 and March 2003 in the General Practice Research Database (FF-GPRD) in United-Kingdom. Local experts were asked to compare their own clinical practice to UK prescriptions and resource use, over a period of four years before diagnosis to four plus years after diagnosis using one year cross-sections. Poisson loglinear regression models, published for the UK, allowed to estimate the medical resources consumed if no diagnosis had been established. The impact of diagnosis was evaluated for each of these medical resources. Costs were calculated by multiplying resource use with corresponding Spanish unit costs (~$; 2008; both public health care payer perspective and societal perspective including patient co-payments). RESULTS: This study confirms previous published results obtained for the UK and France: whereas costs gradually increase before diagnosis, a stagnation in costs increase occurs in the year after diagnosis, subsequently followed by a moderate decrease afterwards. The savings made as a result of fibromyalgia diagnosis add up to €421 per patient and per year from the health care system perspective and €432 from a societal point of view. Diagnostic tests, referrals to specialists, GP visits and drugs represent respectively 42%, 29%, 15% and 14% of these savings, CONCLUSIONS: Compared to a diagnosed fibromyalgia patient, a not diagnosed patient in Spain represents an incremental cost of €421 from the health care payer perspective.

COSTS AVOIDED BY DIAGNOSING FIBROMYALGIA IN FRENCH PATIENTS

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OBJECTIVES: To estimate the costs savings in outpatient medical resource use associated with diagnosing fibromyalgia during the four years after fibromyalgia diagnosis, METHODS: A French expert panel, involving 33 general practitioners (GPs) and 27 rheumatologists, was questioned in 2007 by means of a questionnaire describing the UK prescriptions registered in the General Practice Research Database between January 1998 and March 2003 (2260 fibromyalgia patients). Participating experts were asked to describe their clinical practice compared to the UK prescriptions in terms of diagnostic tests, drugs, consultations