Cost-effectiveness analysis of burning mouth syndrome therapy

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Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
The objective was to compare the cost-effectiveness of four therapies for patients with a diagnosis of idiopathic burning mouth syndrome. The authors concluded that clonazepam was the most cost-effective treatment. The study was not well reported, so it is not possible to fully assess the analysis and the authors’ conclusions.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
The objective was to compare the cost-effectiveness of four therapies for patients with a diagnosis of burning mouth syndrome, with unknown cause.

Interventions
The four therapies were oral amisulpride 50mg per day for eight weeks, oral paroxetine 20mg per day for eight weeks, oral sertraline 50mg per day for eight weeks, and clonazepam, sucked for three minutes and spat out, three times per day for 14 days.

Location/setting
France, Italy, Netherlands, Spain, and UK/primary care.

Methods
Analytical approach:
A decision tree was used to synthesise the data from the published literature. The time horizon was eight weeks. The authors stated that the perspective was that of the health care payer.

Effectiveness data:
Recent, relevant studies from the published literature were used to populate the model. The main clinical effectiveness estimates were the probabilities of a response to treatment (treatment being effective), of withdrawal from treatment, and of suffering adverse events.

Monetary benefit and utility valuations:
Not relevant.

Measure of benefit:
The primary clinical outcome was successful treatment for burning mouth syndrome. This was defined as no symptoms or significant amelioration of the complaint, without significant side-effects from the treatment.

Cost data:
The cost categories were the direct health care costs, consisting of drug costs and out-patient visits to a dentist. The sources for the resource use and prices were published literature, the Spanish drug directory, a pan-European micro-costing study, and market drug prices. The price year was 2010 and the costs were converted to Euros, at a specified exchange rate, where necessary. The costs were adjusted using the Spanish consumer price index, for Spain, or using a discount rate of 3% per year, for the other countries. The costs were presented separately for each country.

Analysis of uncertainty:
One-way and multi-way sensitivity analyses were conducted. Generic as well as brand name prices for drugs were analysed, and a time horizon of 14 days for all treatments was analysed.

**Results**
Topical clonazepam was the most effective of the drugs analysed, with a response probability of 0.6667, followed by amisulpride (0.5738), paroxetine (0.4503), and then sertraline (0.4426).

Topical clonazepam was the most cost-effective therapy, for burning mouth syndrome, in all five countries. It dominated all the other drugs, as it was more effective and less costly, in most countries.

**Authors' conclusions**
The authors concluded that clonazepam was the most cost-effective treatment for burning mouth syndrome.

**CRD commentary**

**Interventions:**
The description of the interventions was adequate. The authors reported some evidence to justify their selection of these treatments, but the evidence was not fully described and other important options could have been omitted.

**Effectiveness/benefits:**
The effectiveness data were poorly reported. The methods used to identify the relevant studies were not described, nor were the methods used to select these sources, making it difficult to assess if the best available evidence was included in the model. No details of the clinical studies were given, so no assessment of internal validity can be made.

**Costs:**
The included cost categories were relevant to the perspective, but it was not clear whether all the costs were included, such as those for the treatment of adverse events. The sources for the resource and cost data were provided, but the detail was insufficient to assess the quality of methods. The cost adjustment technique was reported, but further information was needed to assess whether or not correct methods were used. The authors made adjustments using the consumer price index, but the health care component of the consumer price index would have been more appropriate. The description of the cost data was adequate, but more detail would have been useful.

**Analysis and results:**
An incremental analysis was appropriate for comparing the relative cost-effectiveness of the alternative treatments, but the results were very poorly reported. The authors attempted to assess the impact of uncertainty on the results, but they did not fully consider the joint impact of multiple parameter uncertainty. The reporting of the analysis was poor, limiting the ability to compare the treatments. The authors discussed some of the limitations of their analysis, but the poor reporting makes any assessment of the validity of their analysis difficult.

**Concluding remarks:**
The study was not well reported, so it is not possible to fully assess the analysis and the authors’ conclusions.

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