Idiopathic anaphylaxis: long-term follow-up, cost, and outlook
Krasnick J, Patterson R, Harris K E

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.

Health technology
Oral corticosteroids, antihistamines and sympathomimetics in the treatment of patients with idiopathic anaphylaxis.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
Patients with idiopathic anaphylaxis.

Setting
Hospital. The economic study was carried out in Chicago, Illinois, USA.

Dates to which data relate
The data for the effectiveness analysis and resource use corresponded to the period between 1971 and 1990. The prices used were those prevailing in 1995.

Source of effectiveness data
Effectiveness data were derived from a single study.

Link between effectiveness and cost data
The costing was retrospectively undertaken on the same patient sample as that used for the effectiveness analysis.

Study sample
The charts of one hundred and sixty patients were initially available for study (from the charts of 225 patients). Twelve were excluded according to entry criteria, and eighty-seven patients could not be contacted. Sixty-one patients were finally included in the study with an average age of 39 years (range: 10 - 68 years). There were 11 patients in the IA-A-F and 15 in IA-G-F group. The number of patients in IA-A-I and IA-G-I groups were 15 and 20, respectively.

Study design
Retrospective before-and-after study. The study was carried out in a single centre. The duration of follow up ranged from 3.2 to 23.7 years after initial evaluation.
Analysis of effectiveness
The analysis of effectiveness was based on treatment completers only. The primary health outcome used was remission, which was defined as "no episodes of idiopathic anaphylaxis requiring prednisone or epinephrine for at least one year".

Effectiveness results
65% of patients with frequent episodes were in remission at final evaluation; 91% of infrequent-episode patients were in remission at the same time.

Clinical conclusions
The classification system and empiric treatment protocol adopted by the authors were proven to be effective in putting the disease into remission.

Measure of benefits used in the economic analysis
The health outcome used was remission, this being defined as "no episodes of idiopathic anaphylaxis requiring prednisone or epinephrine for at least one year”. The evaluation of health states was carried out by means of a telephone survey.

Direct costs
Costs were not discounted. Only broad measures of quantities were reported (number of emergency room evaluations, hospitalisations, intensive care unit (ICU) admissions). Operating costs (including among others nursing and physician fees and medications), and costs of complications were measured. The boundary adopted was the hospital. The estimation of quantities was based on actual data for study completers. The unit cost data were based on the actual costs and charges from the study institution's files. The quantities were measured between 1971 and 1990 and the unitary costs used were those costs recorded in the institution during 1995.

Indirect Costs
Not included.

Currency
US dollars ($).

Sensitivity analysis
Not included.

Estimated benefits used in the economic analysis
65% of patients with frequent episodes were in remission at final evaluation; 91% of infrequent-episode patients were in remission at the same time. The duration of benefits corresponded to a range of follow up from 3.2 years to 23.7 years.

Cost results
Before the introduction of the protocol, the total costs amounted to $225,000. After the introduction of the protocol, the estimated costs were $40,260. The duration of costs after the protocol was introduced ranged from 3.2 years to 23.7 years.

Synthesis of costs and benefits
Costs and benefits were not combined.

**Authors' conclusions**
The "classification system and empiric treatment protocol have proven to be both cost-effective and efficient in putting the disease into remission... A comprehensive program of education, available physicians, and appropriate therapy with prednisone, antihistamines, and sympathomimetics has proven to be effective both in reducing episodes of idiopathic anaphylaxis and in improving the quality of life for the patients, but it also decreases the amount of money spent on emergency room visits and hospitalizations".

**CRD COMMENTARY - Selection of comparators**
A justification was given by the authors for the choice of comparator. The authors argued that they did not use a placebo group as the comparator since they felt "that withholding effective medications for a life-threatening disease would be unethical".

**Validity of estimate of measure of benefit**
The internal validity of the effectiveness results may be weakened by the lack of randomisation and a control group.

**Validity of estimate of costs**
Quantities were not fully reported separately from prices and few details of methods of quantities and cost estimation were given; it is therefore not possible to assess whether or not important cost items were omitted.

**Other issues**
The issue of generalisability to other settings or countries was not addressed and no appropriate comparisons were made with other studies. The results were not presented selectively.

Note by CRD Research Fellow: Correspondence with the authors indicates that, subsequent to this study, a book (Idiopathic Anaphylaxis, edited by Patterson R, (1997), Oceanside Publications Inc, Providence, Rhode Island) has been published which updates the findings of the present study. The reader is referred to this source for further details.

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