Cost-effectiveness of splenectomy versus intravenous gamma globulin in treatment of chronic immune thrombocytopenic purpura in childhood

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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.

Health technology
Intravenous gamma-globulin (IVGG) infusions.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
Cohort of 10 year-olds.

Setting
The study was carried out in the USA.

Dates to which data relate
Price related to 1986.

Source of effectiveness data
Review of studies.

Modelling
Epidemiological cohort model (model of survival and disease).

Measure of benefits used in the economic analysis
Lives saved and life-years gained.

Direct costs
Direct costs were to the health service and included: IVGG, splenectomy, physicians visits, hospitalisation, platelet count, and penicillin. Price information related to 1986.

Currency
US dollars ($). In the DH Register of Cost-effectiveness Studies, the original results were converted to UK pounds.
sterling () using GDP purchasing power parities and reflated to 1991 using the NHS pay and prices index.

**Sensitivity analysis**
Sensitivity analysis was carried out using the method of single parameter variation.

**Synthesis of costs and benefits**
Outcome duration was 10 years. Cost duration was 10 years. Incremental cost per life saved: was 4.47 million (costs discounted at 5%). Incremental cost per life-year gained: was 6380 (costs discounted at 5%, benefits not discounted). The range of incremental cost per life saved: cost were negative and benefit were positive for the lowest values, and 11.6 million for the highest value. Sensitive parameters were IVGG efficacy; postsplenectomy sepsis rate; and cost of IVGG.

**CRD Commentary**
(This commentary was not written by CRD, but by the authors of the DH Register.) 1) No controlled clinical trials have been performed to establish the effectiveness of IVGG therapy relatively to splenectomy or to no intervention. 2) The quality of evidence and the findings are of uncertain value. 3) Children unresponsive to the initial therapy received the alternative therapy. 4) The authors did not address the necessity for intervening at all. 5) The range in the sensitivity analysis is such that no conclusion can be reached about the two modalities.

**Bibliographic details**

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**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Adolescent; Age Factors; Child; Child, Preschool; Cost-Benefit Analysis; Humans; Injections, Intravenous; Markov Chains; Probability; Prognosis; Purpura, Thrombocytopenic /economics /surgery /therapy; Splenectomy /economics; gamma-Globulins /administration & dosage /therapeutic use

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