Laparoscopic splenectomy for ITP: the gold standard

Friedman R L, Fallas M J, Carroll B J, Hiatt J R, Phillips E H

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
Laparoscopic splenectomy (LS) for idiopathic thrombocytopenic purpura (ITP).

Type of intervention
Elective treatment.

Economic study type
Cost-effectiveness analysis.

Study population
 Patients undergoing splenectomy for ITP.

Setting
Cedars-Sinai (large private metropolitan teaching hospital) Medical Centre, USA.

Dates to which data relate
Effectiveness and cost data were collected between March 1991 and August 1995.

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

Link between effectiveness and cost data
Costs were recorded concurrently in the LS group and compared with the OS group.

Study sample
49 consecutive patients undergoing splenectomy for ITP (31 LS and 18 OS). Age, sex, comorbidity, and spleen size were similar in both groups.

Study design
Retrospective case series.

Analysis of effectiveness
The analysis of effectiveness was based on treatment completers only. The main health outcomes used in the analysis were: success rate for LS, platelet response, identification of accessory spleens, days to resumption of oral liquids, major
Effectiveness results
LS was successful in 94% of patients in whom it was attempted. Patients tolerated an oral diet 1.2 (+/- 0.5) days after LS and 3.2 (+/- 0.7) after OS (p<0.001). In the LS group, six patients (21%) had accessory spleens identified and removed, compared with 2 patients (11%) in the OS group. Platelet counts did not respond in 2 patients (7%) in the LS group, but no accessory spleens were identified by nuclear scan. One major complication occurred in the LS group. There were no cases of splenosis or mortality in either group.

Clinical conclusions
The magnified laparoscopic image of the hilar and short gastric vessels allows for safe vascular dissection and ligation.

Measure of benefits used in the economic analysis
The measures of benefits were: success rate for LS, platelet response, identification of accessory spleens, days to resumption of oral liquids, major complications and mortality.

Direct costs
Direct health service costs were considered. Hospital costs were obtained from the Resource Management Department at Cedars-Sinai Medical Centre on a per patient basis. Operative costs included operating room and recovery room time, supplies, anaesthesia services, and respiratory services. Professional surgical fees were excluded.

Statistical analysis of costs
Statistical analysis was performed by unpaired test, and a p value <0.05 was accepted as significant.

Indirect Costs
Not considered.

Currency
US dollars ($).

Estimated benefits used in the economic analysis
LS was successful in 94% of patients in whom it was attempted. Patients tolerated an oral diet 1.2 (+/- 0.5) days after LS and 3.2 (+/- 0.7) after OS (p<0.001). In the LS group, six patients (21%) had accessory spleens identified and removed, compared with 2 patients (11%) in the OS group. Platelet counts did not respond in 2 patients (7%) in the LS group, but no accessory spleens were identified by nuclear scan. One major complication occurred in the LS group. There were no cases of splenosis or mortality in either group.

Cost results
Costs were similar in both groups. In the LS group, direct costs were lower, $5,509 (+/- 3,636) versus $9,031 (+/- 12,752), and operating room costs were higher, $2,762 (+/- 418) versus $1,859 (+/- 380) but neither difference was statistically significant.

Synthesis of costs and benefits
Costs and benefits were not combined.
Authors' conclusions
LS is a safe and effective treatment for ITP with significantly shorter postoperative hospital stay than OS (2.9 +/- 1.3 days versus 6.9 +/- 3.0 days).

CRD COMMENTARY - Selection of comparators
The reason for the choice of the comparator is clear, as this was a widely used alternative procedure in the authors' setting. You, as a database user, should consider if this applies to your own setting.

Validity of estimate of measure of benefit
Data have not been used selectively to prove a particular point.

Validity of estimate of costs
Resource quantities were not reported separately from the prices. Adequate details of methods of quantity/cost estimation were given and no important cost items were omitted.

Other issues
Power calculations relating to the sample size would have been welcome, however, appropriate comparisons were made with other similar studies and results were not presented selectively. Costs may not be generalisable to other settings/countries.

Source of funding
None stated.

Bibliographic details

Indexing Status
Subject indexing assigned by NLM

MeSH
Adolescent; Adult; Aged; Aged, 80 and over; Comparative Study; Female; Humans; Laparoscopy; Length of Stay; Male; Middle Aged; Purpura, Thrombocytopenic, Idiopathic /surgery; Retrospective Studies; Splenectomy /methods; Treatment Outcome

AccessionNumber
21996000963

Date bibliographic record published
31/01/1999

Date abstract record published
31/01/1999