Quality of life improvement following parathyroid surgery: a two-year review from a single surgical centre

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Background:

Parathyroidectomy offers definitive treatment for primary hyperparathyroidism, for symptomatic and asymptomatic patients, to prevent future complications of the disease.

Objectives:

Evaluate quality of life changes following parathyroidectomy.

Methods:

Retrospective study within a single centre using the Glasgow Benefit Inventory (GBI) to assess quality of life changes following parathyroidectomy for primary hyperparathyroidism.

Results:

42 patients were assessed using the validated GBI. 23/42 patients were symptomatic and in 17/42, hypercalcaemia was an incidental finding, and the patients were asymptomatic. GBI analysis identified that 27 patients (64%) expressed a benefit (rated as score >0), 8 (19%) had no benefit (score = 0) and 6 (14%) experienced negative effects (score <0) post-operatively. The mean GBI score was 21.0 (95% confidence interval: 13.0 to 29.0). Of the incidental, asymptomatic patients, 47% experienced an overall benefit.

6 patients experienced an overall negative effect; 3 were asymptomatic pre-operatively, one had a co-existing recurrent laryngeal nerve palsy from previous subtotal thyroidectomy for Graves' disease. There was no clear explanation as to the worse outcome in the other two patients.

For the remaining pre-operatively symptomatic patients, there were identifiable reasons that may have contributed to their negative score, including, post operative hypocalcaemia, low vitamin D levels, and an episode of panproctocolitis. We had no post-operative complications of recurrent laryngeal nerve palsy or haematoma.

Conclusions:

- Parathyroidectomy offers considerable positive patient-perceived benefit for both symptomatic **and** asymptomatic patients (60% experienced an overall benefit).
- Patient-reported outcome measures are increasingly recognised as an important adjunctive tool in the assessment of surgical outcomes.
- Our GBI results (mean 19.1 {95% CI: 12.8 to 25.4}) are comparable with GBI scores for mastoid surgery (14.2), sialendoscopy (13.4), tonsillectomy (15.8 cold steel and 11.6 hot).
- Surgical aims are correction of hypercalcaemia and to improve patients' overall quality of life.
- Parathyroidectomy is a safe operation in appropriately selected patients at high volume/specialist centres.

Table 1: Descriptive statistics for the GBI overall score and the 3 subdomains: General, Social and Physical.

Count	45			
Female	34			
Male	11			
	OVERALL	General	Social	Physical
Mean	19.07	21.76	17.04	12.18
Median	19.4	20.8	0	0
Standard Deviation	21.48	25.99	25.98	24.23
Standard Error	3.2	3.87	3.87	3.61
Range	91.5	124.9	100	100
Minimum	-13.8	-33.3	0	-33.3
Maximum	77.7	91.6	100	66.7
Upper 95% CI	25.35	29.35	24.63	19.26
Lower 95% CI	12.8	14.16	9.44	5.1
Kurtosis	0.12	0.18	2.33	0.01
Skewness	0.78	0.36	1.69	0.72

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