Is subtotal thyroidectomy for benign nodular goitre a suitable surgery in the developing world?

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NHS
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NHS Trust

Background

In the developed world, there is a change from subtotal to total thyroidectomy for benign nodular goitres due to the availability of life-long thyroxine and calcium replacement therapy, the difficulties in estimating amount of residual functioning thyroid tissue, and the risks of recurrent goitre, thyrotoxicosis, and incidental carcinoma.

In the developing world, the availability of life-long supply of thyroxine and calcium replacement therapy cannot be guaranteed.

Many surgeons would therefore prefer hemithyroidectomy or subtotal thyroidectomy in order to preserve some functioning thyroid and parathyroid tissue.

Method

A retrospective survey of the demographic details and complication rates of 432 patients who underwent surgery on the Mercy Ships, West Africa in a 15 year period was carried out.

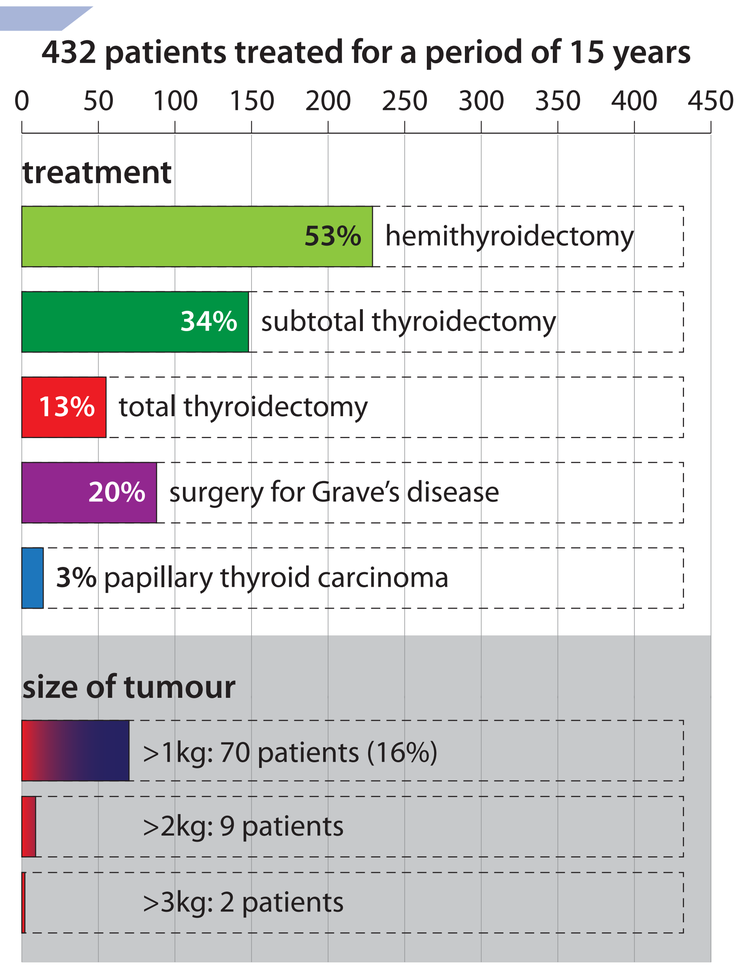
Results

Over half (53 %, 229) had hemithyroidectomy, followed by subtotal (34 %, 148) and total (13 %, 55) thyroidectomy.

20% (88) had surgery for Grave's disease and 14 (3%) for papillary thyroid carcinoma.

70 (16%) patients had goitres weighted over 1 kg, 9 over 2 kg and 2 over 3 kg.

Postoperative complications include:
13(3%) acute haematoma, 3 (0.7%) permanent vocal cord changes, 2 (0.4%) had permanent hypoparathyroidism.



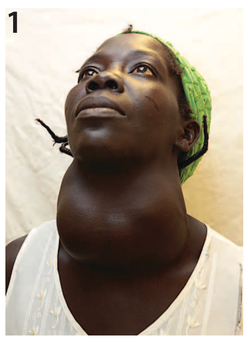
Conclusion

Extensive goitres removed in West Africa is due to lack of access to health care and education.

Hemithyroidectomy or subtotal thyroidectomy are preferred surgical option because of uncertain supply and affordability of thyroxine for West African population groups, especially for rural patients.

This also reduce the small risks of bilateral recurrent laryngeal nerve palsy and permanent hypoparathyroidism associated with total thyroidectomy.

1. 42yr Togolese woman with nearly 1kg goitre.
2. After subtotal thyroidectomy (with surgeon LC and his daughter KC).



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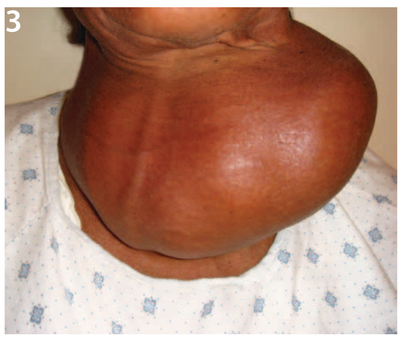
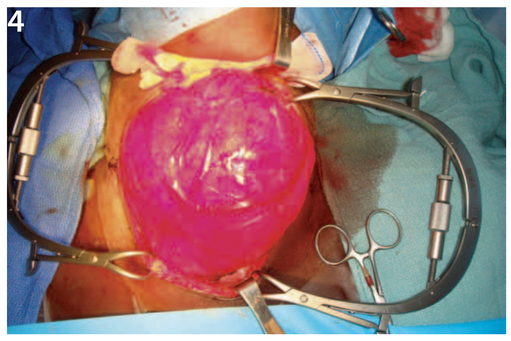
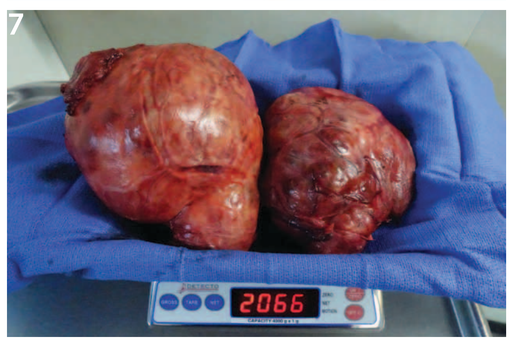
3. 61yr Ghanaian woman with over 1kg goitre.
4. Subtotal thyroidectomy using 2 Joll's retractors for access.
5. After surgery giving her testimony

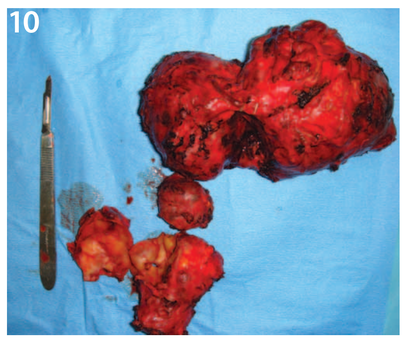




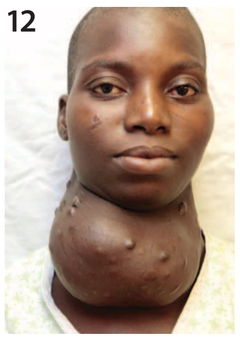
6. 62yr Beninese women with extensive goitre.
7. Subtotal thyroidectomy weighted over 2kg
8. After surgery without complication

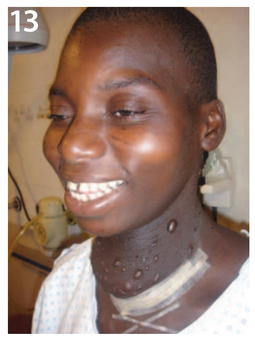


9. 52yr Ghanaian woman with papillary thyroid carcinoma.
10. Thyroidectomy and neck dissection.
11. 1 week after surgery without complication.



12. 32yr Togolese woman with goitre received daily stab wounds inflicted by tribal medicine man.
13. After subtotal thyroidectomy with no complication.





14. 72yr Congolese woman with extensive goitre.
15. 2 weeks after subtotal thyroidectomy removing over 3kg of goitre with no complication

16. 35yr Cameroonian woman with exophytic goitre.
17. Retrotracheal and retroesopharygeal goitre on CT scan.
18. Subtotal thyroidectomy removing over 2kg of goitre.
19. 2 weeks after surgery with no complicationof goitre.