CASE REPORT

Thyroidectomy under local anaesthesia: experience with giant goitres

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Introduction

The first successful thyroidectomy on record appears to have been performed in about 952 A.D. in Zahra, an Arab city of Spain by a Moorish physician, Albucassis. The extirpation of thyroid gland for goiter typifies, perhaps better than any operation, the supreme triumph of the surgeon’s art. More than 80% of thyroid swellings are operated upon primarily for cosmetic reasons.

Thyroidectomy is usually performed with general endotracheal anaesthesia. However, in many developing countries, because of the severe shortage of anaesthetists, anaesthetic drugs and equipment it can be done under local anaesthesia with acceptable results. Giant goiter is an enlargement of the thyroid gland not less than 10g/kg body weight.

Previous reports of thyroidectomy under local anaesthesia were not for giant goiters. Ajao in 1979 wrote: “up to a certain limit the more prominent the thyroid gland is, the easier it is to remove under local anaesthesis”. This is a prospective study of thyroidectomy done for giant goiters in a semi-urban hospital (Nakowa Hospital, Yauri, Kebbi State, Nigeria). The aim of this study was to determine the feasibility, safety, effectiveness and acceptability of local anaesthesia for thyroidectomy. It was also meant to assess any difficulty or complication specifically associated with the procedure.

Materials and methods

All cases of thyroidectomy done for giant goiters under local anaesthesia in Nakowa Hospital, Yauri between January 1990 and December 1994 were included in this prospective study. Only cases of simple goiter without retrosternal extension were included. Toxic goiters and malignant goiters were excluded. After giving informed consent, the patients received premedication of intramuscular pentazocine and diazepam. They had an intravenous infusion in place and received zocine and diazepam. They had an intravenous infusion in place and an intravenous infusion was continued 6 hours after the operation and patients had postoperative analgesia. One patient had a transient hoarseness of the voice and recovered 6 hours postoperatively.

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Results

Over a period of five years (1990-1994), ten patients with giant goiters who gave consent for their thyroidectomy to be done under local anaesthesia were included in this study. One of them had to be augmented using ketamine; the remaining 9 were done under local anaesthesia. They were all females aged between 40 and 62 years (mean 50.8 years). Table 1 shows the clinical details. Figs 1 and 2 show one of the patients pre- and post-op. The weight of the gland removed ranged from 700g to 3,500g and the weight of the patients ranged from 60 to 72kg. They all tolerated subtotal thyroidectomy under local anaesthesia satisfactorily. One of them had to be converted to general anaesthesia hence only nine form the basis of this communication.

Histologically all of them were colloid goitres.
Discussion

Simple non-toxic goitre constitutes the commonest type of thyroid gland disease. In 1959 Thomas published the first report from Ibadan on “The large Goitres”. Over 60% of his 100 cases had “massive goiters”. Many years later, Olurin in the same institution in Ibadan published the findings of a prospective study that identified the clinico-pathophysiological problems of surgically managing patients with simple goitre not less than 10gm per kilogram body weight. This he called the Simple Giant Goitre Syndrome (SGGS). These patients have simple goiters weighing not less than 10gm/kilo body weight, with a history usually of not less than 10 years duration and predominantly in peasant woman of about 41 to 50 years of age who live in rural goitre endemic area. Thyroidectomy is usually performed with general endotracheal anaesthesia. In most cases this reflects both surgeon’s preference and the patient’s choice. However, local and regional anaesthesia remains useful alternatives for selected patients. This is particularly so, in many developing countries because of the severe shortage of anaesthetists, anaesthetic drugs and equipment. Previous reports of thyroidectomy under local anaesthesia were not for giant goiters. Ajao in his series of thyroidectomy under local anaesthesia wrote: “... Up to a certain limit the more prominent the thyroid gland is, the easier it is to remove under local anaesthesia”. This present study reports nine cases of giant goitre that had successful subtotal thyroidectomy under local anaesthesia in a Semi-urban Community (Yelwa-Yauri) in Kebbi State of Northern Nigeria. It highlights the technique of local infiltration and some areas of difficulty as well as the extra care required when doing thyroidectomy under local anaesthesia. With meticulous and careful dissection, bleeding will be minimized and the need for blood transfusion avoided. There must be less traction on the trachea during manipulation to avoid excessive coughing and laryngeal spasm. Sometimes infiltration of the pretracheal fascia with local anaesthesia before mobilization of the thyroid gland could be useful.

Surgeons in training in developing countries should be encouraged to have adequate exposure and training in local anaesthesia and regional techniques. This is to avoid a situation where surgeons in peripheral hospitals are reluctant to perform thyroidectomy, with the excuse that there is no anaesthetist. These patients will then be left with these alternatives: (a) to travel over long distances, in many cases, to teaching hospitals where the waiting period may be over six months (b) to live with the social stigma if the patient cannot afford the expenses of traveling to a teaching hospital. This procedure is safe, simple, acceptable and cost-effective in our experience. The more prominent the thyroid gland is, the easier it is to remove under local anaesthesia provided the surgeon is meticulous, and understands that with giant goiters, the normal anatomy is distorted and numerous new vascular channels are always present. This procedure is recommended for carefully selected patients to be handled by experienced surgeons in peripheral hospitals.

References