

## 4<sup>th</sup> International Conference & Exhibition on **Surgery**

October 05-07, 2015 Dubai, UAE

### **Trans-axillary thyroid surgery robot assisted multicentre study of benefits and complications in short term**

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**Introduction:** The trans-axillary thyroid surgery robot assisted, developed in South Korea, is an alternative to cervicotomy with great cosmetic benefit. Its distribution in Europe and US remains limited to a few centers experts, mainly because of its technical difficulty. Most studies are Asian with sometimes conflicting results and no multicenter European study was available.

**Aim:** Our aim was to evaluate the functional results, aesthetic and oncological and identify the specific complications of trans-axillary robot assisted thyroid surgery.

**Materials & Methods:** Retrospective multicenter study of patients undergoing partial or total thyroidectomy in Lille, Nancy and Geneva with a postoperative follow-up of at least 6 months. Pre- and intraoperative data were extracted from medical records and follow-up data were collected by contacting every patient by phone.

**Results:** 98 interventions were carried out from January 2010 to August 2014, in 93 consecutive patients: 47 lobectomies including 5 totalization of thyroidectomy and 51 total thyroidectomy for suspected thyroid nodules in 69 patients, 15 toxic nodules or goiter, 8 symptomatic goiter and Graves' disease in 6 patients. The operating averaging times were  $175 \pm 57$  minutes for lobectomies and  $195 \pm 39$  minutes for total thyroidectomy. The patients evaluated the quality of scar as 7.5 / 10. There was no serious complication, there was 9.2% recurrent paralysis including one definitive and 10.2% of hypocalcemia including 1 persistent hypocalcemia. Postoperative pain was moderate with EVA score of less than 4/10 in 58.2% (n=57) and controlled by level I and II of analgesics allowing one day surgery for 4 patients. At 6 months, the rate of mechanical pain was 6.1% (n=6), the rate of cervical adhesions was 19.4% (n=19) and the rate of pre-pectoral dysesthesia was 51% (n=50). These dysesthesia were associated with functional impairment and neuropathic pain in 5.1% (n=5) of patients, necessitating specialized consultation. These symptoms have improved under short treatment by gabapentin and motor physical therapy. Patients whose pathology revealed the presence of cancer, had a mean of follow-up of  $25 \pm 11$  months. The patients who received their complementary therapy-I 131, the thyroglobulins were below 1 ng / ml ( $0.1 \pm 0.3$  [0 to 0.4]) and all scans of reevaluation with 5mCi were normal except two showing an ordinary fixation without corresponding thyroid ultrasound residue.

**Conclusion:** This study shows the results of the trans-axillary thyroid surgery in its learning curve for European patients. This approach allows the absence of cervical scar but it is associated with specific complications related to subcutaneous dissection path.

### **Biography**

Robert Caiazzo is Professor of Surgery in the Faculty of Medicine at the University of Lille II, Lille, France. He is the member of the Department of General and Endocrine Surgery at Lille University Hospital. His research is devoted to the surgical treatment of endocrine and metabolic disease and focused on metabolic surgery for type 2 diabetes. He has authored or co-authored 25 papers in reputed journals. He is also the Principal Investigator of several ongoing clinical trials of bariatric surgery in Lille.

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### **Notes:**