



CYSTS OF THE THYROGLOSSAL TRACT IN GUINEAN CHILDREN

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ABSTRACT

Introduction: Thyroglossal cysts (KTT) are congenital malformations due to lack of resorption of the trunk connecting the base of the tongue to the Lalouette pyramid.

Objective: To analyze the epidemiological, clinical and therapeutic profile of thyroglossal cysts in Guinea.

Methodology: From 2010 to 2016, we conducted this retrospective study, involving 18 cases of KTT, operated in the ENT department of Donka University Hospital.

Results: The average age was 05 years, with extreme ages of 04 years and 13 years, a sex ratio of 1.18. The history of superinfection of KTT was noted in 58.82% of cases, and that of surgical intervention for KTT in 71.17% of cases. The clinical revelation was a cyst in 58.82%, and a fistula in 41.17%. Cervical ultrasound was performed in all our patients. All cases were operated by the Sistrunk technique, with excision of the body of the hyoid bone. The pathological study revealed no case of malignant degeneration. The immediate outcome was favorable in 14 cases, with 3 cases of postoperative infection, with no recurrence of KTT following a 16-month follow-up.

Conclusion: KTT can occur at any age, especially in children. It must be mentioned before any mobile cervical mass when swallowing and protraction of the tongue. The Sistrunk technique with resection of the body of the hyoid bone, is the treatment of reference, which made it possible to decrease the rate of the recurrences.

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INTRODUCTION

Thyroglossal tract (KTT) cysts are congenital malformations due to lack of resorption of the embryonic tract, connecting the base of the tongue to the Lalouette pyramid (Sari, 2007 and Foley, 2006). They represent 40% of congenital cervical malformations (Sari, 2007). KTT can occur at any age, especially in children, in whom it represents the second cause of cervical swelling after adenitis (Sari, 2007, Foley, 2006 and Ghfir, 2010), and must be evoked in front of any cervical mass, median, anterior, mobile to swallowing and protraction of the tongue.

The Sistrunk technique with resection of the body of the hyoid bone and a collar of the base of the tongue, is the treatment of reference, it has reduced the rate of recurrence (Mondin, 2008). The purpose of our work is to define the epidemiological, clinical, and therapeutic profile of this pathology, and to evaluate its risk of recurrence.

MATERIAL AND METHODS

Our work is a retrospective study performed in the ENT department of the Donka University Hospital on cysts and fistulas of the thyroglossal tract during a period of 08 years, from January 1, 2009 to December 31, 2016. It involved medical records of 17 patients, all operated on for cysts and fistulas of the thyroglossal tract.

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(a) Picture of Facial Cyst in Surgical Position



(b) Picture of Profile Cyst in Surgical Position



(c) : Thyroglossal tract cyst

Figure 1.

The data collection was carried out using an exploitation sheet. The paraclinical assessment was essentially represented by cervical ultrasound. The histopathological study was done, systematically for all the operative parts.

RESULTS

Over a period of 7 years, a hospital frequency of 0.38%. The study population counted 14 boys versus 3 women with a sex ratio of 4.66. The average age was 08, with extreme ages of 04 and 13 years. The majority of our patients, 9 in total (52.94%) were under the age of 15, of whom 47.05% were under the age of 8 years. A history of surgery for KTT was found in 7 cases (71.17%), and superinfection of KTT in 10 cases (58.82%). We did not find any family history of KTT or congenital malformations.

The clinical revelation was a cyst in 10 patients (58.82%), in the form of a firm rounded cervical mass, regular, and of size generally less than or equal to 2 cm in 11 cases (64.70%) and 3 cases superinfection. Fistula was the mode of revelation in 7 cases (41.17%). Three cases (17.64%) of discomfort with swallowing, or with the mobilization of the tongue were noted. The lesion was mobile with swallowing and protraction of the tongue in all cases, and fixed on the skin in 55 cases (29.41%), with presence of a cord palpable in 11.76% of cases. Cervical ultrasound was performed in all our patients, it allowed diagnostic confirmation by showing anechoic, homogeneous formation related to the hyoid bone, in case of KTT and also allowed to eliminate an ectopic goiter in all patients. Preoperative antibiotic therapy was prescribed in all our patients, who had episodes of superinfection of the cyst. All our patients were operated under general anesthesia and

tracheal intubation, according to the Sistrunk technique with excision of the entire tract to its basilingual origin where a muscle cone was excised with excision of the body of the hyoid bone. Intraoperatively, we objectified a single cord in all cases. Aspiratory drainage was performed in 6 patients (35.29%) and was withdrawn after 48 to 72 hours. The anatomopathological study of the operative specimen performed systematically confirmed the diagnosis in all cases. The presence of thyroid tissue was noted in only 6 cases (35.29%). No case of malignant degeneration was found. Postoperative antibiotic therapy was initiated orally in all patients, usually amoxicillin / clavulanic acid at a dose of 80 mg / day for 6 days. The average duration of hospitalization was 1.2 days with extremes of 1 day and 4 days. Immediate postoperative outcomes were generally simple. Postoperative infection has been reported in two patients who have progressed well on antibiotic therapy and one case of hematoma, which would have surgical evacuation. No cases of hematoma or recurrence were noted in the long term, with a mean follow-up of 32 months.

DISCUSSION

The cyst of the thyroglossal tract (KTT), is a congenital malformation, due to a lack of resorption of the embryonic tract, connecting the base of the tongue to the pyramid of the larynx (Sarim, 2007 and Foley, 2006). It is the most common dysembryoplasia in the head and neck (Charrier, 2008) accounting for 40% of congenital cervical malformations (Sari, 2007). These cysts can occur at any age, mostly in children under 10 years (Foley, 2006; Mondin, 2008 and Hsieh, 2003). This is consistent with the results of our series which was 36.2% of cervicofacial malformations. Their hospital frequency is low 0.38% and 1.92% respectively of consultations and surgeries. The distribution of the disease according to sex varies according to the authors (Ghfir, 2010; Mondin, 2008 and Charrier, 2008). Some cases of family presentation of the disease are described (Mondin, 2008). Clinically, it is a rounded anterior cervical nodule, of firm consistency, ascending during swallowing and protrusion of the tongue, and mobile in both directions, transverse and vertical, often of median, sometimes paramedian (10 to 24%), usually on the left (Mondin, 2008; Charrier, 2008 and Hsieh, 2002). Its size is variable, ranging from that of a hazelnut to that of a pigeon egg (Picture). Swallowing discomfort and acute respiratory distress can rarely be associated (Mondin, 2008). The localization in height is variable, often under hyoid, inter thyro-hyoid (Sari, 2007; Ghfir, 2010 and Brousseau, 2003). Subhyoidal localization was found in 14 (82.35%) of our patients. Other unusual localizations are described by the authors: intra-lingual, intrathyroid, and lateral (Mondin, 2008 and Charrier, 2008). Thyroglossal tract fistula represents 10 to 41% of cases. It is always secondary, either to an episode of superinfection or to an incomplete procedure (Charrier, 2008 and Brousseau, 2006).

We found 7 patients with a history of cyst surgery. The clinical examination, completed by ultrasound, generally allows the diagnosis of KTT (Mondin, 2008). Pen exploration in this case is irrelevant. Thorough examination of the thyroid gland is of considerable importance. Complementary exams are of interest in difficult or doubtful forms. Cervical ultrasound is the most indispensable examination, which is generally sufficient for the diagnosis, showing an anechoic, homogeneous and well-limited image. It essentially eliminates thyroid ectopy, with

100% sensitivity, to avoid postoperative hypo-thyroidism related to a diagnostic error. It also makes it possible to suspect a malignant degeneration, in front of the heterogeneous aspect, of irregular contours of the cyst, and to study the relations with the neighboring structures (Mondin, 2008; Leung, 1995; Ahuja, 2005). Fistulography makes it possible to detect possible secondary canaliculi, source of eventual recurrences (Nicollas, 2006). The spontaneous evolution can be done towards three complications: the superinfection, the fistulization and the malignant degeneration. Superinfection of the cyst can occur in 16 to 47%, it can evolve by repetitive episodes leading to its fistulization, either to the skin, most often, or to the pharynx (Mondin, 2008 and Shahin, 2005). Malignant degeneration is rare, its prevalence is about 1.5% of cysts (Belnoue, 2004). Its diagnosis is often established by the anatomopathological study of the operative specimen, the extemporaneous examination and the cytopathology do not seem of great interest (Türkyilmaz, 2004). The papillary form is the most widespread, it is found in about 83% of cases. The other forms are represented by mixed carcinomas (papillo-follicular), squamous cell carcinomas, and follicular and anaplastic carcinomas. No case of medullary carcinoma is described in the literature (Ghfir, 2010 and Charrier, 2008). The treatment of KTT is surgical. The Sistrunk technique is the reference, it reduces the rate of recurrence. It takes place, usually under general anesthesia. The incision is horizontal, well centered on midline, 1 cm below the body of the hyoid bone. In case of fistula, this incision will circumscribe the fistulous orifice in orange quarter. The KTT is excised en bloc with the body of the hyoid bone, as well as the entire tract to its lingual origin, with excision of a muscular cone of the tongue base (Mondin, 2008; Charrier, 2008; Türkyilmaz, 2004 and Nicollas, 2006).

An aspirating or non-aspirating drain is left under the aponeurotic for a duration of 48 hours. The combination Amoxicillin / Clavulanic acid and cephalosporins 2nd or 3rd generation are the most used molecules. The duration of hospitalization varies from 1 to 4 days following the series (Mondin, 2008; Rogério, 2002 and Türkyilmaz, 2013). In case of an episode of acute superinfection, the surgical cure of the KTT will be postponed, after healing under antibiotic therapy, sometimes associated with surgical drainage if there is a collected abscess. Pathological examination was not systematic. Conduct in the face of a malignant degeneration of the KTT is still subject to several controversies. Some authors consider that a surgical cure according to the method of Sistrunk is largely sufficient, but according to recent publications, it is recommended to complete the initial surgical procedure by a total thyroidectomy, in case of individualization of a histological type vesicular or epidermoid, in cases of tumoral invasion of the cyst wall, in the presence of a thyroid lesion, and whenever there is doubt about the patient's ability to adhere to regular medical follow-up (Mondin, 2008 and Belnoue, 2004). Postoperative infection was a generally minor complication, well controlled by medical treatment. Hypothyroidism is a major complication, should no longer be seen with systematic preoperative research of an ectopic thyroid (Ghfir, 2010). Other more rare complications are described: laryngeal wounds, salivary fistulas (Mondin, 2008). Recurrence is a real problem in KTT surgery. They are found in 4 to 6% of cases, often early, in the first year after surgery. They can occur even after a well-performed surgical technique (Mondin, 2008; Türkyilmaz, 2004 and Ducic, 1998). In our study, no cases of recurrence or degeneration were noted after Sistrunk's technique. In total, to

limit the number of recurrences, it is necessary to perform a complete surgery, with extensive excision, carrying the body of the hyoid bone, going back to the foramen cecum.

Conclusion

The KTT is a relatively rare pathology in ENT, especially interesting the child at the first. The study of our series of 17 cases associated with a literature review confirms the interest of the clinic in the diagnosis, the place of the ultrasound which is sufficient for the assessment, in the majority of the cases, the therapeutic attitude currently adopted always follows the Sistrunk technique, to optimally prevent the risk of recurrence and the histological control of the surgical specimen is indispensable, in search of a malignant degeneration.

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