# Outpatient management of multiple trichelemmal cysts in a non-hospital setting: Case report

HON Martins<sup>1</sup>, RG Bortoluci<sup>1</sup>, CG Paula<sup>1</sup>, LS Facciolo<sup>1</sup>, JG Ventureli Neto<sup>1</sup>, LO Del Lama, FC Ferreira Pinto<sup>2</sup>

### **Abstract**

**Aim:** This report describes the case of a 49-year-old woman treated at a non-hospital outpatient clinic with diffuse nodules on her scalp for two years

**Methods:** Sequential excision of the nodules was performed for diagnosis, treatment and aesthetic and functional improvement.

**Results.** Twelve nodular lesions were removed, with surgical procedures performed every seven days, over the course of five weeks.

Conclusion: The case reinforces the importance of non-hospital outpatient care in the healthcare network and its potential for resolving problems and improving access to healthcare, which directly benefits the patient and the public healthcare system.

Keywords: Epidermal Cyst; Ambulatory Care; Pathology; Ambulatory Surgical Procedures.

Authors' Addresses: <sup>1</sup>Medical Course of Barão de Mauá University Center. Ribeirão Preto, São Paulo, Brazil.

Corresponding Author: F.C. Ferreira Pinto. <sup>2</sup> Barão de Mauá University Center. Email: fernando.cesar@baraodemaua.br

#### Introduction

Cystic epithelial lesions (CELs) are commonly found in various parts of the body, characterized as closed lesions, reaching the dermis or subcutaneous cellular tissue, containing fluid or semisolid content. The diagnosis of CELs is basically clinical, according to the findings and symptoms, and the need for additional investigation is infrequent [1, 2].

Among CELs, there is the trichilemmal cyst (TC) or pilar cyst, a benign epithelial cystic tumor, derived from hair in the growth phase. This lesion has a good prognosis, even in the presence of complications such as infections, representing 20% of all CELs [3]. The scientific literature indicates that the formation of the hereditary trichilemmal cyst is associated with a specific genetic mechanism, involving the phospholipase C delta 1 gene (PLCD1). Studies indicate that these cysts follow an autosomal dominant inheritance pattern [4,5]. Therefore, it is important to perform a family investigation.

Ninety percent of TCs are found on the scalp. Their main differential diagnosis is epidermoid or follicular cyst, in addition to epidermal inclusion cysts, pilomatricoma, multiple steatocystoma, acne, lipomas and proliferating trichilemmal tumor, which is a rare condition [1, 3].

The approach to TC involves detailed clinical evaluation, surgical intervention and histopathological examination to confirm the diagnosis [1].

# **Objective**

The objective of this report is to write a clinical case of multiple trichilemmal cysts, treated in an outpatient setting outside the hospital, in a small municipality.

#### Case description

Clinical history: Woman, 49 years old, admitted to the minor surgery service of the medical specialties outpatient clinic of a small municipality II (45,000 inhabitants), complaining of nodules in the scalp region for approximately 2 years. The patient reported that within a short period of time there was an increase in the number

and size of the nodules, which were spread throughout the scalp. She also reported that, when the nodules first appeared, she sought medical care and was referred to a tertiary hospital located in a regional reference city, where two nodules were removed. The patient reported that she had lost follow-up at the aforementioned service due to difficulty in accessing the service, as she lived in another city. Therefore, she sought outpatient care in her city of residence after 18 months, alleging the appearance of new lesions that were growing progressively. She denied comorbidities and a family history of similar conditions. However, she reported great discomfort due to the presence of the lesions, reinforcing the drop in self-esteem and the desire to undergo the procedure to remove the nodules.

On examination, the patient was in good general condition and did not complain of pain. Palpation of the epicranium revealed 12 nodules measuring approximately 1 to 3 cm in size, firm in consistency, without a central point, relatively mobile, with well-defined contours, some isolated, others in visible clusters and others hidden by hair and without inflammatory signs (Figure 1).



Figure 1. Initial inspection of lesions in the preoperative period.

Considering the available outpatient structure, sequential excision of the lesions was indicated, with the removal of two to three cysts per session (Figure 2).



**Figure 2.** Visualization of the nodules after placement of the surgical field.

This approach aimed to ensure patient safety, the technical quality of the procedure and the lowest risk of complications.

Surgical description: Antisepsis was performed with chlorhexidine, followed by local anesthesia with lidocaine, with vasoconstrictor. The skin incision was superficial, preserving the integrity of the cyst capsules in most lesions. In some cases, the capsule ruptured, and the cyst contents were drained. Subsequently, the capsule was removed with the aid of "Halsted" forceps (Figures 3 and 4).



Figure 3. Procedure for excision of nodules.

After the cysts were removed, the skin was sutured with simple stitches using 4.0 nylon thread. In total, 12 nodular lesions were removed, with surgical procedures performed every seven days over a period of five weeks.

The removed lesions were sent for anatomopathological examination, which confirmed that they were one lipoma and 11 trichilemmal cysts. There was satisfactory healing after the lesions were resected, the patient recovered without signs of infection



Figure 4. Surgical specimens.

and is being followed up. This study was approved by the Research Ethics Committee of the Barão de Mauá University Center (CAAE:  $86890025.9.0000.5378;\ N^{\circ}.7.511.607$ ).

## **Discussion**

This case report highlights the challenges and the solution found to treat a patient with aesthetic and functional complaints associated with multiple lesions on the scalp, in a small municipality. Thus, it emphasizes the importance of resolution in outpatient services in small municipalities, in line with the principles of the SUS of comprehensiveness and regionalization of care.

Scalp cysts are a common clinical condition, more frequent in women aged 40 to 60 years, and their approach should consider factors such as aesthetic impact, risk of infection and differential diagnosis [6]. Although generally benign, multiple or atypical cases should raise suspicion of conditions such as genetic syndromes or rare malignant lesions [7]. Rapid growth may be a sign of infection or malignancy, which should be considered when approaching these cases [8].

In turn, CTs are less common than follicular cysts, they also have a slight predominance in females and 90% of them are located on the scalp. They rarely appear on the face, limbs and trunk. Other specificities regarding epidermoid cysts are the absence of an orifice, greater mobility and firmer consistency [3].

Scientific evidence highlights that, generally, small CTs that do not cause symptoms or aesthetic or functional discomfort for the patient can be monitored without surgical intervention. However, surgical management with complete excision is the recommended course of action to resolve the problem, minimizing complications such as infection or inflammation, if there is any trauma to the cyst [1]. Furthermore, the surgical procedure has a good prognosis, with a low recurrence rate and is important for confirming the diagnosis, as it allows for histopathological examination. It is worth noting that, although rare, there is a possibility of CTs transforming into trichelemmal carcinoma, a condition that requires another type of intervention [9]. Possible complications of surgical removal include bleeding, pain, infection and scarring [1].

In the case in question, the patient had impaired self-image and social life, due to the presence of visible lesions on the scalp, in addition to difficulty maintaining hair hygiene.

This case report also raises reflections on the importance of ensuring continuous access to health care in small municipalities. Losses

to follow-up, as occurred initially in this case, can delay definitive diagnosis, influence prognosis, and increase the psychological impact on patients with relevant aesthetic and functional complaints.

In addition, it is worth noting that the CT approach can be performed safely in a non-hospital outpatient unit (Type I) [10]. In Brazil, in the public health system, the Unified Health System, it is the responsibility of the health manager to organize local services, which will bring direct benefits to the patient and the health system. Enabling the performance of minor surgical procedures in non-hospital outpatient units located in small municipalities contributes to improving the effectiveness of care and the efficiency in the application of financial resources, especially in the field of public health. Furthermore, it prevents loss of follow-up due to difficulty in access, a common problem in remote areas or those with fewer resources, which can be minimized by decentralizing care.

This report contributes by showing that simple surgical procedures can be performed safely and effectively in non-hospital outpatient clinics, expanding access and reducing the burden on tertiary services. This is in line with the literature that recommends expanding the problem-solving capacity of primary and secondary care.

The main limitation of the study, since it is a case report, is the low generalizability of the findings. A review of other similar cases or discussion of complication and recurrence rates in case series was not performed, which can be developed in future studies.

# **Conclusion**

This case demonstrates the feasibility of sequential management of multiple CTs located on the scalp in a non-hospital outpatient setting. In addition to ensuring confirmation of the diagnosis by histopathology, the most appropriate treatment for these lesions was promoted in a local health service. The approach to this case provided an opportunity to improve the patient's quality of life, highlighting the relevance of accessible health services in local contexts, which, if well structured, can be effective and efficient.

# **Acknowledgments**

The authors thank Professor Janise Braga Barros Ferreira for her suggestions and review of the final version of the manuscript.

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