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Scalp Squamous Cell Carcinoma in A 14 Years Old Child: A Case Report

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Abstract **Case Report**

Scalp tumors are typically benign in adults, but malignant forms, such as squamous cell carcinoma, can be severe due to delayed diagnosis and inadequate management. This article presents a rare case of scalp squamous cell carcinoma in a 14-year-old child, developing on a trichilemmal cyst that had been manipulated with traditional products. Surgical excision confirmed clear margins, followed by a skin graft and oncological management without cervical lymph node dissection. This case highlights the rarity of scalp squamous cell carcinoma in children and the importance of early diagnosis and appropriate treatment.

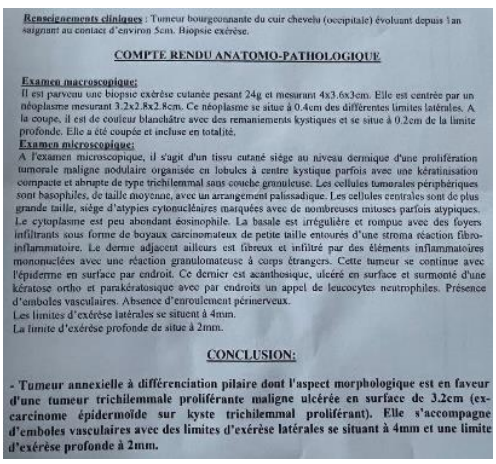
Keywords: Squamous cell carcinoma, scalp, child, trichilemmal cyst, malignant tumor, surgery, radiotherapy, early diagnosis.

I. INTRODUCTION

Scalp tumors typically occur in adults and are predominantly benign forms. Squamous cell carcinoma is the most predominant malignant tumor [1, 2]. The high mortality of malignant forms could be explained by delayed diagnosis and poor management [3].

II. OBSERVATION

This is a 14-year-old child, a student, with no particular medical history. He presented with a painful nodule near the occiput, which had been manipulated with traditional products for 1 year and 4 months prior to admission. The evolution showed a progressive increase in the size of the nodule, leading to a biopsy and excision. The histopathological result confirmed a squamous cell carcinoma on a trichilemmal cyst with vascular emboli. Upon general examination, the patient was conscious and well, with no signs of general health deterioration. Locally, there was an ulcerated and budding lesion near the occiput, superficial and mobile in relation to the deep plane. Examination of the lymph nodes revealed bilateral submandibular lymphadenopathies of juxta-centimetric size, without other associated anomalies.



Renseignements cliniques : Tumeur bourgeonnante du cuir chevelu (occipitale) évoluant depuis 1an saignant au contact d'environ 5cm. Biopsie exérèse.

COMPTE RENDU ANATOMO-PATHOLOGIQUE

Examen macroscopique:
Il est parvenu une biopsie exérèse cutanée pesant 24g et mesurant 4x3.6x3cm. Elle est centrée par un néoplasme mesurant 3.2x2.8x2.8cm. Ce néoplasme se situe à 0.4cm des différentes limites latérales. A la coupe, il est de couleur blanchâtre avec des remaniements kystiques et se situe à 0.2cm de la limite profonde. Elle a été coupée et incluse en totalité.

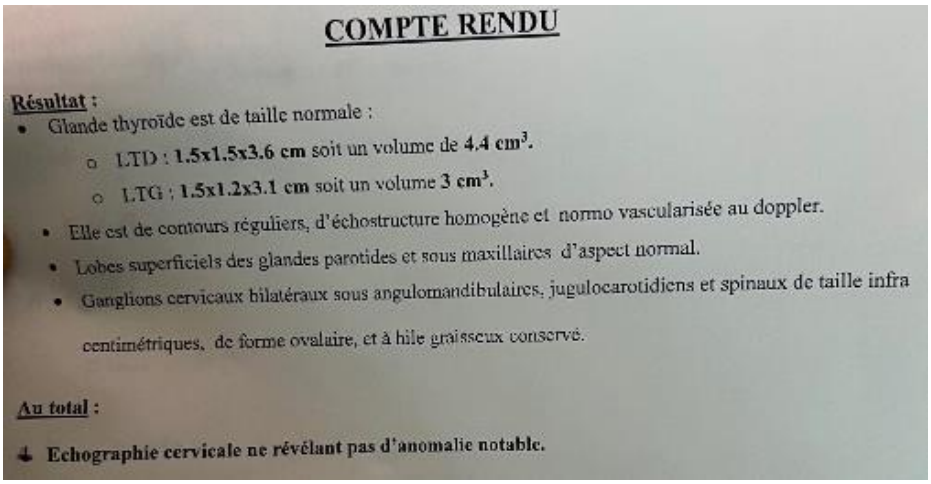
Examen microscopique:
A l'examen microscopique, il s'agit d'un tissu cutané siège au niveau dermique d'une prolifération tumorale maligne nodulaire organisée en lobules à centre kystique parfois avec une kératinisation compacte et abrupte de type trichilemmal sous couche granuleuse. Les cellules tumorales périphériques sont basophiles, de taille moyenne, avec un arrangement palissadique. Les cellules centrales sont de plus grande taille, siège d'atypies cytonucléaires marquées avec de nombreuses mitoses parfois atypiques. Le cytoplasme est peu abondant éosinophile. La basale est irrégulière et rompue avec des foyers infiltrants sous forme de boyaux carcinomateux de petite taille entourés d'une stroma réaction fibro-inflammatoire. Le derme adjacent ailleurs est fibreux et infiltré par des éléments inflammatoires mononucléées avec une réaction granulomateuse à corps étrangers. Cette tumeur se continue avec l'épiderme en surface par endroit. Ce dernier est acanthosique, ulcéré en surface et surmonté d'une kératose ortho et parakératosique avec par endroits un appel de leucocytes neutrophiles. Présence d'emboles vasculaires. Absence d'enroulement périnerveux.
Les limites d'exérèse latérales se situent à 4mm.
La limite d'exérèse profonde de situe à 2mm.

CONCLUSION:

- Tumeur annexielle à différenciation pilaire dont l'aspect morphologique est en faveur d'une tumeur trichilemmale proliférante maligne ulcérée en surface de 3.2cm (ex-carcinome épidermoïde sur kyste trichilemmal proliférant). Elle s'accompagne d'emboles vasculaires avec des limites d'exérèse latérales se situant à 4mm et une limite d'exérèse profonde à 2mm.

Cervical ultrasound showed infra-centimetric bilateral lymph nodes. A CT scan of the abdomen and pelvis ruled out secondary localization.

A CT-scan of the abdomen and pelvis ruled out secondary localization.



COMPTE RENDU

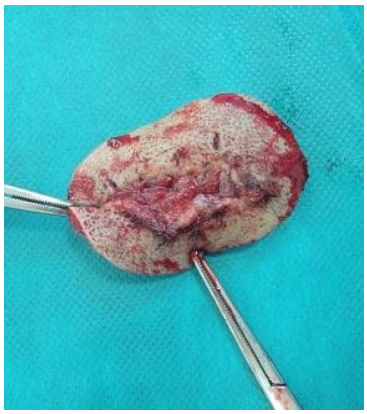
Résultat :

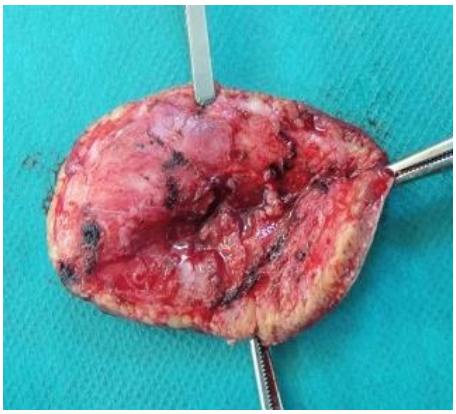
- Glande thyroïde est de taille normale :
  - LTD : **1.5x1.5x3.6 cm** soit un volume de **4.4 cm³.**
  - LTG : **1.5x1.2x3.1 cm** soit un volume **3 cm³.**
- Elle est de contours réguliers, d'échostructure homogène et normo vascularisée au doppler.
- Lobes superficiels des glandes parotides et sous maxillaires d'aspect normal.
- Ganglions cervicaux bilatéraux sous angulomandibulaires, jugulocarotidiens et spinaux de taille infra centimétriques, de forme ovalaire, et à hile graisseux conservé.

Au total :

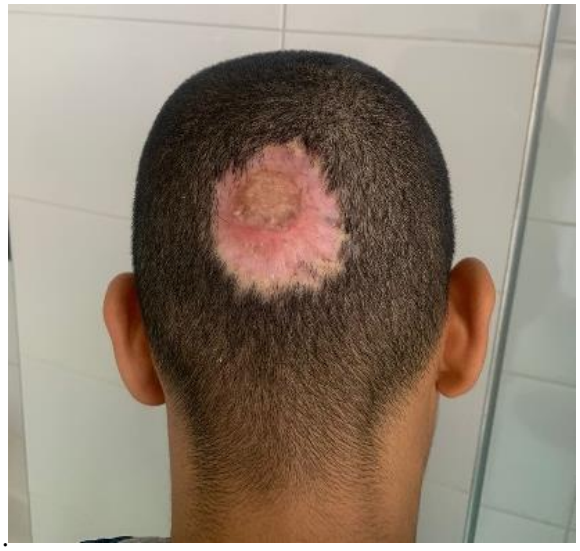
Echographie cervicale ne révélant pas d'anomalie notable.

The patient was then scheduled for tumor excision with 1 cm margins on either side, respecting the non-invaded periosteum.





The histopathological result of the operative specimen showed clear margins between 1.3 and 1.6 cm. Subsequently, the child was scheduled for a thin skin graft to cover the tissue loss and was referred to oncology for radiotherapy without the need for cervical clearance.



III. DISCUSSION

Squamous cell carcinoma of the scalp in children is a rare but possible condition. Although more common in adults, it can also affect children, usually due to excessive sun exposure or similar risk factors.

The symptoms and treatment of scalp squamous cell carcinoma in children are similar to those observed in adults and depend on the tumor size, location, and stage.

Treatment may include surgery combined with radiotherapy or chemotherapy, followed by regular monitoring. Prevention is also important to reduce the risk of occurrence or recurrence, including sun exposure and monitoring of suspicious lesions [6].

IV. CONCLUSION

Scalp squamous cell carcinoma is seen more commonly in the elderly, but it can occur in children, although rarely. No similar cases were found in the literature, leading to limited discussion and references.

REFERENCES

1. Brin, L., Zubair, A. S., & Brewer, J. D. (2014). Optimal management of skin cancer in immunosuppressed patients. *American journal of clinical dermatology*, *15*(4), 339-356.
2. Yu, S. H., Bordeaux, J. S., & Baron, E. D. (2014). The immune system and skin cancer. *Adv Exp Med Biol*, 810, 182-191.
3. Velez, N. F., Karia, P. S., Vartanov, A. R., Davids, M. S., Brown, J. R., & Schmults, C. D. (2014). Association of advanced leukemic stage and skin cancer tumor stage with poor skin cancer outcomes in patients with chronic lymphocytic leukemia. *JAMA dermatology*, *150*(3), 280-287.
4. Cantwell, M., Hua, T., Pappas, J., & Kipps, T. J. (1997). Acquired CD40-ligand deficiency in chronic lymphocytic leukemia. *Nature medicine*, *3*(9), 984-989.
5. Brandt, M. G., & Moore, C. C. (2019). Nonmelanoma skin cancer. *Facial Plast Surg Clin N Am*, *27*(1), 1-13.
6. Richmond, H. M., Duvic, M., & MacFarlane, D. F. (2010). Primary and metastatic malignant tumors of the scalp: an update. *American journal of clinical dermatology*, *11*, 233-246.