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Research Article

Proliferating Trichilemmal Tumor, A Systemic Review

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Abstract:

Background: Malignant proliferating trichilemmal tumor is a rare skin tumor that affects mainly older women. It similar to differential squamous cell carcinoma.

Methods: A search strategy was designed and run in Medline and google scholar. Also, searching grey literature, checking references, tracking citations, hand-searching of focused journals, and websites were utilized for retrieval of related studies. All of articles which studied epidemiology of mortality or injuries of the war were included.

Conclusion: Malignant proliferating trichilemmal tumours are rare and cause struggling in diagnosis for the surgeon as there is a high risk of recurrence and metastasis

Keywords: proliferating trichilemmal tumor; malignant skin tumor; trichilemmal cyst; trichilemmal carcinoma

Introduction

Proliferating trichilemmal tumours (PTTs) were first reported by Jones in 1996 using the term "proliferating epidermoid cyst" [1]. These tumors are occasional cutaneous neoplasms obtained from the outer root sheath of the hair follicle [1]. Their distinctive histological detection is the sudden compact amorphous keratinization of the epithelial cells that cover the cyst wall without a granular layer, and this phenomenon is called trichilemmal keratinization [2]. PTTs frequently display benign behavior and rarely present a malignant course. When they take over neighboring tissues encouraged by anaplasia and necrosis, it is described as a malignant proliferating trichilemmal tumor (MPTT) [2]. MPTTs are invaded and metastatic tumors that determine biologically assertive behavior. Squamous cell carcinoma (SCC) should be defined as differential diagnosis due to the familiar of disease demonstration [3]. Treatment of MPTTs is disputed because only a restricted number of cases are reported in literature [4]. PTTs have been approximated to occur on the scalp in near to 90% of cases. The rate of recurrence and regional lymph node metastasis has been estimated to be between 3.7 - 6.6% and 1.2 - 2.6% [4]. In this review, we decided to have a comprehensive study on proliferating trichilemmal tumors [5].

Methods and Materials

All steps of this systematic review were based on the PRISMA guideline for reporting systematic review [21]. According to the subject of this study, we selected some appropriate keywords to be searched in the different databases. They were "proliferating trichilemmal tumour", "carcinoma", "treatment", "metastasis". Using these keywords, we created a specific search strategy for different databases including PubMed and google scholar. Our last search was performed on 5 May, 2022.After all, we checked the references of all finally included studies in our project to find any possible missed articles.

Included studies had a wide variation in their methodology, and we could not done meta-analysis. Therefore, we just decided to gather their relevant information and present them in a table which tries to put together different studies with the same treatment regimens.

Discussion

Proliferating trichilemmal tumors (PTTs) first purported by Wilson-Jones in 1966 are defined as benign lesions although one that can mimic squamous-cell carcinoma [6]. Malignant proliferating trichilemmal tumour is an conspicuously extraordinary tumour with differentiation against hair and/or follicle. Lanugo hair follicles of bald scalp and follicles of other areas vacant of nonterminal hair are probably to effect these tumors [7]. Malignant proliferating trichilemmal tumors display more combative clinical as well as atypical histologic features. Some reported assert that any proliferating constituent should be compromised as a sign of malignancy in a trichilemmal tumor [8]. The ordinary area includes scalp, forehead and neck which is female more over than 40 years are most commonly affected .Based on our research, rare cases of malignant PTT have been reported which metastases are very rare. Cases arose in the scalp, in the head, arm, and inguinal region [9].

Two small series reported the metastatic rate of MPTTs is prevalent to be 25%. MPTTs have a more invasive and these ulcers demonstrate a significant mortality [9]. This tumor inadequacy a characteristic

histological or immunohistochemical marker to imply malignant transformation. All cases of MPTT should be assessed with local imaging to evaluate the extent of local involvement and investigate for regional metastases [9]. Computed Topography with contrast is the choice modality to evaluate for local bony involvement and erosion. (10)CT of the neck can be used to evaluate for nodal metastases, aside the skull base and neck. Magnetic resonance imaging (MRI) is more suitable to evaluate soft-tissue aggression or invasing of the dural sinuses [11].

A solid or cystic mass with poorly manifestation edges may be identified. Reported suggested of malignancy include local aggression into the calvarium, meninges, or dural sinuses [12]. The differential diagnosis of MPTT comprehend basal cell carcinoma, sebaceous carcinoma, squamous cell carcinoma and clear cell hidradenocarcinoma [13]. Whole body evaluation should be commence if there is suggestion of local or regional dissemination. In addition, hole-body positron emission tomography scanning should be done. However, although metastasis from proliferating trichilemmal tumours is rare, it has been suggested in the literature for a sporadic malignant variant showing an aggressive clinical course with lymph node aggression [14]. Reported have suggested that plastic surgery such as Mohs or excisional surgery is a most effective and tissue-sparing approach for MPTTs [15]. Adjuvant therapy such as radiation therapy and/or chemotherapy may be considered in some cases [16]. Patients should be extremely going around with nearly with persistent examinations to assess for the possibility of recurrence or metastases [17].

Though the reported is limited, the demonstration of foreboding importance incorporate clinical findings such as rapid growing in size, tumour size more than 5 cm, non-scalp location and/ or foci of necrosis, or ulceration in addition to histological assessment of marked cytological atypia and copious mitotic figures along with atypical forms [11].

Conclusion

To conclude, malignant proliferating trichilemmal tumors are rare and cause are usually demonstrated there is a high risk of recurrence and metastasis. MPTT can occur in young people especially in an individual with pre-existing PTT. The treatment of MPTT without metastasis based on manifestation varying form wide local excision to only Mohs surgery.

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