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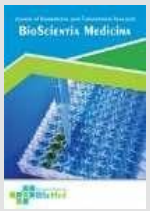

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The Profile of Ocular Fibrous Histiocytoma Tumors at Dr. M. Djamil General Hospital, Padang, Indonesia

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A B S T R A C T

Background: Ocular fibrous histiocytoma tumors originate from histiocytic cells or primitive mesenchymal cells. A fibrous histiocytoma is basically composed of a mixture of fibroblastic cells, histiocytes, blood vessels, and collagen in various proportions. This study aimed to determine the profile of ocular fibrous histiocytoma tumors at Dr. M. Djamil General Hospital, Padang, Indonesia. **Methods:** This study was a descriptive observational study. A total of 8 research subjects participated in this study. Data analysis was carried out with the help of SPSS version 24 software, and univariate analysis was carried out. **Results:** The majority of subjects were female, with an age range of 41-60 years. The clinical symptoms felt by patients are the presence of a mass. The majority of study subjects had disease onset < 6 months, and tumor sizes were 1-5 cm. The majority of tumor locations are on the eyelid, and the histopathologic overview shows xanthelasma and dermatofibromas. Excision therapy is the therapy for the majority of research subjects. **Conclusion:** Most types of fibrous histiocytoma tumors at Dr. M. Djamil General Hospital, Padang, Indonesia, are benign type and locally aggressive.

1. Introduction

An ocular histiocytoma fibrous tumor is an ocular mesenchymal tumor that varies greatly in morphology and pathophysiological growth. Fibrous histiocytoma tumors originate from histiocytic cells or primitive mesenchymal cells. Fibrous histiocytoma tumors are basically composed of a mixture of fibroblastic cells, histiocytic cells, blood vessels, and collagen in various proportions. Ocular fibrous histiocytoma tumor types are divided into benign, locally aggressive, and malignant fibrous histiocytoma tumors. The location of ocular histiocytoma fibrous tumors is on the eyelid, conjunctiva, and orbit. Histopathological types of ocular fibrous histiocytoma tumors include xanthelasma, xanthogranuloma, dermato-fibroma, atypical fibrous xanthoma, benign fibrous histiocytoma, dermatofibrosarcoma protuberans and fibroxanthosarcoma (malignant fibrous histiocytoma, malignant fibroxanthoma).[1-5]

A fibrous histiocytoma is a mesenchymal tissue tumor. Tumors believed to arise from mesenchymal tissue occur in several locations with different biologic behaviors. Tumors in this group arise from primitive mesenchymal stem cells that are capable of developing into a variety of cell types. Mesenchymal tumors account for 2% of orbital lesions and 9% of neoplasia; in children, these tumors account for 5% of all diseases and 19.4% of childhood neoplasia.

Histologically and clinically, histiocytoma can vary from a slowly developing benign lesion to a locally aggressive malignant lesion. Diagnosis of this disorder is quite difficult because, clinically, it has similar symptoms to various other tumors. Only histopathological examination is able to definitively diagnose this disorder. Investigations such as an MRI or CT scan are performed to evaluate the size and location of the aggressiveness of the tumor. Treatment of this tumor is also determined by the type of tumor, namely in the form of chemotherapy, radiotherapy, or surgery.[6-11]

Studies related to fibrous histiocytoma are still very limited, which results in a lack of understanding and a lack of ability to diagnose and treat this case. While on the other hand, fibrous histiocytoma has a greater prevalence from year to year. Of course, this requires an effort to conduct studies related to fibrous histiocytoma. This study aimed to determine the profile and appearance of ocular fibrous histiocytoma tumors at Dr. M. Djamil General Hospital, Padang, Indonesia.

2. Methods

This study was a descriptive observational study and used secondary data sourced from the medical records of the medical record installation of Dr. M Djamil General Hospital, Padang, Indonesia. A total of 8 research subjects were included in this study. The inclusion criteria in the form of ocular fibrous histiocytoma tumor patients at Dr. M. Djamil General Hospital, Padang, Indonesia, for the period January 2016 - December 2020. The sampling process was carried out in total sampling. This study was approved by the medical and health research ethics committee at Dr. M. Djamil General Hospital, Padang, Indonesia.

This study presents sociodemographic data of research subjects in the form of age and gender. Description of clinical symptoms, disease onset, and disease history are also presented in this study. Description of tumor location, tumor size, lateralization, and histopathological features are presented in this study. Data analysis was performed with the help of SPSS software version 24. Univariate analysis was performed to present the data frequency distribution for each variable.

3. Results

Table 1 shows the profile of ocular fibrous histiocytoma study subjects. The majority of subjects were female, with an age range of 41-60 years. The majority of clinical symptoms felt by patients are the presence of a mass. The majority of study subjects had disease onset < 6 months. The majority of the study subjects' tumor sizes were 1-5 cm. The majority of the study subjects' tumor locations were on the eyelid. The majority of histopathologic features show xanthelasma and dermatofibromas. Excision therapy is the therapy for the majority of research subjects.

4. Discussion

In the results of this study, there were 8 fibrous histiocytoma tumor patients who were treated at Dr. M. Djamil General Hospital, Padang, in the period January 2016 to December 2020, consisted of 3 male patients (37.5%) and 5 female patients (62.5%). However, other studies state there is no significant difference in gender in this fibrous histiocytoma tumor. This is because this study only obtained a small sample. The results of this study found that the average age of patients was 51-60 years. In this study, the youngest patient was 38 years old, and the oldest patient was 60 years old. Most ocular histiocytoma fibrous tumors occur unilaterally, as in this study, 7 patients occurred unilaterally, namely in the oculi dextra or sinistra. Clinical manifestations of patients who go to the ophthalmic clinic of Dr. M Djamil General Hospital, Padang, mostly in the form of a palpable mass in 7 patients (87.5%), proptosis in 1 patient (12.5%), ptosis in 2 patients (25%), ulceration in 1 patient (12.5%), pain in 1 patient (12.5%) and visual disturbances in 2 patients (25%). Other studies show that the clinical manifestations of proptosis are still the most common complaint. However, in this study, what was found more commonly was a palpable mass. Characteristics of ocular fibrous histiocytoma

tumors based on the most known onset, which is less than 6 months in 4 patients (50%) and the tumor size is known to be between 1-5 cm in 4 patients (50.0%). This illustrates that the type of fibrous histiocytoma tumor in the study corresponds to the characteristics of a benign tumor type.[12-16]

Table 1. Profile of ocular fibrous histiocytoma study subjects.

Gender	**Total (n)**	**Percentage %**
Male	3	37,5
Female	5	62,5
Age (years)	**Total (n)**	**%**
30-40	1	12,5
41-50	3	37,5
51-60	4	50,0
Clinical symptoms	**Total**	**%**
Mass	7	87,5
Proptosis	1	12,5
Ptosis	2	25,5
Ulceration	1	12,5
Pain	1	12,5
Visual disturbances	2	25,0
Disease history	**Total**	**%**
Ca mammae	1	12,5
Meningioma	1	12,5
Unknown	6	75,0
Disease onset	**Total**	**%**
< 6 months	4	50,0
6 months – 1 year	1	12,5
1-10 years	3	37,5
Tumor size	**Total**	**%**
<1 cm	3	37,5
1-5 cm	4	50,0
>5 cm	1	12,5
Tumor location	**Total**	**%**
Eyelid	3	37,5
Conjunctiva	1	12,5
Orbital	4	50,0
Tumor lateralization	**Total**	**%**
Oculi dextra	3	37,5
Oculi sinista	4	50,0
Both eyes	1	12,5
Histopathological overview	**Total**	**%**
Xanthelasma	3	37,5
Dermatofibroma	3	37,5
Benign fibrous histiocytoma	1	12,5
Dermatofibrosarcoma	1	12,5
Therapy	**Total**	**%**
Excision	6	75,0
Exenteration + radiotherapy	1	12,5
Excision + craniotomy	1	12,5

All patients suspected of having a fibrous histiocytoma tumor underwent a biopsy examination, either excisional biopsy or open biopsy. Histopathological examination in this study showed results of fibrous histiocytoma orbital tumors of the Xanthelasma type in 3 patients (37.5%), Dermato-fibroma in 3 patients (37.5%), Benign Fibroushistiocytoma in 1 patient (12.5%) and Dermatofibrosarcoma as many as 1 patient (12.5%) where more benign types of tumors were seen, in accordance with other studies. The management of this fibrous histiocytoma tumor patient was excision

in 6 patients (75.0%), exenteration and radiotherapy in 1 patient (12.5%), and excision and craniotomy in 1 patient (12.5%). Excision was performed for a benign type fibrous histiocytoma tumor. Meanwhile, aggressive and malignant local types can be exenterated through chemotherapy and radiotherapy. Radiotherapy is an effective therapy for locally aggressive and malignant ocular histiocytoma fibrous tumors. Only 1 patient received radiotherapy at Dr. M. Djamil General Hospital with an aggressive local type ocular histiocytoma fibrous tumor. Systemic chemotherapy is a therapy for locally aggressive and malignant ocular histiocytoma fibrous tumors. Chemotherapy is mainly given in combination with postsurgical exenteration plus radiotherapy. In this study, there was 1 patient with an aggressive local-type fibrous histiocytoma tumor with dermatofibrosarcoma histopathology who underwent exenteration and radiotherapy. Then 1 patient was also referred to neurosurgery with a benign type and histopathology xanthelasma due to other clinical manifestations, namely meningioma in the frontal bone. In this patient, a craniotomy was performed to treat the meningioma.[17-20]

5. Conclusion

Most types of fibrous histiocytoma tumors at Dr. M. Djamil General Hospital, Padang, Indonesia, are benign type and locally aggressive.

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