سامية محمد مصطفى



شبكة المعلومات الحامعية

بسم الله الرحمن الرحيم



-Caro-

سامية محمد مصطفي



شبكة العلومات الحامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





سامية محمد مصطفى

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسو

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة يعيدا عن الغيار



سامية محمد مصطفي



شبكة المعلومات الجامعية



المسلمة عين شعور المسلمة عين شعور المسلمة عين شعور المسلمة عين شعور المسلمة ا

سامية محمد مصطفى

شبكة المعلومات الحامعية



بالرسالة صفحات لم ترد بالأصل



EGYPTIAN EXAMPLES OF SOFT TISSUE SARCOMAS, PATHOLOGICAL AND IMMUNOHISTOCHEMICAL STUDY

Thesis
Submitted for partial fulfillment
Of The Requirement For The M.D. Degree

In Pathology

By

Magdy Mahmoud Nouh

M.B., B. CH. And M.Sc. (Pathology)

Under The Supervision of

Prof. Dr. Samia A. Youssef

Prof. and Head Of Path. Depart.
Benha Faculity of Medicine
Zagazig University

Prof. Dr. Nadia M. Mokhtar

Prof. Of Path.
National Cancer Institute
Cairo Univeersity

Dr. Hala A. Agina

Ass. Prof. Of Path. Benha Faculity of Medicine Zagazig University

Faculty of Medicine Zagazig University Benha Branch 1999 B 107 T.

ربنا لا تزغ قلوبنا بهد إذ مديتا ومب لنا هي لدنك رحهة إنك أنت

ACKNOWLEDGEMENTS

I am deeply indebted to *Prof. Dr. Samia Youssef*. Professor of Pathology and Head of Pathology Department, Benha Faculty of Medicine, Zagazig University, for her continuous encouragement, valuable and generous guidance and limitless support to improve the quality of this work.

I would like to express my profound gratitude to *Prof. Dr. Nadia Mokhtar*, Professor of Pathology, National Cancer institure, Cairo University, who gave me a lot of her constructive guidance, constant encouragement and generous help throughout this work.

I am also sincerely grateful to *Prof. Dr. Hala Agina*, Assistant Prof. Of Pathology, Benha faculty of Medicine, Zagazig University, for het skillful Pathological advice, fruitful discussions and who devoted much of her time in guiding me throughout this study.

Magdy Mahmoud Nouh M.B., B. CH. And M.Sc. (Pathology)

Content

* Introduction	Page 1
* Aim of the work	3
* Review of Literature	4
- Epidemiology	5
- Etiology of soft tissue sarcoma	9
- The use of histochemical stain in soft tissue sarcoma	17
- The Immunohistochemical markers in soft tissue sarcoma	18
- The use of immunohistochemical markers in soft tissue sarcoma	22
- Nucleolar organizer region	26
- Classification of soft tissue sarcoma	31
- Grading of soft tissue sarcoma	34
- Liposarcoma	38
- Fibrosarcoma	44
- Malignant fibrous histocytoma	50
- Leiomyosarcoma	56
- Rhabdomyosarcoma	61
* Material and Methods	67
* Results	79
* Discussion	150
* Summary and Conclusion	165
* References	169
* Arabic Summary	<u>.</u>

INTRODUCTION

Soft tissue sarcoma (STS) comprise a heterogeneous group of relatively rare malignant tumors of mesenchymal origin (Martin et al., 1976).

It is reported that the histological grade was found to be essential for choosing an appropriate treatment for (STS) and to be the most important single prognostic factor in predicting survival and disease free intervals (Albus et al., 1986).

The grade of malignancy remained the most difficult to define and it could not be adequately assessed because of the relative rarity and complex histologic features of STS (Coinder et al., 1986).

Also the grading system takes into account the histogenetic type and subtype of tumor. However many sarcomas are too poorly differentiated to exhibit morphologic features specific enough to define their histogenesis. So that accurate identification by morphological criteria alone is limited (Enterline, 1981 and Angervall et al., 1986).

Using the immunoperoxidase technique, enable more accurate diagnosis to be made (Du - Bouly, 1985).

Proliferative activity of STS were considered to be the most important factor for assessing histologic grade (Crocker et al., 1989).

Silver staining for nucleolar organizer region (AgNOR) which are segments of DNA with ribosomal genes – have made estimates of proliferative activity in soft tissue sarcomas more reproducible and objective (Crocker et al., 1989)..

AIM OF WORK

- (1) Histopathological study of various types of STS by H & E .
- (2) Histopathological studies using variable stains for better definition of the histological criteria of the tumor in an attempt to set up a histological and grading system.
- (3) Histochemical studies to detect AgNOR for estimation of the proliferative activity of STS.
- (4) Immunohistochemical study of some undifferentiated cases of STS in trial to define their histogenesis .

SOFT TISSUE SARCOMAS

Soft tissue sarcomas are malignant mesenchymal proliferation that arise in the extra skeletal, myoepithelial tissue of the body exclusive of viscera, covering of the brain, and lymphoreticular systems (Martin et al., 1976).

They included lesions composed of or derived from, fat, fibrous tissue, smooth muscle, skeletal muscle, blood vessels and lymphatics, all of which originate in embryonic mesoderm (Martin et al., 1976 and Wingren et al., 1990).

Tumors of peripheral nerve, the components of which are derived from the neuroectoderm, are also included because of their frequent occurrence in the superficial soft tissue (Enzinger and Weiss, 1996).

Soft tissue sarcoma is defined as tumors arising from non - skeletal connective tissues of the body excluding supporting tissues of internal origin, glia, and haemopoietic tissue, they arise nearly every where in the body, the most important locations being, the extremities, trunk, and abdominal cavity (Damjnove and Linder, 1996).

Epidemiology:

Incidence:

There is increase in the incidence of soft tissue sarcomas. About 4500 to 5200 new cases are diagnosed each years in United state compared with 93,000 cases of lung cancers and 88.000 cases of breast cancer. During the year 1987, 5,300 newly diagnosed cases occurred in the United States. These tumors will account for about 0.5% of all new cancer cases and deaths (*Lack et al.*, 1989). In 1990 5700 new soft tissue sarcomas developed in the untied state, and there were 3100 Sarcoma related deaths (*Collins et al.*, 1993).

Compared with carcinoma and other neoplasm, soft tissue sarcoma are rare tumors. It is estimated that they accounts for about 0.8% to 1% of all malignancies and 2% of all malignant deaths. In Egypt soft tissue sarcoma constituted 3.75% of total malignancies. (Mokhtar, 1991 and Ross et al., 1993). It is not clear whether this increasement represents a true increase or it reflects merely better diagnostic capabilities and greater interest in this type of tumors. However, undifferentiated sarcomas represents 8.3% of all sarcomas in Egypt. This incidence decreased from 1985 to 1989 due to application of tumor markers and electron microscopy at the surgical pathology unit, helping in early diagnosis of soft tissue sarcomas (Mokhtar, 1991 and Damjanov and Linder, 1996).

The incidence of soft tissue sarcomas appears to be increased also by the increased incidence of acquired immune deficiency syndrome associated kaposi's sarcomas. (Enzinger and Wesiss, 1996).

Age:

Control of the Control of the Control

Soft tissue sarcomas occur at any age and like carcinomas, are more common in older patients; about 15% affect persons younger than 15 years and about 40% affect persons 55 years or older. So a definite relationship exists between soft tissue sarcoma and age of presentation. Embryonal rhabdomyosarcoma, and small round cell sarcoma are tumors of infants and children, synovial sarcoma and clear cell sarcoma mainly affect adolescents and young adults, while liposarcomas and malignant fibrous histocytomas are tumors of middle aged and elderly patients. Some pediatric tumors are congenital (Cutler and Young, 1975 and Chang et al., 1979). Sarcoma are currently the fifth leading form of cancer in children. Congenital sarcomas are rare (Breslin et al., 1988).

In Egypt soft tissue sarcomas of pediatrics, represents 26.68% and this ranks the second of pediatrics malignancy after lymphohaemopoitic malignancies (Mokhtar, 1991).