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RESEARCH ARTICLE

OCCURRENCE OF VARIOUS SOFT TISSUE TUMORS IN NORTH KARNATAKA

Inamdar S.S[1], Kintan J. Sannghavi[2], Siraj Ahmed S[3*]

[1]Professor, Department of Pathology, S.N. Medical College & Hospital, Navanagar, Bagalkot, Karnataka, India

[2]Consultant, Department of Pathology,TATA Memorial Hospital, Mumbai, India

[3]Assistant Professor, Department of Anatomy, Gadag Institute of Medical sciences,Mallasamudra, Gadag, Karnataka, India

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ABSTRACT

Soft tissue can be defined as nonepithelial extra skeletal tissue of the body; benign soft tissue tumors outnumber malignant tumors by a margin of about 100:1 in a hospital population. The diagnosis and management of soft tissue tumors require a team perspective. A good clinical acumen, careful gross examination of the specimen and adequate sampling of the tumor is essential. The soft tissue tumors (232 cases) constituted 2.08 % of the entire biopsy material (11157 cases) recorded in the department of pathology. Soft tissue tumor accounted for 8.34% of all tumors (2781 tumors diagnosed during the study period). Benign soft tissue tumors constituted 9.91% of all benign tumors and malignant soft tissue tumor accounted for 4.27% of all malignant tumors diagnosed during the study period. Benign soft tissue tumors formed 85.78% of all soft tissue tumors while malignant soft tissue tumors constituted 14.22% of all soft tissue tumors with a benign to malignant ratio of 6.03:1.

INTRODUCTION:

Soft tissue can be defined as nonepithelial extra skeletal tissue of the body. It represents voluntary muscles, fat, and fibrous tissue, along with the vessels serving these tissues[1]. These are almost everywhere in the body[2]. Benign soft tissue tumors are more then malignant tumors[3]. 1/3rd of benign tumors are lipomas.

Clinically soft tissue tumors diagnosis is difficult[4]. several techniques such as special stains, electron microscopy and immunohistochemistry have been applied to increase the diagnostic accuracy[5].

METHODOLOGY

The present study comprises of all the soft tissue tumors, benign, intermediate and malignant obtained from the department of pathology, Teaching and General Hospitals and various private hospitals and laboratories in Karnataka. A detailed clinical data including history and examination was carried out. The materials include incisional and excisional biopsies of various soft tissue tumors.

Specimens size, shape, color and consistency were recorded. The specimen was fixed in 10% neutral formalin for 24 hrs and then 5-6 mm thick sections were cut from representative areas and submitted for routine processing. Sections were studied by light microscopy after H&E staining. Special stains used whenever necessary. The classification adopted based on the WHO classification of soft tissue tumors (2002).

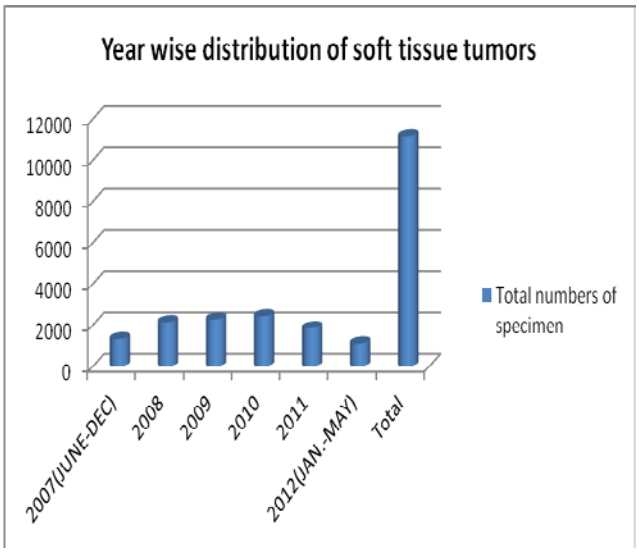
RESULTS

Present study includes a total of 232 soft tissue tumors out of a total of 11157 specimens of all types during five years period of 2007 to 2012.

Table 1: Year-wise distribution of Cases

Year	Total numbers of specimen	Specimen of soft tissue tumors	Percentage (%)
2007(JUNE-DEC)	1336	35	2.62
2008	2145	37	1.72
2009	2271	51	2.25
2010	2426	26	1.07
2011	1855	56	3.02
2012(JAN.-MAY)	1124	27	2.40
Total	**11157**	**232**	**2.08**

*Corresponding author: Siraj Ahmed | E-mail: drsms70@gmail.com



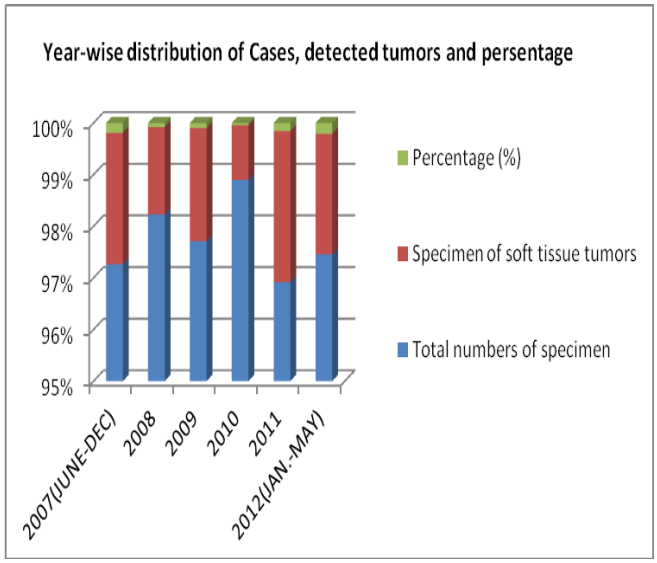


Figure 1: In year 2011, maximum percentages (3.02%) of soft tissue tumors were found amongst all received specimens.

Table 2: Comparative Incidence of Benign and Malignant Tumors of Soft Tissue

Authors	No	Benign (B)	%	Malignant (M)	%	B : M ratio
Geetha Dev [6,7] (1974)	780	650	83.3%	130	16.7%	5:1
Myhre Jensen[8] (1981)	1403	1331	94.6%	72	5.4%	18.5:1
M.j. Kransdorf[9] (1995)	31047	18677	60.2%	12370	39.8%	1.5:1
Present study (2012)	232	199	85.8%	33	14.2%	6.04:1

DISCUSSION:

Findings of present study are closely correlating with study conducted by Geetha Dev[6,7] (1974). The percentage of malignant tumors was relatively more than the study of Myhre Jensen[8] (1981), which can be explained by the inherent bias in a referral population. The markedly increased percentage of malignant tumors in the study of Kransdorf[9] (1995) from AFIP records may be due to the case material referred to a highly specialized center. The relative frequency of benign to malignant soft tissue tumors is difficult to estimate accurately since many of the benign tumors cause a few problems and thus the patients do not report to the clinician. The general consensus is that the benign tumors outnumber malignant counterparts by a considerable margin.

CONCLUSION:

The diagnosis and management of soft tissue tumors require a team perspective. A good clinical examination, careful grossing and adequate sampling is essential. Majority of soft tissue tumors can be diagnosed by haematoxylin and eosin stained section. Special stains are additive to the routine haematoxylin and eosin for the proper diagnosis, treatment and to indicate the prognostic guide for further course of management.

Present study comprised of soft tissue tumors, obtained from the department of pathology, M R Medical College, from Basaveshwar Teaching and General Hospital and various private hospitals and laboratories in and around Gulbarga. The soft tissue tumors (232 cases) constituted 2.08 % of the entire biopsy material (11157 cases)

recorded in the department of pathology. Soft tissue tumor accounted for 8.34% of all tumors (2781 tumors diagnosed during the study period).

1. Benign soft tissue tumors constituted 9.91% of all benign tumors and malignant soft tissue tumor accounted for 4.27% of all malignant tumors diagnosed during the study period.
2. Benign soft tissue tumors formed 85.78% of all soft tissue tumors while malignant soft tissue tumors constituted 14.22% of all soft tissue tumors with a benign to malignant ratio of 6.03:1.

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