

Extraskkeletal Osteogenic Sarcoma

Extraosseous Osteogenic Sarcoma

Extraskkeletal Osteosarcoma

Extraosseous Osteosarcoma

Primary Osteosarcoma

ESOS

By:

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Rare

Aggressive

First Reported by H Wison in 1941

0.3 - 1 %

Sarcoma in Soft Tissue that produces osteoid or bone that is Malignant

Not attached to the Skeletal system

Other Sarcomas can produce osteoid and Bone

Carcinosarcoma

Metapladtic Carcinoma

Sarcomatoid Carcinoma

Others

Dedifferentiated Lipo

Dedifferentiated Leiomyosarcoma

Dedifferentiated SFT

RMS

Sites

Lower extremity

Upper extremity

Spine

Head

Chest

Abdomen

Retroperitoneum

Pelvic cavity

Breast

Spine

Extraskkeletal Osteosarcoma also seen in

Thyroid , kidney ,UB , Colon ,Heart ,Testes ,Penis Gall Bladder , Cerebellum

In the Breast it can occur

Denovo

Metaplastic Carcinoma

Carcinosarcoma

Primary / Secondary deposit

Primary OS of the Breast

An analysis of 50 cases

SA Silver et al

Am J Surg Pathol 1998 Aug

Mammary OS

50 cases

Biphasic

Exclude biphasic origin

Mean 64 y

Size 1.4 cms to 13 cms

Mean 4.6 cms

60 % well circumscribed

Rare

Aggressive

Primary Sarcoma of breast 1 %

Primary Breast OS Rare

Less than 1 % of all Breast malignancies

Arises from preexisting Phylloides tumor , Fibroadenoma

Or

Arises from totipotential Mesenchymal cells in the breast

200 cases Reported

Poor prognosis

Aggressive

Rare

Must be distinguished from OS arising from underlying bone Ribs ,Sternum ,
Spine, Pectoral muscles

Mean age 64 y

In contrast to Conventional OS of the Bone which occurs in young pts

On mammography it is well circumscribed ,dense mass with calcification

Preexisting

Breast irradiation ,trauma ,vinyl chlorides , implants

Bilateral sometimes, multinodular ,shallow

Mammography

USG

CT

MRI

PET CT

IHC

CK

Vimentin

SMA

CD 34

CD 10

bcl 2

Ki 67 35 %

SATB2 is sensitive ,specific for osteoblast diff In both Benign and Malignant bone lesions and ST lesions with bone diff

Early Recurrence

Mets to lungs ,brain

Large studies of 40 to 50 years in MD Anderson and Mayo Clinic PBOS

1 to 2 cases

Whereas in AFIP

50 cases

Exclude metastasis from Primary OS of bone

Primary OS of bone the pt is younger

Alkaline phosphatase mild to mod rise

Can be used to follow up and monitor

Surgery

Chemo

Radio

Immunotherapy

5 y survival rate 35 %

10 y survival rate 32 %

Overall survival depends on age ,size , grade ,subtype ,Atypia, mitosis
,involvement of cut margins

Mets in

Lungs ,brain bone ,Heart, skin

Local recurrence

Distant mets

ER 0

PR 0

HER2 0

GCDFP15 -

Mamma globin-

GATA 3 scattered

Types

Fibroblastic

Osteoblastic

Chondroblastic

Small cell

Telangiectatic

Largest collection of PBOS

Silver and Tavassoli

Published in 1998

A Clinico Pathological Analysis of 50 cases

1967 to date (1998)

In the above discussion

Diff entities are covered

1 Primary Breast OS

2 Metaplastic Carcinoma or Carcinosarcoma having OS as one component

3 OS arising in phylloides tumor and fibroadenoma

4 Extraskeletal or Extraosseous OS

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