Practical Approach to Sweat Gland Tumors

Thomas Brenn
Sweat Gland Tumors

- Rare tumors showing wide morphological spectrum
- Behavior ranging from benign to frankly malignant
- Recognition of malignant tumors often challenging
- Confusing literature and inconsistent nomenclature
- Few comprehensive studies with limited follow-up
- HE-interpretation gold standard for diagnosis
- Surgery gold standard for treatment
Sweat Gland Tumors

Findings Suggestive of Malignancy:

- Infiltrative border
- Marked mitotic activity
- Atypical mitoses
- Nuclear Pleomorphism
- Tumor necrosis
- Perineural infiltration
- Lymphovascular invasion
Malignant Sweat Gland Tumors

Poorly defined and entity specific criteria for malignancy

Subtle features of malignancy
  MAC, digital papillary adenocarcinoma

Diagnosis dependent on recognition/sampling of precursor spiradenocarcinoma, porocarcinoma

Benign tumors may show signs associated with malignancy
  hidradenoma (LVI), cylindroma (infiltrative growth)
Malignant Sweat Gland Tumors

Morphological overlap with cutaneous metastasis from visceral primaries, particularly of the breast and salivary glands

May be inseparable histologically and immunohistochemically

- Demonstration of myoepithelial layer
- Clinical correlation and screening
Malignant Sweat Gland Tumors

Low-grade malignant

• Risk for locally destructive growth and recurrence but rare metastasis and low mortality

High-grade malignant

• Significant metastatic potential and mortality
Low-grade Malignant Sweat Gland Tumors

Microcystic adnexal carcinoma
Squamoid eccrine ductal carcinoma
Endocrine mucin producing sweat gland carcinoma
Mucinous carcinoma
Adenoid cystic carcinoma
Cribriform carcinoma
Secretory carcinoma
High-grade Malignant Sweat Gland Tumors

Adnexal adenocarcinoma, NOS
Porocarcinoma
Hidradenocarcinoma
Digital papillary adenocarcinoma
Malignant neoplasms arising from spiradenoma or cylindroma
Syringocystadenocarcinoma papilliferum
Signet Ring Cell/histiocytoid carcinoma
Apocrine carcinoma
Malignant mixed tumor
Case

62 year old M with a nodule on left upper arm for 7 years
Case

Cribiform carcinoma
Primary Cutaneous Cribriform (Apocrine) Carcinoma

Distinctive sweat duct tumor presumed (by some) to be in the spectrum of apocrine carcinoma

Firm 1-3 cm nodules

Limbs of middle aged adults (median: 47 years)

F>M

Cribriform Carcinoma

-Behavior-

Entirely indolent and benign

No recurrences, metastasis or mortality

?carcinoma
Case

91 yo M.
Right lower eyelid lesion for 3 months
Case

Endocrine mucin producing sweat gland carcinoma
Endocrine Mucin-Producing Sweat Gland Carcinoma

Rare (only 20 documented cases) but potentially under-recognized entity; reported in 1997

Similarities to endocrine ductal carcinoma in situ and solid papillary carcinoma of the breast

May be associated with invasive mucinous carcinoma


Endocrine Mucin-Producing Sweat Gland Carcinoma

Slowly growing tumors, ?cyst, ?swelling

Eyelid and cheek, majority on lower eyelid

Adulthood (48-84 years, mean 70)
Immunohistochemistry

CK7+    Synaptophysin+
CK20-   Chromogranin+
EMA+    ER/PR+
S100-   Myoepithelial layer-

[Images of Synaptophysin and Chromogranin]
Endocrine Mucin-Producing Sweat Gland Carcinoma

-Behavior-

No recurrence, metastasis or disease related mortality
Case

92 year old F with a tumor on the left eyebrow / temple
Case

Squamoid eccrine ductal carcinoma
Squamoid Eccrine Ductal Carcinoma

Introduction
Rare cutaneous carcinoma showing squamous and ductal/eccrine differentiation

Reported as SEDCa in 1997
Overlap with tumours previously reported as Cutaneous Adenosquamous Carcinoma

<100 cases reported cases so far

Likely underreported

Squamoid Eccrine Ductal Carcinoma

Clinical

Predilection for elderly (median: 80 yrs)
M > F

Sun-exposed skin of head and neck, particularly face > extremities;

Nodule / plaque

Multiple cm
Squamoid Eccrine Ductal Carcinoma

Behavior

Significant risk for locally destructive growth

Difficult to achieve adequate control surgically

High risk for local recurrence (25%)

Occasional LN metastasis (12%)

Rare distant metastasis or mortality