Merkel Cell Carcinoma

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Objectives

- Clinical Presentation
- Histology
- Current Treatments
- Future Treatment
Case

- 72 yo Caucasian male
- Subcutaneous nodule right posterior arm ~1 year
- PCP told patient it was likely a lipoma
- Lesion began to grow and patient requested further evaluation
- Patient was referred to dermatology
Right posterior arm 11/1/13.
1.2 cm x 2.5 cm subcutaneous, mobile, skin colored nodule fixed to overlying epidermis
Case

- Patient presented to dermatology 5 months after initial referral
- Lesion had continued to grow rapidly
- Two weeks prior to visit patient noted swelling in the right axilla.
- ROS: Intentional 40 pound weight loss last several month. All other ROS non-contributory.
Case

- PMHx: DMII
- PSHx: non-contributory
- Fam Hx: Father deceased from pancreatic ca
- Social hx:
  - Tobacco: quit 50 years ago
  - ETOH: hx of social use, currently none
  - Illicit drugs: denies
Case

• Physical Exam
  • Gen: A&O x 3 NAD
  • Right posterior arm: 6 cm erythematous moist, mobile, subcutaneous nodule, fixed to overlying epidermis.
  • Right axilla LAD
Right posterior arm 4/11/15.
Case-work up

- 5mm lesional punch biopsy for H&E
- CT Chest and Right upper extremity with and without contrast.
Case

- CT- subcutaneous mass of posterior right arm with evidence of necrosis. Right axillary LAD, largest lymph node 3 cm
- Histology- Poorly differentiated neuroendocrine carcinoma
  - Immunohistochemistry-
    - +CK 20 perinuclear dot, synaptophysin
    - Negative TTF-1 and CK7
- Diagnosis: Merkel Cell Carcinoma
Right posterior arm. H&E 2x magnification
H&E 20x magnification
H&E 40x magnification
CK 20 Perinuclear Dot
Synaptophysin
Case

- General Surgery consult
- WLE of Right posterior arm MCC and axillary lymph node dissection
- Despite WLE margins were still positive
- 21 of 29 lymph nodes positive for MCC
- Pathologic preliminary staging was T3N1
- Patient was referred to oncology
H&E Right Axillary Lymph Node
Case

- PET scan was ordered by oncology
  - Metabolic areas in right distal arm, right supraclavicular lymph nodes, right axillary lymph nodes and b/l hilar lymph
- Due to extent of disease radiation was not an option
- Oncology recommended chemotherapy with platinum and etoposide.
- Patient chose palliative care.
MCC Epidemiology

- MCC is an aggressive neuroendocrine tumor
  - High rate of recurrence and metastasis
- Incidence is increasing faster than any other skin cancer
  - SEER program data
    - 1986-2001 annual incidence tripled
    - Approximately 1600 new cases/year
- Most commonly affects elderly Caucasian males
MCC Risk Factors

- Age >65
- Increased sun exposure
- Immunosuppression
- Immune dysregulation due to T cell dysfunction
  - 30x increase CLL
  - 13x increase AIDS
  - 10x increase in organ transplant
- Infection with MCPyV
MCC Clinical Presentation

- Painless, solitary, rapidly growing nodule/indurated plaque, arising on chronically sun exposed skin
- Most common location
  - face and neck followed by upper limb
- Acronym AEIOU for clinical parameters
  - Asymptomatic
  - Expanding Rapidly
  - Immune Suppressed
  - Older than 50 years old
  - UV exposed areas
MCC Histology

- Poorly defined dermal tumor
- Strands and nests of monotonous uniform, small, oval cells
- Cells 2-3 x larger than lymphs
- Abundant mitotic figures
- Immunohistochemical stain
  - CK 20 perinuclear dot
  - EMA, NSE, chromogranin, synaptophysin, calcitonin, VIP
  - Negative TTF-1
  - MCPyV
  - P63- aggressive behavior
MCC Work Up

- 4mm punch biopsy for H&E
- Clinical nodal exam
- SLNB for all
- PET
- No consensus on CT chest to r/o small cell lung ca.
Treatment

- **Primary**
  - WLE with SLNB
  - Consider local radiation
- **Regional lymph node involvement**
  - Lymph node dissection +/- lymph node basin radiation
- **Metastatic**
  - Palliative chemotherapy
  - Cisplatin, doxorubicin, cyclophosphomide, vindesine, epirubicin, etoposide
Possible Future Treatment

- Targeted Molecular therapy
  - Ipilimumab
  - YM-155
  - Pazopanib
  - Lanetreotide
  - ILGFR-1 and mTOR inhibitor
  - Oblimersen
Possible Future Therapies

- Immunotherapy
  - Recombinant IL-2
  - Intra-lesional interferon
  - PD-1 inhibitor
  - IL-12 DNA Electroporation
  - Bortezomib
  - T-cell immunotransfer
References


References


References


