A unique presentation of metastatic melanoma appearing ten years after the primary lesion that highlights the usefulness of SOX-10 in identifying melanomas of metastatic origin

Natalie Steinhoff DO, Gabriela Maloney DO, Richard Miller DO, Largo Medical Center, Largo, FL

INTRODUCTION

- Melanoma is the most common cancer in 25-29 year olds
- Risk factors: sun exposure, >50 moles, atypical moles, family and/or personal history, skin type, immunosuppression
- 90% of all recurrences occur during the first 5 years following primary diagnosis, with greatest risk in the first 2 years
- Metastatic melanoma (MM) has a 15-20% 5-year survival rate

CASE REPORT

- 45-year-old female with past medical history of melanoma on right triceps treated with Mohs, skin graft and one year interferon therapy in 2005 presented with an enlarging right upper quadrant cutaneous nodule that appeared one month prior
- Physical Exam: 5x5x3cm bullous, violaceous nodule
- Imaging: CT scan of abdomen showed 5.6x6.2cm lesion with well-defined and enhancing rims in skin and subcutaneous fat of upper right abdominal wall, appearing to minimally infiltrate underlying rectus abdominus musculature without intraperitoneal communication (Figure A)
- Surgical excision was performed and patient was discharged with outpatient follow-up instructions, however returned ~3 months after surgical excision due to recurring, fast growing mass (Figure B, Figure C)
- Histopathology: Preliminary pathological findings were consistent with invasive high grade undifferentiated malignant neoplasm (Figure D)
- Immunohistochemical (IHC) stains: (+) SOX-10, vimentin, EMA, Ki-67; (-) Mart1, HMB45, pancytokeratin, desmin, SMA, CD31, CD34, ERG, tyrosinase
- Given the clinical history, the morphologic and immunophenotypic findings were found consistent with malignant melanoma of metastatic origin
- Further testing revealed positivity for BRAF VE1 and BRAF V600E, further confirming the diagnosis

DISCUSSION

- Clinical presentation and histopathology of metastatic melanoma vary and may make diagnosis difficult
- A variety of IHC markers that help characterize metastatic melanoma now exist: S100, SOX10, HMB-45, Melan A/Mart-1, tyrosinase, Ki-67/Mib-1, MITF, Vimentin among others
- SOX10 is a transcription factor involved in differentiation of neural crest cells to melanocytes, and is suggested to be superior in regards to sensitivity, specificity, staining intensity and ease of interpretation compared to S100 and others

CONCLUSION

- This case is a unique presentation of MM that appeared 10 years after the primary lesion was treated with Mohs and interferon
- Although the lesion appeared vascular in nature, both clinically and surgically, the positivity for the SOX-10 marker and the clinical history helped hone the diagnosis of malignant melanoma of metastatic origin

REFERENCES