



# NEUROTROPIC MELANOMA

## Neurotropic melanoma in the hand with proximal extension throughout the median and radial nerves

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### Objective

- Neurotropic Melanoma (NM) is an uncommon type of cutaneous melanoma, less than 2%. It extends through out the perineural sheath or intraneural structures<sup>1</sup>.
- Although locally aggressive, tendency towards nodal invasion and metastases are less common than in conventional melanoma. Over half of the NM lesions are found on the neck and head<sup>2</sup>.
- **We present an uncommon case of neurotropic melanoma in the hand with proximal extension throughout the median and radial nerves.**
- Occasional reports of NM involving the median nerve had been published to our knowledge<sup>3</sup>.

### Methods

- A 57 year old male patient was referred to our clinic 16 months after having received treatment at another facility, where he underwent amputation of the right thumb at the MPJ for a malignant epithelioid melanoma.
- A right axillary lymphadenectomy was also performed due to a massive axillary node and capsular invasion.

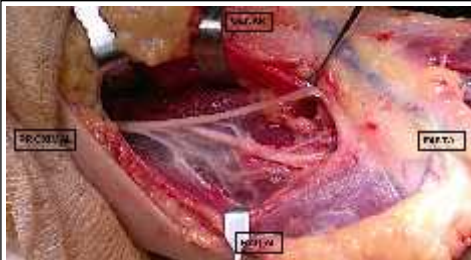


**Figure 1** Initial presentation of the hand. 2 solid masses were identified.

- At our center, two solid painful masses (figure I) were palpated. Incisional biopsies, revealed **tumor recurrence as a neurotropic melanoma.**
- According to the oncologic staging and a multidisciplinary committee evaluation, **palliative surgery was recommended for a Stage III (AJCC) with the objective of obtaining a stage of free macroscopic disease.**



**Figure 2** Pigmented median nerve. 5 cm of macroscopic margins free of disease were obtained.



**Figure 3** Radial sensory nerve: dissected proximally until 2 cm of macroscopic margins free of disease were achieved.

### Results

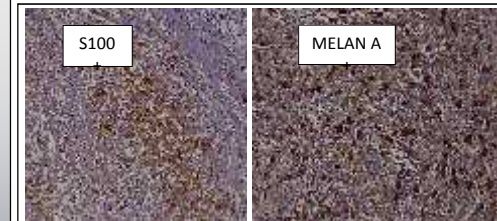
- Resection through out the median and radial sensory nerves was performed.
- A 2 cm macroscopically disease-free margin was obtained at the elbow for the radial nerve conserving the motor branch (figure II). And a 5 cm for the median nerve (Figure III).
- **Although recommended safe macroscopic margins, subsequent histology revealed positive margins for both nerves.**
- Adjuvant radiation was performed.
- Postoperatively the patient experienced **reduction of pain from 10 to 3 (VAS)**, and improved hand function. Quick **DASH decreased from 84 to a 48 score.**
- 16 months postoperative: painful solid mass at the level of the elbow aroused as recurrence of the neurotropic tumor. Further palliate surgery needs to be performed in the patient.



**Figure 4 and 5** Macroscopic image of the pathologic excised median and radial sensory nerves

### Conclusions

- **Neurotropism**, characteristic of NM, is **associated with deep invasion at the primary site and positive margins** after excision due to its peri and intraneural extension.
- A multidisciplinary approach is indicated in the treatment of this extremely rare disease in the hand.
- In this patient a palliative treatment, with a stage of free macroscopic disease improved pain and hand function for a limited period of time.
- **Local aggressiveness of this tumor makes it difficult to obtain a durable palliative treatment.**



**Figure 6** Positive S100 and Melan-A in the histologic nerve samples

### Bibliography

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