Primary melanoma of the cornea: a rare case report

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Case presentation (I)

PRESENT ILLNESS:

- 84 y. o. woman presented to us with pain, inability of complete eyelid closure and gradual deterioration of VA in her RE

HISTORY:

- **Ophthalmic**
  - OD: cataract surgery 3 years before
  - Unspecified postoperative complication
  - A pigmented lesion, developed 1 year ago with gradual growth

- **General**
  - Arterial hypertension
  - Adrenal adenoma
  - Hiatus hernia
  - Right facial nerve paresis for the past 25 years
Case presentation (II)

OPHTHALMIC EXAMINATION OD

- BCVA: OD 3/10 (head tilted to the right)
- Slit-lamp: circular corneal pigmented lesion, 4x6mm, clearly demarcated and surrounded by clear cornea of over 1mm.
- Feeder vessels passed through the limbus to the lesion.
- PC IOL
- IOP measurement, gonioscopy and fundoscopy impossible

OPHTHALMIC EXAMINATION OS

- BCVA: OS 9/10
- IOP: 14 mmHg
- Incipient clouding of OS crystalline lens
- IOP, gonioscopy and fundoscopy: normal
Preoperative U/S

A/B - scan and UBM. No other pathology detected
(Courtesy of Dr Miltos Balidis - OPTHALMICA Eye Institute)
Preoperative AS-OCT
Other examinations and differential diagnosis

OTHER EXAMINATIONS
(All founded to be normal)

- CBC
- Hep. Enzymes, ALP, LDH, K, Na, Ca
- Chest X-ray
- MRI brain - orbits
- U/S (upper abdomen and pelvis)
- Bone scan

DIFFERENTIAL DIAGNOSIS:

- Papilloma
- Naevus
- Squamous Cell Carcinoma
- Primary Acquired Melanosis (PAM)
- Malignant Melanoma

Surgical excision
Postoperative results

1 day post-op. (BCVA: 4/10)

6 weeks post-op. (BCVA: 6/10)

2 months post-op. (BCVA: 6/10)

AS-OCT 2 months post-op.
Histologic examination

- Corneal tissue is invaded by a neoplasm regarding the chorioepithelial junction and the underlying fibrous tissue on its full thickness
- The tumor cells contained numerous intracytoplasmic melanin granules
- Immunohistochemically, the antibodies HMB45, Melan-A and Ki-67 proliferation marker were noted as positive
- The case was diagnosed as malignant melanoma of the cornea
- The pagetoid spread is indicative of a primary tumor

(Courtesy of Prof. P. Chitiroglou and Dr. S. Tzorakolefteraki - Pathology Department of A.U.TH.)
Since 1892 there have been recorded only fifteen (15) such incidents in the international medical literature to date [4-18]

PATHOGENESIS:

- Labor invasive complicated surgery
- Penetrating trauma of the cornea
- Basal cells of the corneal epithelium are potential melanoblasts
- Melanin in Hudson - Stahl’s lines
- Schwannian cells of the corneal nerves

CORNEAL MELANOMA MANAGEMENT:

- Surgical excision and biopsy
- Postoperative topical chemotherapy (MMC, 5-FU or IFN)

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Thank you very much for your attention!