

Parkinson's Disease and Ocular Melanoma in Veterans

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Objective: To determine the coexistence of ocular melanoma with Parkinson's disease (PD), in Veterans, using electronic health records (EHR).

Background: Cutaneous malignant melanoma is considered to be more common in PD patients. However, the association of non-cutaneous melanoma, e.g. ocular melanoma, with PD is less clear. We identified two cases of ocular melanoma in a recent chart review study (unpublished data) while exploring the association of PD with malignant melanoma among Veterans within VA integrated service network 16 (VISN 16). This study was designed to determine the coexistence of ocular melanoma (as a subgroup of malignant melanoma) with PD, in the same population, by expanding the search criteria to include ocular malignancy diagnostic codes.

Methods: Electronic medical records for VISN 16 during the period of 10/01/1997 to 09/30/2007 were queried for diagnosis of movement disorders, malignant melanoma and ocular malignancy, based on ICD 9 codes. Out of 504 charts with dual diagnosis of malignant melanoma and movement disorders, 59 cases had ICD 9 codes for ocular malignancy. These charts were further reviewed for accurate movement and ocular diagnosis.

Results: Nine cases of ocular melanoma were identified. Two with comorbid diagnosis of idiopathic parkinsonism, one with drug induced parkinsonism, two each with Essential Tremor and non-specific tremor. Two cases were miscoded for a movement disorder. 40 cases were miscoded as ocular malignancy despite having benign lesions, 9 patients had non-melanoma ocular malignancy, while one chart was inaccessible.

Methods

A previous chart-review of movement disorders and melanoma was expanded to add the ICD9-CM code for eye cancer (190.x) after 4 eye melanoma cases were found with coding for malignant melanoma of skin (172.x).

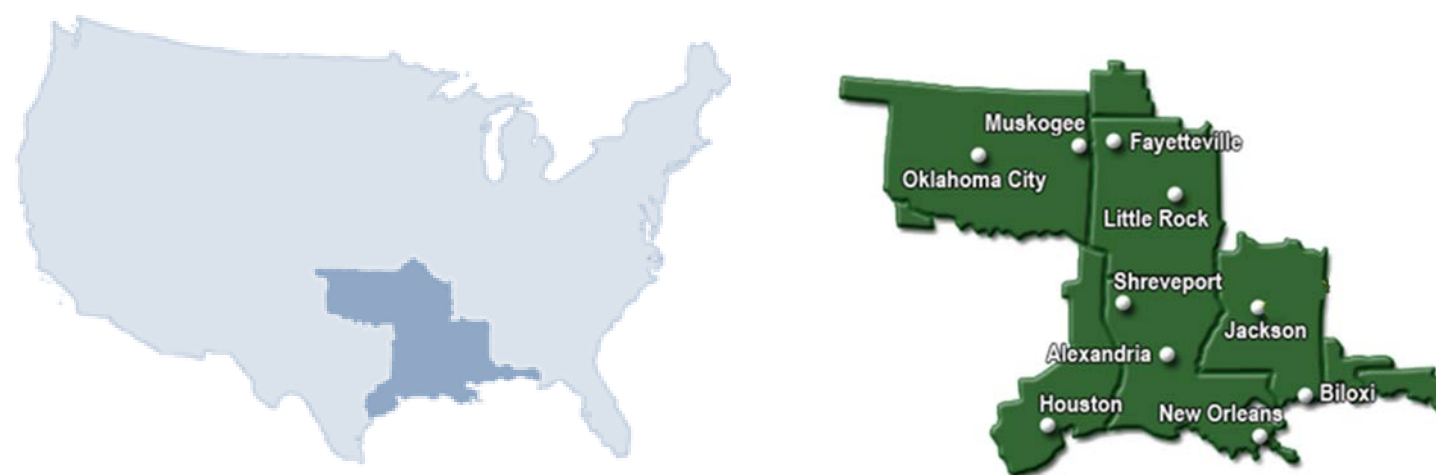
ICD-9CM codes for movement disorders and melanoma included in the new search

332.0	Parkinson's disease	172.x	Malignant melanoma of the skin
332.1	Secondary parkinsonism	V10.82	Personal history of malignant melanoma of skin
333.1	Essential tremor	190.x	Malignant neoplasm of the eye
333.0	Basal ganglia disorders		
781.0	Tremor NOS		

Movement disorder diagnoses for 4 eye melanoma cases

2	Parkinson's disease
1	Drug induced parkinsonism
1	Tremor

Area served by the 10 medical centers included in the chart review



In addition to the 4 previously identified cases, an additional 55 charts were reviewed for subjects with codes for both eye cancer and a movement disorder.

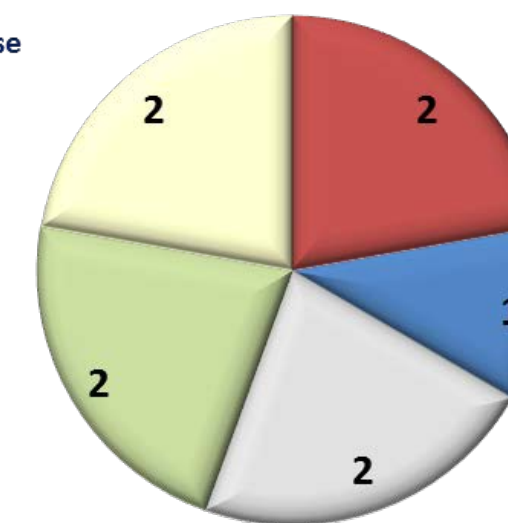
Results

59 cases with ICD-9 CM codes for both a movement disorder and eye cancer were reviewed.

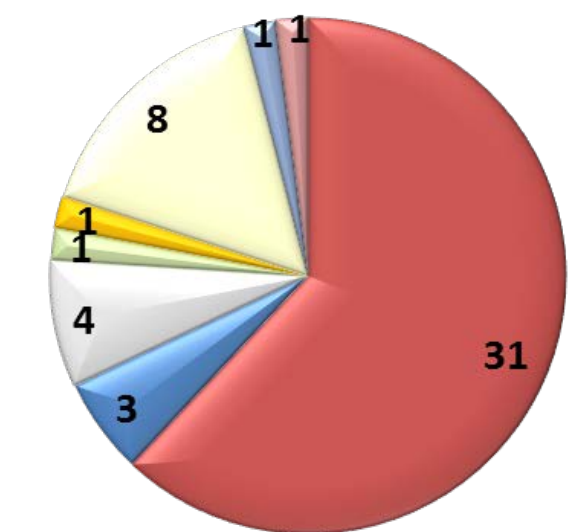
Eye melanoma cases
4 initial + 5 additional

No evidence of eye melanoma
49 reviewed + 1 unavailable

■ Parkinson's disease
■ Drug-induced parkinsonism
■ Tremor
■ Essential tremor
■ Miscoded



■ Choroidal nevus/nevi
■ Conjunctival/corneal intra-epithelial neoplasia
■ Squamous cell carcinoma (SCC)
■ SCC with melanoma elsewhere
■ Lacrimal cancer
■ miscoded
■ Melanoma with metastasis, not of eyes
■ Unavailable record



- All true eye melanoma cases had eye cancer codes, (190.x or V10.84).
- Only one of the 2 miscoded cases would have been found with the addition of the eye cancer code (190.x), all others had at least one occurrence of skin melanoma codes 172.x or V10.82.
- All of those with PD+eye melanoma & DIP+eye melanoma had at least 1 occurrence of the PD ICD-9 CM code 332.0.
- The addition of eye cancer (190.x) plus other movement disorder codes (332.1, 333.0, 333.1, 781.0) to the search criteria for Parkinson's disease and eye melanoma cases did not find any additional cases of PD with eye melanoma in our study population.

Conclusions: Only two cases of ocular melanoma were found to co-exist with idiopathic parkinsonism in a Veteran population, using these search criteria, similar to what was noted for other movement disorders. However, the miscoding of benign ocular conditions with ocular malignancy raises the question of possible miscoding of ocular melanoma with benign ocular diagnoses. Hence, we plan to expand our search criteria by including codes for benign ocular lesions to complete our query and resolve the above mentioned coding concern.