Accepted Manuscript

Conjunctival Tumors in 5002 Cases. Comparative Analysis of Benign versus Malignant Counterparts. The 2016 James D. Allen Lecture

Carol L. Shields, M.D, Adel E. Alset, M.D, Nina S. Boal, B.A, Mairghread G. Casey, B.S, Austen N. Knapp, B. S, Jordan A. Sugarman, B.S, Marisa A. Schoen, B.A, Phillip S. Gordon, B.A, Alexzandra M. Douglass, B.S, Kareem Sioufi, M.D, Emil A.T. Say, M.D, Jerry A. Shields, M.D.

PII: S0002-9394(16)30497-4

DOI: 10.1016/j.ajo.2016.09.034

Reference: AJOPHT 9916

To appear in: *American Journal of Ophthalmology*

Received Date: 2 August 2016

Revised Date: 27 September 2016

Accepted Date: 28 September 2016

Please cite this article as: Shields CL, Alset AE, Boal NS, Casey MG, Knapp AN, Sugarman JA, Schoen MA, Gordon PS, Douglass AM, Sioufi K, Say EAT, Shields JA, Conjunctival Tumors in 5002 Cases. Comparative Analysis of Benign versus Malignant Counterparts. The 2016 James D. Allen Lecture, *American Journal of Ophthalmology* (2016), doi: 10.1016/j.ajo.2016.09.034.

Abstract

Purpose: To evaluate frequency of conjunctival tumors in all ages and compare benign versus (vs) malignant counterparts.

Design: Retrospective series.

Methods:

Setting: Tertiary referral center

Study population: 5002 patients

Observation: Clinical features

Main Outcome Measure: Differentiation benign from malignant counterparts

Results: The tumor was benign (52%), premalignant (18%), or malignant (30%). Malignant tumors included melanoma (12%), squamous cell carcinoma (9%), lymphoma (7%), and others. Comparison of PAM vs melanoma revealed melanoma with greater median patient age (54 vs 61 years, $p<0.0001$), male sex (35% vs 49%, $p<0.0001$), location in fornix (2% vs 6%, $p=0.0016$) and tarsus (1% vs 4%, $p=0.0018$), larger median basal diameter (6 vs 8 mm, $p<0.0001$) and thickness (<1 vs 1 mm, $p<0.0001$), and intralesional cysts (0% vs 7%, $p<0.0001$), feeder vessels (10% vs 48%, $p<0.0001$), intrinsic vessels (4% vs 33%, $p<0.0001$), and hemorrhage (<1% vs 3%, $p=0.0001$). Ccomparison of CIN vs SCC revealed SCC with greater diffuse involvement (1% vs 8%, $p<0.0001$), and larger median basal diameter (7 vs 8 mm, $p<0.0001$) and thickness (1 mm vs 2 mm, $p<0.0001$).Comparison of BRLH vs lymphoma revealed lymphoma with greater median patient age (50 vs 61 years, $p<0.0001$), fornix location (32% vs 54%, $p<0.0001$), larger median basal diameter (10 vs 20 mm, $p<0.0001$) and less involvement of nasal region (50% vs 23%, $p<0.0001$).

Conclusion: In an ocular oncology practice, conjunctival tumors are benign (52%), premalignant (18%), or malignant (30%). Malignant tumors tend to occur in older patients and demonstrate greater basal diameter and thickness, compared to benign counterparts.