

Tumor-Associated Tissue Eosinophilia

(TATE)

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(pilot)

(Mast Cell)

Squamous Cell)

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(Carcinoma, SCC

SPSS

(version 11.5)

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ANOVA t-test

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H&E

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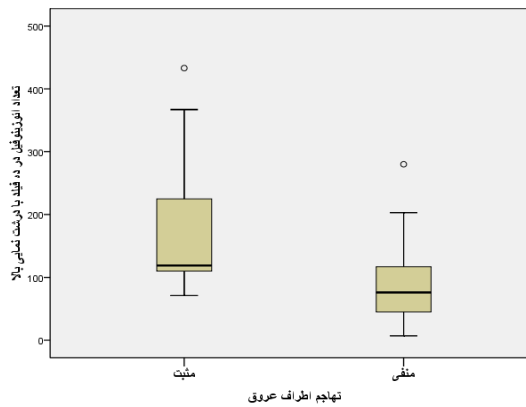
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Box-Plot

SCC

Ishibashi .

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Horiuchi

Alrawi

Ohashi

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Dorta

Gao

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(stage)

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Spiegel

Horiuchi

Elpek

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Ayhan

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Basal Cell)

(Carcinoma, BCC

BCC

SCC

BCC

SCC

SCC

SCC

Lowe

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1. Cormier SA, Taranova AG, Bedient C, Nguyen T, Protheroe C, Pero R, Dimina D, Ochkur SI, O'Neill K, Colbert D, Et Al. Pivotal Advance: Eosinophil Infiltration Of Solid Tumors Is An Early And Persistent Inflammatory Host Response. *Journal Of Leukocyte Biology* 2006; 79: 1131-1139.
2. Costello R, O'Callaghan T, Sébahoun G. Eosinophils And Antitumour Response. *Rev Med Interne* 2005; 26 (6): 479-84.
3. Dorta RG, Landman G, Kowalski LP, Lauris JRP, Latorre MRDO, Oliveira DT. Tumour-Associated Tissue Eosinophilia As A Prognostic Factor In Oral Squamous Cell Carcinomas. *Histopathology* 2002; 41: 152-157.
4. Alrawi SJ, Tan D, Stoler DL, Dayton M, Anderson GR, Mojica P, Douglas W, Hicks W Jr, Rigual N, Loree T. Tissue Eosinophilic Infiltration: A Useful Marker For Assessing Stromal Invasion, Survival And Locoregional Recurrence In Head And Neck Squamous Neoplasia. *Cancer J* 2005;11(3):217-25.
5. Hamilton SR, Aaltonen LA (Eds.): *World Health Organization Classification Of Tumours. Pathology And Genetics Of Tumours Of The Digestive System*. Lyon; IARC, 2000 (Reprinted In 2006): 11.
6. Lorena SC, Dorta RG, Landman G, Nonogaki S, Oliveira DT. Morphometric Analysis Of The Tumor Associated Tissue Eosinophilia In The Oral Squamous Cell Carcinoma Using Different Staining Techniques. *Histol Histopathol* 2003; 18(3):709-13.
7. Horiuchi K, Mishima K, Ohsawa M, Sugimura M, Aozasa K. Prognostic Factors For Well-Differentiated Squamous Cell Carcinoma In The Oral Cavity With Emphasis On Immunohistochemical Evaluation. *J Surg Oncol* 1993; 53 (2): 92-6.
8. Gao J, He Y, Wu L. The Clinical Analysis Of Eosinophil Infiltration In Human Squamous Cell Carcinoma Of Buccal Mucosa. *Hua Xi Kou Qiang Yi Xue Za Zhi* 1997; 15 (3): 228-9.
9. Sassler AM, McClatchey KD, Wolf GT, Fisher SG. Eosinophilic Infiltration In Advanced Laryngeal Squamous Cell Carcinoma. *Laryngoscope*. 1995 Apr; 105 (4 Pt 1): 413-6.
10. Spiegel GW, Ashraf M, Brooks JJ. Eosinophils As A Marker For Invasion In Cervical Squamous Neoplastic Lesions. *Int J Gynecol Pathol*. 2002 Apr; 21(2): 117-24.
11. Spiegel GW. Eosinophils As A Marker For Invasion In Vulvar Squamous Neoplastic Lesions. *Int J Gynecol Pathol*. 2002 Apr; 21 (2): 108-16.
12. Ayhan A, Altıntaş A, Tuncer ZS, Küçükali T, Yüce K. Prognostic Value Of Mitotic Activity, Eosinophilic And Inflammatory Reaction In Stage I Cancer Of The Uterine Cervix. *Eur J Surg Oncol* 1992; 18(3): 264-6.
13. Rancić G, Petrović S, Stanojević M, Petrović A, Trajkovski S. Numerical Density Of Eosinophilic Leukocytes In Skin Basal And Squamous Cell Carcinomas. *Srp Arh Celok Lek* 1994; 122 (Suppl 1): 84-6.
14. Lowe D, Fletcher CD, Shaw MP, Mckee PH. Eosinophil Infiltration In Keratoacanthoma And Squamous Cell Carcinoma Of The Skin. *Histopathology* 1984; 8 (4): 619-25.
15. Ishibashi S, Ohashi Y, Suzuki T, Miyazaki S, Moriya T, Satomi S, Sasano H. Tumor-Associated Tissue Eosinophilia In Human Esophageal Squamous Cell Carcinoma. *Anticancer Res* 2006; 26 (2B): 1419-24.
16. Ohashi Y, Ishibashi S, Suzuki T, Shineha R, Moriya T, Satomi S, Sasano H. Significance Of Tumor Associated Tissue Eosinophilia And Other Inflammatory Cell Infiltrate In Early Esophageal Squamous Cell Carcinoma. *Anticancer Res* 2000; 20 (5A): 3025-30.
17. Elpek GO, Gelen T, Aksoy NH, Erdog˘An A, Dertsiz L, A Demircan, N Keles. The Prognostic Relevance Of Angiogenesis And Mast Cells In Squamous Cell Carcinoma Of The Oesophagus. *J Clin Pathol* 2001;54:940-944.

Survey the Association between Tissue Eosinophil Counts and Prognostic Factors of Esophageal SCC

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Abstract

Introduction: According to World Health Organization reports, the esophageal Squamous Cell Carcinoma (SCC) is most frequent in north-east of Iran. Infiltration of inflammatory cells, such as eosinophils, may play an important role in biologic behaviors of tumors.

Objective: Survey the association between tissue eosinophil counts and prognostic factors of esophageal SCC.

Materials and Methods: This analytical cross-sectional study was conducted applying a convenience sampling. The archive of pathology department of Imam-Reza Hospital, Mashhad, between 2005-2007 was used. Number of eosinophils, and also mastocytes, surrounding the tumoral cells was estimated using the standard method of Tumor-Associated Tissue Eosinophilia. Mean numbers of eosinophils and mastocytes between different groups of prevascular or preneural invasion, lymph node metastases, tissue differentiation status and depth of invasion were tested statistically.

Results: Twenty-five (61.0%) men and 16 (39.0%) women with a mean (Standard Deviation, SD) age of 53.6 (± 14.78) were studied. Mean (SD) number of eosinophils and mastocytes were 115.4 (± 88.16) and 30.7 (± 26.03) respectively. Mean number of eosinophils was higher in patients with prevascular invasion (183.2 vs. 86.9) ($p=0.002$). No other statistically significant association was found.

Conclusion: Excess number of tissue eosinophils indicates the tendency towards more prevascular invasion. It is recommended to follow these patients intensively.

Key words: Carcinoma, Squamous Cell/ Eosinophil/ Esophagus/ Prognosis

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