

The immunopathology of regression in keratoacanthoma

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Background: Keratoacanthoma (KA) has a tendency for either progression or spontaneous regression. Regression is a phenomenon present in a variety of cutaneous lesions. It is likely that certain immunologic mechanisms explain the phenomenon of spontaneous regression occurring in KA. Causes and detailed mechanism of this regression are still not completely elucidated. Recent studies suggested that the tumor regression is dependent mainly on the stromal immune response.

Aim: As a first step in confirming or refuting this hypothesis, we did an immunohistochemical study of KA. Also we correlated between the tumor size, rate of proliferation and stromal infiltration by cytotoxic T lymphocytes which release granzyme-B.

Methods & Results: This is a case series study done on 20 cases of KA that were examined and clinicopathological findings were reviewed. Immunohistochemical stains using PCNA, P53 and granzyme-B were done. PCNA showed positive staining in all cases (100%) with significant positive correlation with the tumor size (0.5, $p < 0.02$). P53 was positive in 16 cases (80%) with highly significant positive correlation with the tumor size (0.63, $p < 0.0028$). Granzyme-B was positive in the stromal lymphocytes and histiocytes only in 6 cases (30%) with highly significant negative correlation with the tumor size (-0.79, $p < 0.0001$). Negative correlation between PCNA overall score and granzyme-B was evident (-0.37) and between P53 overall score and granzyme-B also (-0.38). The mean total score for granzyme-B was higher (1.04+0.23) in tumors less than 1 cm in size if compared with that in tumors more than 1cm in size (0.66+0.12).

Conclusion: The increased release and/or activity of granzyme-B as CTL-mediated response were considered to be a central effector mechanism in tumor regression in KA.

Speaker Biography

Fathia A Bayoumi is graduated from the faculty of medicine, Ain-Shams university (MBBCH), Masters and PhD in Pathology from Zagazig University, Egypt is working in Medcare hospital United Arab Emirates as a consultant histopathologist. She worked as the Chief Academic Officer and Head of Department of Pathology, Dubai Medical College, United Arab Emirates.. In addition, she obtained a Masters in Health Professions Education from Maastricht and Suez Canal University. With her vast experience as Professor and Head of Pathology department, in addition to her role as Chief academic officer, Prof. Fatehia is acclaimed to be one of the best teachers by the students. Having more than twenty four years of experience in medical education in the UAE, she has pioneered many significant improvements in medical education in DMC. During the two years, when she served as Dean of College, she geared the college through several key milestones such as integration of curriculum and international accreditation, way back in 1998, taking DMC to the forefront of integrated teaching in the country. She continues to give leadership to the academic affairs, continuously updating the curriculum and introducing innovative tools of education. Her urge to excel has taken the educational system of the college to the next level through sharing of best practices and strategic partnerships. Prof. Fathia brings to the college, the latest in international health sector through her participation in international societies like International Academy of Pathologists. Prof. Fatehia enjoys a respectable position as one of the top academic pathologists in the country. Her involvement in the Emirates Pathologists' Association has led to DMC hosting their meeting on several occasions. She is a member of international academy of pathologists -Arab Division (IAP-AD), in United States and Canadian Society of Pathologists (USCAP) and Emirates Medical association (EMA). Prof. Fathia is an avid researcher and serves as a research guide and reviewer to several groups of students and doctors. Her areas of research include immunohistochemistry and genetic profiles of different disorders, in which she has published several research articles. She has participation as attendance, speaker, presenter in 38 scientific conferences and workshops and published 37 scientific papers in reputable journals. Prof. Fathia Ali Bayoumi, is the Secretary General of the Medical Research Fund (MRF), DMC which aims to improve the standards of healthcare nationally and regionally through research programs. The Medical Research Fund is highly dependent on a national effort that engages individuals, groups and the corporate sector to usher in a new era of medical achievement in the United Arab Emirates. The Medical Research Fund was launched in April 2008 and received a lot of medical research proposals out of which 12 have been accepted for the fund.

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