

Immune Dynamics In Tumors And Its Modulation For Targetted Immunotherapy- The Novel Aspect Of Malignancy Therapeutics

Dr. Gireesha, India.

Abstract :

According to the theory of immune surveillance, the immune system patrols the body to recognize and destroy not only invading pathogens but also neoplastic host cells. When tumour cells escape immune surveillance and grow too large for the immune system to kill, malignancy occurs. Various studies demonstrate that tumours having lymphocytic infiltration have a better prognosis than those that do not. An increased incidence of malignancies is reported in immunodeficient patients and patients in the extremes of age. All these evidences lead towards an immunological basis of malignancies, and further immunotherapy, or cancer treatments designed to boost the body's natural defences to fight cancer by improving or restoring the function of immune system. Immune response cells target various tumour antigens, altered glycoproteins, glycolipids, etc. to keep tumour cells in check. On the other hand, manipulation of immune checkpoint modulators as well as alteration of tumour microenvironment (by overproduction of growth factors and cytokines) are some of the mechanisms used by tumour cells to escape this immune surveillance. Immunotherapy targets various steps of this complex immune interplay and dynamics to effectively control tumour proliferation. This has been successfully utilised in haematological malignancies (leukemias and lymphomas), melanomas, breast cancer (especially after the advent of immunological classification of breast cancer), as well as neoplasms of other body systems where immunological classification has enhanced the conventional classification. In breast carcinoma, correlation of the recent immunophenotypes with conventional prognostic parameters, such as BR grade, stage & lymph node status of the tumour, as well as with new markers like Cyclin D1 validates its routine applicability in prognostification as well as in development of new therapeutic approaches for breast cancer. These therapies can help in expanding the achievements of ideal chemotherapy regimens and consequently are capable of delivering an incremental development in patient management over the current standards.

Keywords:

immunotherapy, tumour microenvironment

Biography:

Gireesha has completed her Bachelor of Medicine and Bachelor of Surgery (MBBS) degree and postgraduation (MD) in Pathology from New Delhi, India. She is also a holder of Diplomate of National Board (DNB) in Pathology. Her areas of research interest include breast pathology, immunopathology and female genital tract pathology. She has published several case reports and papers in reputed international journals.

Note: - This Work Is Partly Presented at EURO Microbiology 2021 on August 19-20, 2021. Berlin Germany.