

Nurses

1408

NEW MODALITIES IN CANCER THERAPY

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Tumors express antigens that are potential targets for immune rejection by the host. The participation of T and B lymphocytes, natural killer cells and macrophages has been established and their mechanisms of action elucidated. Moreover, it has been found that a whole set of defined molecules, called interleukins, are produced by these cells and participate in their reciprocal interaction. IL-2 is a glycoprotein that plays a central role in immune regulation. The use of IL-2 in the treatment of cancer, either alone or with lymphokine activated killer cells (LAK) or tumor infiltrating lymphocytes (TIL) is based on immune modulation, an entirely new therapeutic approach which has been partially successful. Other interleukins, including IL-4 and IL-6 seem to have great importance in the future of immunotherapy.

Interferons are a family of substances with antiproliferative and immune modulating properties. Genetic engineering has permitted their production in considerable amounts and they are under active clinical research for their evaluation as antitumor therapy. We have established that THF- γ 2 a synthetic thymic hormone, originally obtained from calf thymus is an immunomodulator and acts upon T lymphocytes and its administration is followed by proliferation and differentiation of the various T cell subsets. Chemotherapy in combination with THF- γ 2 is more effective than is chemotherapy alone. THF- γ 2 also increases the survival time of mice. AS101 is another immune modulator developed in Israel.

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THE ROLE OF THE NURSE IN INFUSIONAL CHEMOTHERAPY IN PATIENTS WITH EARLY BREAST CANCER

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Most women with early operable breast cancer would prefer to have breast conserving surgery as opposed to mastectomy. We are investigating a novel Primary Medical Therapy (PMT) using a chemotherapy regimen containing a 6mth continuous infusion of 5-fluorouracil via a Hickman line and ambulatory pump with 3 weekly bolus injections of Epirubicin and infusion of Cisplatinum. We have treated 34 patients with large operable tumours who would have needed mastectomy. All patients responded and only one has had a mastectomy. The role of the nurse is important in the following areas:

- 1) Discussing diagnosis and treatment plan.
- 2) Teaching patients to care for the Hickman line and Ambulatory pump.
- 3) Providing support for patient and family and dealing with psychological problems.

Nursing intervention is important in the early recognition and avoidance of side-effects which may be severe (WHO grade 3/4) as follows: Hickman infection 15%; thrombosis 9%; alopecia 30% (despite scalp cooling); stomatitis 3%; emesis 21%; skin reactions 12%; other side-effects including lethargy and hot flushes which occur to some degree in many patients. This provides an interesting challenge to nurses in planning and evaluating the care and support needed to help these patients through their treatment.

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NEW DEVELOPMENTS IN CANCER TREATMENT

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Cancer treatment has made tremendous advances in the last 20 years. This has been made possible due to the progress of fundamental research, increased funding of research projects and the efforts of clinicians, nurses and patients who are willing to participate in clinical trials.

In addition to the clinical investigations of potential new anti cancer drugs like the taxanes, much effort has been placed in the development of supportive treatment such as growth factors, anti-emetic drugs, organ protective agents and the harvesting of peripheral stem cells for transplantation (PST). These developments have made it possible to treat cancer patients with higher dosages of cytostatic drugs, which aim for improvement of the therapeutic index.

In immunotherapy, perfusions with Tumor Necrosis Factor (TNF) in combination with metfalan are demonstrating dramatic results and monoclonal antibodies are being used for diagnostic and therapeutic purposes.

In surgery and radiotherapy progress has been made in reducing the extent of damage as a result of the treatment. Multi-modality therapy is often used to achieve optimal benefits in response and improve disease free survival.

All of these new developments have many implications for health care providers and nurses in particular. Beside the ethical dilemma's and their impact on patient care, protocol-specific nursing activities such as nursing assessment, intervention, patient and family education and support have to be identified in the early stages of protocol development. This requires nurses to be actively involved in these new developments. We must ask for and be willing to participate in these new developments. Here in lies our professional responsibility, and our specific role in the progress and development of new cancer treatments.

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THE ROLE OF THE NURSE IN A NEW TECHNOLOGY IN ONCOLOGY

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Hyperthermia (HT) consists of the use of heat as a therapeutic agent. Elevation of temperature in the region of 42°C has an antitumor effect on its own, and when combined with chemotherapy (CT) and/or radiotherapy (RT) it potentialises their action. Application of an electromagnetic (EM) field to the tumor localisation, with the aid of 3 external electrodes allows deep loco-regional heating. To evaluate the clinical potential of HT, we have treated several patients in a phase I, II therapeutic trials. The role of the nurse is very important in the medical team using this new treatment method.

A HUMAN ROLE : The patients are often in an advanced stage of their illness, for which they have received multitreatments. As a result of this, and faced with a new little-known therapy, the patients manifest a certain degree of anguish. One of the principal roles of the nurse is to inform the patients and his relatives about hyperthermia and the treatment procedure. The presence of the nurse is essential during the treatment period which lasts between 1.5 and 2 hours, three times a week.

A TECHNICAL ROLE : It is necessary to be thoroughly familiar with the functioning of the hyperthermia apparatus, for the correct surveillance of the treatment and to be able to adapt the different conditions for each treatment, as well as to assume the responsibilities of the usual treatments, such as chemotherapy.

CONCLUSION : Hyperthermia is a good example of the evolution of the role of the nurse, who should adapt herself to a new technology used by the medical team.