The colorectal cancer clinical nurse specialist in chemotherapy

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Over the past decade, chemotherapy has been increasingly used in patients with colorectal cancer. The impact of treatment on the patient can be substantial both physically and psychologically. The colorectal nurse specialist plays an important role in providing support and advice for the patient and their families, and also has a valuable role in coordinating the multidisciplinary team.

Colorectal cancer is a major cause of mortality and morbidity in the Western countries. Bowel cancer remains the second most common cause of cancer deaths in the UK after lung cancer, and the overall 5-year survival is less than 40%. In 1993 there were over 32 000 new cases of colorectal cancer diagnosed and in 1997 there were over 17 000 deaths (Cancer Research Campaign, 1999). Potentially curative radical resection of the primary tumour could be carried out in over three quarters of the patients. However, the prognosis associated with this malignancy remains poor, with at least 50% of patients dying of subsequent metastatic disease within 5 years. Adjuvant therapy with either chemotherapy, radiotherapy or both has been used in conjunction with surgery to improve the surgical results (Wils, 1998).

CHEMOTHERAPY

Chemotherapy has an important role in the management of colorectal cancer. Cytotoxic chemotherapeutic agents act primarily on macromolecular synthesis or function of DNA, RNA or proteins. This causes chemical and biological changes that prevent cell division and eventually lead to cell death. Cytotoxic chemotherapy cannot distinguish between malignant and normal cells, therefore normal cells are also affected. It is the cells that divide most rapidly that sustain the highest level of damage. However, normal cells will recover quicker than the malignant cells and therefore the majority of side effects are short term. Cytotoxic drugs are presented in various forms for clinical use and these include intravenous, oral, intrathecal, intravesical, intra-arterial, intramuscular, subcutaneous and topical application.

ADJUVANT CHEMOTHERAPY

Adjuvant chemotherapy may be defined as treatment given in an attempt to eradicate micro-metastases with the aim of preventing recurrences after potentially curative surgical resection of the primary tumour. Patients with regional lymph node metastases have a high risk of recurrence and death during the 5 years following surgical resection (McDonald, 1999). Several clinical trials have demonstrated improved survival rates for patients receiving adjuvant chemotherapy (Seymour, 1998). Based on the evidence from the meta-analysis of 12 000 patients in the colorectal cancer collaborative group study and another meta-analysis of 39 randomized trials (Dube et al, 1997), the Association of Coloproctology of Great Britain and Ireland recommend that patients with Dukes C (with positive regional lymph nodes) colon cancer should be considered for adjuvant chemotherapy.

The most common chemotherapy regimen used in the UK is weekly 5-fluorouracil (5FU) and folinic acid as per the QUASAR trial (QUASAR Collaborative Group, 2000). Current standards within the UK recommend commencing chemotherapy within 8 weeks of curative resection (Ferns, 1999). Patients attend oncology clinics for 30 weeks to have a weekly intravenous bolus injection. Common side effects are mucositis, neutropenia, nausea, vomiting, diarrhoea, palmar-plantar erythrodysaesthesia and fatigue.

PALLIATIVE CHEMOTHERAPY

Palliative chemotherapy is now offered to an increasing proportion of patients with advanced colorectal cancer. The aims of chemotherapy in this group of patients are to control symptoms

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and maintain or improve quality of life (Seymour, 1998). The recommended treatment for patients with metastatic disease is the modified de Gramont regimen (infusional 5FU and folinic acid). An indwelling central or peripheral line is inserted before starting the treatment. The regimen is infused over 48 hours every 2 weeks. The length of time patients are on this regimen varies between 12 and 24 weeks or until disease progression. There is now evidence that continuing chemotherapy until disease progression may not be beneficial to the patients (Maughan et al, 2001).

Over the last 40 years 5FU has been used alone or in combination as an effective chemotherapeutic agent in the management of colorectal cancer. In the last decade a number of newer agents became available and these consist of drugs such as irinotecan (to be used alone or in combination with 5FU and leucovorin) and oxaliplatin. These new drugs are been evaluated in the ongoing MRC trial, also called FOCUS (Fluorouracil, Oxaliplatin and Irinotecan: Use and Sequencing). A new oral agent capecitabine is now also available and may replace infusional 5FU regimens in the future. These newer agents share common side effects that demand prompt nursing intervention (Viele, 1999).

STIGMA OF CANCER

A diagnosis of cancer can be devastating for patients as it is a disease which is associated with many fears and anxiety. Newly diagnosed patients therefore embark on a physical and psychological journey with an uncertain destination, full of stress, and are in need of hope and support. Provision of information can help these patients regain control over their lives and participate fully with treatment (Sawyer, 2000). A diagnosis of cancer can be one of the most devastating events in a person's life, and the way in which it is communicated can affect the individual's adjustment to the disease and attitude to treatment (Buckman, 1996). The diagnosis will cause feelings of shock, grief and loss of control, as well as considerable uncertainty (Northouse and Northouse, 1987). Mishandling the situation or communicating ineffectively will jeopardise the relationship with the patient and could cause him or her to become mistrustful and suspicious of health professionals (Slevin, 1987).

THE ROLE OF THE COLORECTAL CANCER NURSE SPECIALIST

Specialist cancer nurses form part of the team to support patients through continuous assessment. The clinical nurse specialist will often be the patient's first point of contact with the cancer centre. This contact will then continue throughout the disease treatment process. The clinical nurse specialist provides an all-encompassing service for the patient and their family going through the treatment, staging and monitoring of the disease. McIllmurray (1998) found that:

> **'cancer support nurses were an essential element of cancer service provision and had a valuable coordinating role in the multidisciplinary team'.**

The clinical nurse specialist's service includes providing the support and counselling necessary for this patient group.

Over recent years individuals with advanced forms of the disease have survived longer with the use of palliative chemotherapy and availability of new agents. But survival is still limited so close liaison with local palliative care teams is essential in the early stages of the disease, to ensure that good palliation of symptoms and psychosocial support is in place.

Specialist cancer nursing is acknowledged as an integral component of cancer care. The phrase 'cancer journey' has been used to illustrate a patient's progress through both emotional and physical phases of illness. For some patients the journey could easily be described as a rollercoaster ride. The hopes and expectations of successful treatment may replace the disbelief of diagnosis. The role of the colorectal cancer clinical nurse specialist provides patients with regular support and advice. Cancer affects the whole of the family and is as gruelling for carers as it is for patients. Feelings of guilt, inadequacy, anticipatory grief, selfishness, loss and injustice are difficult to express. Patients feel vulnerable, powerless and out of control as they try to bring some meaning to this event in their lives. McGoldrick (1999) states:

> **'patients long for a degree of normality, a sense of balance and the restoration of a recognisable way of life in the midst of turmoil and change'.**

Specialist cancer nurses can help patients find their way, by assessing how patients are coping and adjusting to the situation, and facilitating the expression of their thoughts and feelings in a safe environment. Sensitive and open communication is essential. It is the clinical nurse specialist's responsibility to provide education and information to the individual receiving chemotherapy so as to allow the patient to make an informed choice as to whether they wish to undertake chemotherapy and to help

cope with potential side effects. Informed consent is a process by which a fully informed individual can participate in choices about their health care. Full informed consent is a decision that is made freely by the individual after full knowledge and understanding of the risks, benefits and available options about various treatment alternatives have been discussed (Hammond, 2002).

Barraclouch (1994) looked at how emotional problems affect cancer patients – some of the factors that contribute to these are poorly controlled symptoms, lack of communication from health-care professionals and fear of being abandoned. To minimize these problems it is important to offer information about their treatment and illness. The information provided must be clear, concise and easy to read. The information should include:

- Specific side effects
- Contact telephone numbers and names
- Dates of appointment(s)
- Frequency and type of monitoring.

The availability of appropriate information has been shown to reduce anxiety about symptoms and side effects. This information can aid the process of adaptation to receiving potential life-saving treatment, and encourage patients to report pertinent toxicities more promptly so that appropriate interventions can be initiated.

Nurse specialists must also disseminate information to colleagues so that patients receive uniformity and high standards of care, informed by up-to-date policies and protocols (Expert Advisory Group on Cancer, 1995). Chemotherapy nurses have a duty to educate themselves so that they are aware of all the benefits and potential risks of the administration of chemotherapy to an individual. They must ensure that information is conveyed clearly and concisely, that individual understanding is assessed and the appropriate steps are taken to ensure full understanding, and that support is given to whatever decision the individual makes.

SPECIFIC PROBLEMS AND NURSING MANAGEMENT

Anorexia

Changes in taste of certain foods can contribute to a decreased appetite in patients receiving chemotherapy. Nursing care of the cancer patient centres around prevention and management related to the disease and its treatment that may adversely affect appetite and nutrition status. Interventions to alleviate unwanted symptoms should be sought as early as possible to promote an increase in appetite and nutritional intake. Nursing interventions to counteract anorexia should aim at minimizing the negative effects of nausea, vomiting, diarrhoea, pain, fatigue, and changes in taste or food preferences. The nurse should promote comfort by providing antiemetics or analgesics while encouraging oral care. The nurse can continually assess the patient's symptoms and the weight of the patient and if necessary refer to the dietician, ensuring that patients benefit from a multidisciplinary approach to care.

Diarrhoea

Management of diarrhoea requires continual assessment by the nurse specialist during chemotherapy. Many patients experience diarrhoea as a symptom of cancer. This may be exacerbated by chemotherapy, causing increased psychological distress. Quality of life can be seriously affected by diarrhoea; the social and emotional costs can be great. Open communication is important and the acceptance of coping behaviours, if constructive, is likewise important. Antidiarrhoea medication can be prescribed and advice can be given on low residue diets and increased oral intake of fluids to prevent dehydration.

Nausea and vomiting

Nausea and vomiting are major problems during chemotherapy treatment. Regular assessment by the nurse and regular use of antiemetics are essential to controlling symptoms. Nurses can become involved in recommending dietary modifications, for example eating cold or room temperature foods, as these give off fewer odours than hot food. Favourite foods should be avoided while the patient is experiencing nausea and vomiting so that aversions to these foods do not develop.

Mucositis

Mucositis caused by chemotherapy can be profound. The pattern of mucositis varies both by drug regimen and its effect on the individual. All patients should receive sufficient information regarding mucositis and the importance of oral hygiene, and the nurse should provide a systemic approach to oral assessment to facilitate early detection and prevent further oral complications.

Fatigue

Chemotherapy and colorectal cancer itself can cause fatigue. This can be a particularly difficult and frustrating side effect, as it often limits the amount of normal activity a patient can

manage. Specific treatable cause such as anaemia if found should be treated. Solutions may be to plan activities or to save energy for favourite activities.

RISK OF INFECTIONS

Bone marrow suppression is caused by rapidly dividing bone marrow tissue that is particularly sensitive to the effects of cytotoxic drugs. The effects of bone marrow toxicities manifest as circulating cells die and bone marrow suppression results in the failure to replace them (Priestman, 1989). Bone marrow suppression manifests with:

- Anaemia (low red blood cell count) which may cause breathlessness and fatigue
- Thrombocytopenia (low platelet count) which may cause bruising and bleeding
- Neutropenia (low neutrophil count) which may cause infections.

The blood count is monitored regularly before chemotherapy and also an interim blood count at 10–14 days post chemotherapy to check the nadir. If the blood counts are found to be low, the patients are contacted to take their temperature at home and advised to telephone the hospital if they develop a fever (>38°C), whether or not they feel unwell.

KEY POINTS

- Colorectal cancer is the major cause of morbidity and mortality in the Western world and is responsible for some 17 000 deaths in the UK.
- Chemotherapy has an important role in the management of colorectal cancer. Adjuvant chemotherapy is recommended for patients with Dukes C colon cancer who had potentially curative resection. Palliative chemotherapy could maintain and improve the quality of life in patients with advanced or metastatic colorectal cancer and should be considered.
- The role of the colorectal cancer clinical nurse specialist provides patients with regular support and advice as the effects of chemotherapy could be demanding.
- The colorectal cancer clinical nurses play an essential part in cancer service provision and have a valuable coordinating role in the multidisciplinary team.
- The colorectal clinical nurse specialist has an increasingly prominent role in the assessment, management, education and coordination of functions for patients receiving chemotherapy.

CONCLUSION

The colorectal clinical nurse specialist has an increasingly prominent role in the assessment, management, education and coordination of functions for patients receiving chemotherapy. The nurse specialist works alongside other health-care professionals to provide an effective, cost-efficient and multidisciplinary approach to colorectal cancer patient care. HM

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