High Standards of Oncology Pharmacy in Practice and Research

Typical features of oncological drug therapy are a tight range of dose and effect and a highly complex treatment regime. Frequently patients are immune deficient, either because of their underlying condition or due to the therapy, or else they suffer from comorbidities. Intensive chemotherapies based on conventional cytostatics, but also new treatment options with typical side effects, call for supportive measures and specialist supervision which comply with guidelines. Cancer outpatients need broad management and counselling in how to use their medication and how to respond to any product-related problems.

Ensuring the quality essential to safe oncological drug therapy requires pharmaceutical expertise. The oncology pharmacist is consequently indispensable as an integrated member of the clinical oncology team. Thanks to the initial and further training they receive and to continuing professional development, oncology pharmacists acquire the best possible expertise for ensuring a safe oncological drug therapy of impeccable quality.

Product procurement

Purchasing the products used in oncology therapies calls for an expert appraisal of the economic benefits in the light of the quality and safety of a drug therapy. Any risks associated with counterfeit goods, inappropriate handling or failed delivery must be minimised as much as possible. Products must be recalled immediately if any defects in quality are identified. Any gaps in delivery must be bridged as well as possible in consultation with the physician in charge of the case. If it proves necessary to draw on imported goods, the pharmacist is responsible for making sure that reliable sources are chosen. It is vital to avoid the use of risky drugs for the sake of saving (possibly not much) money, but optimum use must be made of resources. The use of drugs must always be considered in the light of the treatment process, the suitability of the drug and the period for which it is administered, the nature and frequency of the application and many other factors, and these must all play a part in an overall pharmaco-economic assessment.

Preparation

Cytostatic preparations which are wrongly selected, wrongly labelled, not properly stored or subject to microbiological contamination present a risk that the therapy will fail or that the patient will be harmed. The organisation of the entire process chain is the duty of the oncology pharmacy practitioner; this includes standardisation of the prescription, plausibility testing, procurement, selecting adjuvants, monitoring the preparation environment, the preparation itself, labelling, transportation and storage. Cancer drug dosage can vary considerably depending on the diagnosis. The plausibility check carried out on the prescription by the oncology pharmacist, taking into account all relevant clinical parameters and the patient diagnosis, therefore plays a major role in safe medical treatment. If anything is unclear, this is immediately discussed with the physician who issued the prescription. If a need for consultation arises following prescription, the prescriber and/or patient is given enough relevant information in a comprehensible form to ensure safe use of the drug. The aseptic preparation of infusions, in particular, requires every effort to be undertaken to keep the product germ-free as there is no final sterilisation. The oncology pharmacist has the task of ensuring that an unflawed preparation of impeccable quality is available at the right point in time.

Releasing the drug
An oncology pharmacist makes sure that the required data and labelling are provided when the drug is released. If it needs transporting, he or she will take care that the quality and integrity of the drug are not impaired during this period.

**Information and advice**

The demands made of the pharmacy service during cytostatic therapy are not confined to instructions on correct administration or application. Information must also take account of any possible interaction with other drugs or supportive medication, even those acquired by patients themselves, and of the influence of diet. Given that such products, and any product-related problems or adverse side effects, can have a substantial impact on treatment and on the success of oncological therapies, the provision of detailed information and pharmaceutical support to patients is an important factor in therapeutic success. Competent advice in which physicians and pharmacists concur conveys a sense of therapeutic security, which is in the interest of the oncology patient. Boosting adherence by optimising the multi-professional management of medication, with the involvement of the pharmacist, plays a crucial part in this.

**Applying IT solutions**

The use of IT solutions in logistics, ordering, prescription, testing, preparation, documentation and invoicing can help to enhance therapeutic security. One factor of particular importance is the choice of the right software in the light of local requirements, processes and objectives. Because oncological pharmacists play a key role in the process and have competence in the use of drugs, they work in conjunction with clinical departments and administrative managers to ensure that appropriate, secure, user-friendly software is implemented.

**Quality assurance and guidelines**

Evidence-based algorithms and guidelines are an essential feature of quality assurance when using drugs in tumour and supportive therapies. Oncology pharmacists contribute specialist expertise to the inter-professional drafting of guidelines for the physicians and hospitals they supply. Their participation in therapeutic teams includes attending tumour conferences and working in specialist teams and quality task forces. They also conduct individual patient monitoring and pharmaceutical interventions in a context of collaboration between health professionals (e.g. ward visits and reviews of patient documents). Oncology pharmacists are furthermore involved in implementing, regularly reviewing and further developing quality management systems in their own work environment.

** Provision of courses**

Coordinated information and education strategies are crucial to the correct, quality-assured use of drugs. The safety of patients and care staff dealing with potentially harmful medication is as much a part of this as the right use of the right drug for the right patient at the right time. As specialists in the administration of drugs, oncology pharmacists are committed to devising and offering courses for patients in the correct use of medication and appropriate conduct, and also courses for physicians and nurses.
Further training and continuous professional development

Further training and continuing professional development, like specialisation in specific fields, lay the foundations for the services provided by oncology pharmacy practitioners. Just as important as regular further training for oncology pharmacists is further training for the health professionals they work with, such as pharmacy technicians. Suitable further training and CPD schemes are regularly provided and taken up.

Research and science

Data compiled in the course of the work of the oncology pharmacist can be used to generate observations about applications, to enhance processes and to analyse the optimum use of drugs. In this way, oncology pharmacists can make an active contribution to health services research.