cancer have been treated with PDR brachytherapy in The Finsen Center. For the brachytherapy up to 20 needles are implanted in the tumour. After the implantation the patients are connected to the PDR-microSelektron. PDR brachytherapy is given as a 15–30 minutes pulse every hour over nights. The patients are partially isolated and immobilized for 40–60 hours. The patients need to be taken care of during pauses in the therapy. It is important to find the balance between advanced technology and nursing care. Because of the limited literature available, 2 pilot studies have been made.

Purpose: The purpose of the studies is to ensure and increase the quality of nursing to patient during and after PDR brachytherapy. The goal is to identify and describe the impact of the treatment upon 7 selected issues.

Materials and Methods: In the first pilot study, data from 9 gynaecological patients have been recorded. The selected issues included blood pressure and pulse, technology, pain, fluid balance, obstipation, and side effects after treatment. In the second pilot study, nausea and vomiting in 24 patients with anal and gynaecological cancer have been recorded, according to Common Toxicity Criteria and WHO. The investigations are retrospective and medical records, nursing records, and observation forms have been used.

Results and Conclusion: Apart from pain during the treatment, the studies showed decreased blood pressure, agglutination in the vagina as well as vomiting during the treatment in spite of antiemetics. The new nursing procedures resulting from the two pilot studies will be presented.

1458 POSTER

Arranging the transportation of biologic samples: Beware of the implications!

M. de Boer, V. v Beurden, J. Schoenmakers. *Research nurses, The Rotterdam Cancer Institute (Daniel den Hoed kliniek) and University Hospital Rotterdam, Groene Hilledijk 301, 3075 EA Rotterdam, The Netherlands*

In Clinical Research settings nurses are often the ones arranging or preparing the transportation of blood or tissue samples for diagnostic or research purposes. Legally, they are thus responsible for the shipment, the documentation and the packaging of the goods.

However, they are often uninformed on the legislation concerning the transport and packaging and unaware of the actual responsibilities related to this task.

In our hospital a procedure for shipments was written and the materials needed inventorized. Infectious substances with a low individual and community risk according to the WHO classification of infectious substances risk group 1 are not subject to any transport requirements. Most diagnostic samples are subject to instructions for diagnostic products with a low probability for containing pathogens WHO risk group 2 and 3 (moderate/high individual risk, low community risk).

The transport regulations include the packaging material, the marking, the labelling and the documentation. Transportboxes must be able to withstand a drop test of 1.2 metres, the transported material must be wrapped in absorbant material in a leak-proof inner container. Dry ice requires specific marking and labelling as hazardous material.

The regulations, as will be presented, will provide colleague nurses in similar situations with the information necessary to either meet the challenge or redecide on their involvement in such shipments.

1459 POSTER

Comparison of two types of central venous catheter (CVC) in a population of patients with bone sarcoma

L. Loro, C. Beghelli, M. Tremosini, P. Simoni, L. Spedicato, S. Ferrari, G. Bacci. *Department of Chemotherapy, Istituto Ortopedico Rizzoli, Bologna*

The positioning of central venous catheter (CVC) is nowadays a common modality for patients treated with long antiblastic therapies. This use of catheters implies high costs and complications, which can be prevented by a careful nursing practice and good information for patients. Moreover, the different characteristics of the various types of catheter may play an important role on costs and incidence of complications too.

We wanted to verify the efficacy and safety of two different systems: one with closed tip (A), the second with open tip (B), on a group of patient with bone sarcoma treated with chemotherapy regimens, lasting from 9 to 11 months. Seventy-three patients (24 males, 49 females; median age 14, range 3–60), treated between January 1995–April 1996, were evaluated. Fourty patients had a type-A and 33 a type-B CVC.

The correct positioning of the CVC was assessed by plain roentgenograms. Blood samples for culture tests from CVC were made before every chemotherapy treatment. In case of suspected infection, the blood samples for culture tests were taken also a from a peripheral vein. There were no differences as regards sex, age and pathology between the patients with type-A or type-B CVCs.

The CVC had a median implant duration of 258 days (range 7–377) without differences between type-A and type-B.

Fourteen CVCs (19%) were removed before the expected time (median 86 days, range 7–371) Nine of those were type-A and 5 were type-B (p 0.6206) The causes were 8 symptomatic infections (4 tipe-A, 4 type-B); 4 bad positionings, 1 for PNX (3 type-A, 1 type-B) and 2 type-A catheters moved out spontaneously.

Twenty-nine pts (14 type-A, 15 type-B; p = 0.504) showed a CVC culture positivity once at least.

Ten pts had an infective situation with clinical manifestations which led to catheter removal in 8 cases. We also evaluated the number of all the interventions on CVCs such as connections, blood taking, heparinization and washing.

Comparing all the data, we saw no significant differences between the two types, so we decided to adopt the type-B CVC permanently due to its extremely low cost in comparison with type-A.

1460 POSTER

Nursing views on complications of subcutaneous venous access ports

D. Verhoeven, A. Vanchaze, S. Goorden. *Department of Oncology, KLINA, Antwerp, Belgium*

Purpose: In our hospital, the number of patiënts with a venous-access-port increase continuously. The allied problem for the oncology-nurses is the higher number of complications. In the beginning, the nursing-team had the impression that our hospital was the only one with problems? ... But, after consulting fellow-nurses of neighbour hospitals, we saw that they had the same problems. Therefore, we setted up two inquiries: one for oncology-nurses and a second for oncology-patients.

Methods: *Inquiry of nurses:* During a period of three months, a questionnaire was given to twenty nurses. They were all working in the oncology-floor. We asked the nurses to give us their 'Top-3 of problems/complications' by manipulations of venous-access-ports.

Inquiry of patients: During the same period, another questionnaire was given to thirty cancer-patients with a subcutaneous-venous-access-port. The average of 'port-days' was 202 days. We asked the patients to sum up their most important problems.

Results: *Inquiry of nurses:* The 'Top-3' was divided as follows: 60% of the nurses had problems with drawing blood. 30% with catheter-occlusions and 10% had prick-problems at obese patients.

Inquiry of patients: The problems summarized by the patients were as follows:

37%: afraid of the needle-prick. 21%: pain by pricking the port. 16%: catheter-occlusion. 16%: limitation of daily-activities. 10%: port-infections/thrombophlebitis.

Conclusion: It is clear that there are indead several problems concerning the venous-access-port. In spite of the results of these inquiries, the oncology-nurses as well as the cancer-patients preferred the venous-access-port to a peripherally perfusion. Especially, the safety, and the patients-comfort were decisived. A local anaesthesia (xylocaine-spray) to overcome the pain of the needle-prick seems important.

1461 POSTER

The role of scientific nurse in management of clinical trials in chemotherapy department

V. Zarouk. *Dept. of Chemotherapy, Cancer Research Center, Moscow, Russia*

Purpose: To demonstrate the importance of cooperative work of doctor and nurse in management of clinical trials.

Methods: The work of nurse has two major arms: I. Clinical part. II. Research part.

(1) Clinical part includes:
   (a) The control of patient's diagnostic procedures schedules.
   (b) Taking and proceeding of blood and urine samples; preparation of samples for transportation (serum separating smears for clinical analysis, labeling for each patient, filling in the documents).
   (c) Drug administration with the use of special equipment, i.e. infusomats and special i.v. system.