

Pharmacy Division

Introduction

The Pharmacy Division provides services that include: the counseling for inpatients, dispensing of drugs, preparation of injections, aseptic mixtures for chemotherapy treatment areas to accommodate ambulatory patients, and management of investigational drugs. Revising partly the Pharmaceutical Affairs Law in July 2003 authorized the trials that the doctors conduct on their own. It is very important to create the necessary evidence by establishing the best therapy and standard therapies method and medical care by evidence-based medicine (EBM) for the patients. Since August 2000, a pharmacist in nuclear radiation had been assigned for producing and qualifying the radiopharmaceuticals for positron emission tomography (PET) at Diagnostic Radiology Division.

Routine Activities

In the division's, pharmacists prepare the medicines by using ordering system and provide drug information for outpatients at the request of doctors. 62% prescriptions written at the National Cancer Center Hospital East (NCCHE) for outpatients are filled at outside pharmacies. The division's provides services such as the preparation of injections (including IV admixtures and aseptic preparation of Anticancer Drugs for outpatients receiving chemotherapy at the day care center). Pharmacists manage the medical supplies and the inventory (including narcotic, psychotropic, investigational drugs and the specified bio-derived products). During 2003, NCCHE pharmacists prepared 74 drugs of investigations, including the specified bio-derived products authorized by revising the Pharmaceutical Affairs Law in July 2003. For inpatients, pharmacists

provide the pharmaceutical consultations. For the medical staffs, We provide a computerized drug information (including important side effects, new drug adoptions and drug deletions) , send out information about new drug adoptions and drug deletions via email to local pharmacies. With regard to PET, 1,223 patients had 18F-FDG PET diagnoses in 2003 for various cancers. Additionally, 9 patients received 11C-methionine PET imaging for lung cancers and brain tumors as a clinical trial.

New Developments

The section of clinical services provides comprehensive direct patient care service collaborates, and promotes rational drug therapy. We started satellite at division of hematology and oncology on July 2003. Clinical services provided are tailored to patient care needs and include: pharmacotherapeutic monitoring, pharmacokinetic dosing, patient education (91 patients/month) IV admixture (7 patients with chemotherapy/day in average), drug interaction check. We assist in drug therapy management through participation in drug regimen design and monitoring (approximately 100 regimens). We provide pharmacokinetic dosing adjustments for drug therapy, drug information for all members of the health care team and precept pharmacy master students through experiential training. With regard to PET, 11C-choline is a useful tracer for imaging cancers localized in the brain, lung, esophagus, rectum, prostate, and urinary bladder. For the synthesis of 11C-choline, we modified Sumitomo Heavy Industries Type C-11-B II automatic synthesizer and investigated various reaction conditions. In the best condition, resulting 11C-choline was obtained in overall radiochemical yield of 41% within 20 min.

● S. Yokoyama ●

Number of Prescription

	2002	2003
Prepared in hospital pharmacy		
Total	87,876	93,603
Inpatients	62,450	73,734
Outpatients	25,426	19,869
Taken to outside pharmacies	19,296	25,813
(% of prescription filled outside)	(43.15%)	(56.51%)
Injections		
Total	159,458	138,165
Inpatients	146,075	125,084
Outpatients	13,383	13,081

Aseptic Preparation of Injection Mixture

	2002	2003
IVH preparations	224	72
Anticancer drugs	10,607	12,897
Others	2,412	2,911

IVH, intravenous hyperalimentation.

Number of House Preparations

	2002	2003
Sterilized	21	13
Nonsterilized	218	192

Investigational Drugs Used

	2002	2003
Newly registered	33	23
Ongoing study	41	33
Prescriptions	1107	1085

Amounts of Drugs Consumed

	2002	(%)	2003	(%)
Total consumption	2,451,065	100.00	2,521,005	100
Internal/external medicines	507,576	20.71	399,374	15.84
Injections	1,223,783	49.93	1,371,917	54.42
Blood	153,059	6.24	168,363	6.68
X-ray	232,737	9.50	239,976	9.52
R	71,846	2.90	64,799	2.57
Others	262,064	10.72	276,576	10.97

Unit: 1,000 yen