

Pharmacy Division

Introduction

The Pharmacy Division provides services that include the counseling for inpatients, dispensing of drugs, preparation of injections, aseptic mixtures for chemotherapy, accommodation of ambulatory patients, and management of investigational drugs. It is extremely important to conduct clinical trials for the establishment of standard therapies. The investigator initiated IND trials were authorized by revising the Pharmaceutical Affairs Law in July 2003. 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, pharmacists prepare the medicines by computerized ordering system and provide drug information for outpatients at request of doctors. Sixty two percent prescriptions written at the National Cancer Center Hospital East (NCCHE) for outpatients are filled at outside pharmacies. The division 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 investigational new drugs. The specified bio-derived products were 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 applications and drug deletions), send out information about new drug adoptions and drug deletions via email to local pharmacies. With regard to PET, 1223 18F-FDG PET diagnoses were performed annually for various cancers. Additionally, 9 11C-methionine PET imaging was studied for lung cancers and brain tumors.

New Developments

The section of clinical services provides comprehensive direct patient care service collaborates, and promotes rational drug therapy. We started a 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 consultation (91 patients/month) IV admixture (ave. 7 patients with chemotherapy/day), drug-drug interaction check. We assist in drug therapy management through participation in approximately 100 drug regimen design and monitoring. We provide pharmacokinetic dosing adjustments for drug therapy, drug information for all members of the health care team and precept pharmacy master students through 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 ●

Prepared in hospital pharmacy	2003	2004
Total	93,603	78,864
Inpatients	73,734	68,971
Outpatients	19,869	9,893
Taken to outside pharmacies (% of prescription filled outside)	25,813 (56.51%)	35,638 (78.27%)
Injections		
Total	138,165	131,203
Inpatients	125,084	115,867
Outpatients	13,081	15,336

Number of Prescription

Aseptic Preparation of Injection Mixture

	2003	2004
IVH preparations	72	0
Anticancer drugs	12,897	16,005
Others	2,911	3,696

IVH, intravenous hyperalimentation.

Number of House Preparations

	2003	2004
Sterilized	13	7
Nonsterilized	192	139

Investigational Drugs Used

	2003	2004
Newly registered	23	24
Ongoing study	33	37
Prescriptions	1085	1714

Amounts of Drugs Consumed

	2003	(%)	2004	(%)
Total consumption	2,521,005	100	2,442,385	100
Internal/external medicines	399,374	15.84	255,613	10.47
Injections	1,371,917	54.42	1,613,431	66.06
Blood	168,363	6.68	118,157	4.84
X-ray	239,976	9.52	155,614	6.37
RI	64,799	2.57	66,757	2.73
Others	276,576	10.97	232,813	9.53

Unit: 1,000 yen