

Kilimanjaro Christian Medical Centre Radiology Department Annual Report - 2005

INTRODUCTION

The mission of the Radiology Department is to carry out the functions of health care, teaching, research and consultancy with Christian principles in a dignified, sustainable and affordable manner and to facilitate an efficient medical imaging development in collaboration with all stakeholders.

The department of radiology continued to perform and report all radiological and medical imaging examinations including conventional X-rays, mammography, contrast studies, CT scans and ultrasounds as requested for all inpatients and outpatients at KCMC and others from peripheral hospitals.

We had a good working relationship within the department and with the clinicians as we worked continuously throughout the year. Our usual cooperation and communication with the clinicians, patients and clients continued as ever.

Research activities in the department included those from our postgraduate residents and those in collaboration with other principal investigators from other departments and institutions.

Teaching for short-course students, undergraduate students and postgraduate residents did not lag behind as we continued to deliver with efficiency and reliability as usual.

INFRASTRUCTURE

With the expansion of the provided services and academic activities, the existing structure is not sufficient especially in terms of offices for radiological personnel and viewing rooms.

SUPPLIES

There were enough consumables for daily use. We acquired our supplies from Medical Store Department (MSD) and others from the ORET programs. The items, which were bought by the hospital funds, included films, processing chemicals, contrast media (both ionic and non-ionic), ultrasound gel, thermal printing papers, etc.

PLANT AND EQUIPMENT

Sporadic breakdowns of our roentgen and ultrasound units did occur and were attended to by staff from MOKASI and Philips Company in collaboration with our hospital engineers. The status of the equipment is as follows:

- 1 fluoroscopic unit (Duo Diagnostic) In good condition and working

- 2 MRS units In good condition and working
- 1 c-arm (BV 25) In good condition and working
- 1 medio 30 CP unit Out of order
- 2 portable units In good condition and working
- 1 mobile unit Out of order
- 1 dental X-ray unit In good condition and working
- 1 mammography unit In good condition and working
- 1 CAT scanner (SR 400) In good condition and working
- 1 CAT scanner printer Out of order
- 4 ultrasound units In good condition and working
- 2 automatic film processors In good condition and working

In June we received a used ultrasound machine, which was donated from England through the Northumbria collaboration but has not functioned since early December 2005.

STAFF

We continued to experience a staffing shortage due to expansion of services and increasing academic activities. Also, there was no capacity building programme.

We have one consultant radiologist, three radiologists, seven radiographers, one secretary, one nurse midwife and four health attendants.

Nine M Med residents and nine AMO radiologists' trainees make the complete personnel list in the department.

NATIONAL AND INTERNATIONAL COLLABORATION

Radiography students from MUCHS did their fieldwork in our department as a part of their training.

One of our radiographers is currently in Bergen Norway for a year through the KCMC/Haralds plass Hospital volunteer program. A radiographer from Norway is also rotating in the department as part of that exchange.

We had visitors from Hungary, Oxford and Newcastle in England, and Florida, USA who contributed a lot in exchanging experiences in practice and teaching, especially in contrast studies, pre-natal sonography and interventional radiology.

TYPE OF EXAMINATIONS PERFORMED AND QUANTITIES

GENERAL X-RAY EXAMINATIONS

	YEAR 2003	YEAR 2004	YEAR 2005
Chest	7,771 (43.4%)	8,071 (41.6%)	9,556 (47.8%)
Extremities	3,492 (19.5%)	3,892 (20.1%)	3,880 (19.4%)

Spine/Pelvis	2,305 (12.8%)	2,505 (12.9%)	2,166 (10.8%)
Skull	1,821 (10.1%)	1,971 (10.2%)	1,895 (9.5%)
Abdomen	1,150 (6.4%)	1,250 (6.4%)	1,053 (5.3%)
GIT	740 (4.1%)	810 (4.2%)	582 (2.9%)
Urology	401 (2.2%)	601 (3.1%)	574 (2.9%)
OG specials/others	270 (1.5%)	310 (1.6%)	280 (1.4%)
TOTAL	17,950 (100%)	19,410 (100%)	19,986 (100%)

The total number of general X-ray examinations is 2.9 percent higher than last years'. The steepest rise was in chest X-ray examinations, whilst the number of other X-ray examinations declined. This is due to the increasing number of chest infections, screening for medical examinations and secondary deposits, trauma, etc.

CT SCAN

	<u>YEAR 2003</u>	<u>YEAR 2004</u>	<u>YEAR 2005</u>
Brain	596 (81.9%)	802 (77.9%)	885 (80.2%)
Spine	71 (9.8%)	126 (12.2%)	132 (12.0%)
Abdomen	60 (8.3%)	70 (6.8%)	54 (4.8%)
Chest	-	30 (2.9%)	31 (2.8%)
Extremities	-	-	-
Pelvis	-	2 (0.2%)	2 (0.2%)
TOTAL	727 (100%)	1,030 (100%)	1,104 (100%)

There has been a 6.7 percent increase in the number of CT examinations compared with last year's statistics due to the fact that the number of brain CT examinations for various indications like trauma, tumors and infections increased.

ULTRASOUND EXAMINATIONS

	<u>YEAR 2003</u>	<u>YEAR 2004</u>	<u>YEAR 2005</u>
Echocardiography	1,704 (14.3%)	2,081 (16.5%)	2,108 (17.8%)
Obstetrics	1,640 (13.8%)	1,819 (14.4%)	1,377 (11.7%)
Abdomen	7,486 (62.8%)	7,422 (58.9%)	6,806 (57.6%)
Eye	55 (0.5%)	40 (0.4%)	58 (0.5%)
Brain	185 (1.6%)	230 (1.8%)	155 (1.3%)
Musculoskeletal	42 (0.4%)	32 (0.3%)	43 (0.4%)
Others (Mammography)	809 (6.8%)	970 (7.7%)	1,270 (10.7%)
TOTAL	11,921 (100%)	12,594 (100%)	11,817 (100%)

On ultra-sonography, the total number of examinations is 6.2% lower than last year. The steepest decline was in pre-natal and urological examinations. Presumably these departments now do some examinations themselves. However, they still make use of our more advanced equipment, like Doppler capability.

CONSTRAINTS ENCOUNTERED DURING THE YEAR

1. Shortage of staff and capacity building plans.

2. Erratic supply of suitable consumables from MSD and ORET.
3. Inadequate existing infrastructure due to the lack of an office for radiological personnel, a bigger viewing room, a departmental computer and Internet facilities.
4. Old equipment with frequent breakdowns.
5. Frequent power failure.
6. Lack of departmental budget for replacing equipment and buying consumables.

RECOMMENDATIONS

1. Employ and recruit more staff and have capacity building plans for existing staff.
2. Have reliable availability of consumables.
3. Improve existing facilities in terms of replacing old and worn-out equipment plus the infrastructure.
4. Have the stand-by generator supply power to all examination rooms.
5. Improve and progress in providing new services such as Screening Mammography and Interventional Radiology singly or in collaboration with other stakeholders local or international.
6. Further the department budget and keep aside certain amount of money for replacing equipment and buying consumables.

Thank you.

DR. C.F. KALAMBO

HEAD, RADIOLOGY DEPARTMENT
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