



Outside waiting areas for relatives of patients who may have travelled from remote regions of Pakistan to obtain treatment at AKH.

# Radiography in Karachi

*Samina Syed Afzal, Clinical Specialist Sonographer at Fairfield hospital, Bury, reports on her recent visit to Karachi in Pakistan.*

On a humid August afternoon, I arrived with my family at the port city of Karachi in Pakistan. We were greeted by a khaki clad driver sent from the Agha Khan University (AKU) hospital and so began our three week visit to a remarkable healthcare establishment.

In 1983, the AKU became the first private, autonomous establishment to develop an international reputation for quality and innovation in teaching, research and scholarship through ongoing partnerships with prestigious overseas institutions. Currently the university comprises a faculty of health sciences including a school of nursing, a

medical college and an associated teaching hospital, and an institute for educational development.

## The radiology department

Pakistan is often referred to as a developing country and to find such a comparatively well structured site with a good quality healthcare service offered to all patients, was something of a surprise to me. We learned that there were also a few satellite clinics with diagnostic services such as radiology, pathology and phlebotomy, sited on the outskirts of the sprawling Karachi city to serve the

peripheral population, some of whom could not afford long distance transport to the main AKU hospital.

On our first day at the hospital, myself and my husband (an MRI radiographer) had an early start in order to attend an orientation morning at the human resources offices. In the afternoon, we were shown the radiology department and introduced to the radiology manager and the lead radiology consultant. We were then shown around the ultrasound department, x-ray, fluoroscopy, angiography, CT and MRI sections and warmly greeted by all staff.

The working day at the

hospital commences at 8.30am and ends at 5pm with a reduced staff quota working on-call from 5pm, including weekends. The AKU hospital is effectively operational 24 hours a day, because many patients travel long distances from poorly resourced villages. Relatives often escort patients and simply wait outside with blankets and food in the leafy quadrangles, designed with pink marbled seating and positioned to access the various departments.

The radiographic equipment in the department ranges from old to relatively new and during our stay, myself and my husband were able to discuss some of the shortcomings with the

radiographers and radiology supervisors. The department does, however, have the capacity to track the route of radiography/ultrasound requests (from initial appointment) on a RIS-based system which also allows review of previous radiology examinations. The request is performed, and a report dictated onto a tape by a radiologist. A team of industrious transcribers then type the report up and, on average, the finished report is presented for checking by the radiologist within an impressive two hours! This allows urgent patients to be seen by the referring clinician and given treatment on the same day.

### Training

I was surprised to learn that radiographers were trained 'on the job' for one year, and that only in the last two years had they been given short lectures on radiographic techniques and adaptation for challenging patients, as well as some basic physics. The end of year competency assessments took the form of short tests, the content of which was devised by the two radiography deputy supervisors. Teaching material included video tapes on MRI and copies of *Synergy* magazine.

Lectures relating to discussion of anatomy of the axial and appendicular skeleton were given with demonstrations of techniques using willing volunteers. Similarly, ultrasound lectures

were given on obstetric and gynae scanning techniques and on protocol formalisation for detecting abnormalities.

Overall the radiography staff were keen to discuss their work practices in depth and I observed refreshingly attentive attitudes to those medical staff who found time to teach them.

In the ultrasound section, which comprised of six rooms, there were two sonographers, both female, who performed obstetric and gynae scans under the rushed supervision of a consultant radiologist. Scans were performed in undimmed light conditions, whilst sitting on non height adjustable chairs and viewing very small ultrasound monitors. The examination couches in all six rooms were not height variable and were physically dragged across the floor by the sonographers to allow a trolley or bed to be wheeled into the room. Ultrasound measurements were recorded on split images on thermal paper for the radiologists to report.

The sonographers' main concern was that they were not given time to understand the background knowledge related to the examinations they performed. They were not taught equipment physics but were expected to read the subject from photocopied text books. This did not allow for confident manipulation of equipment and, as a result, did not optimise pathology. Overall the sonographers were keen to be given the opportunity to learn and understand more about ultrasound.



Angiographic procedure.

It was apparent that there was no formal radiography curriculum. The training was given in-house in busy conditions and was not supplemented with the structured plan of teaching essential for the operation and progress of this busy department.

The radiology manager and I discussed the need for external assessment of the on the job training given to the radiographers, as well as the development of an accreditation process. Initially I had discussed with him the standards required to measure the quality of this healthcare setup, one of which included the adequate formal training and continued assessment of healthcare professionals.

The maintenance of the diagnostic equipment, the health and safety procedures, and the radiation protection procedures, all needed to be reviewed and enforced. The implementation of radiographic examination protocols was also required in order for the department to gain accreditation.

### Recommendations

Before our visit concluded, I was pleased to see some notable changes resulting from our recommendations. New table lamps were purchased for all the ultrasound rooms to rectify the inadequate lighting conditions and a filter had been designed to homogenise the long limb radiographs for orthopaedic assessment. A diagram showing a paediatric restraining seat was left with the deputy radiographer and

new lead aprons had been ordered. The darkroom safelights were adjusted adequately.

### Conclusions

This visit gave us the opportunity to gain an insight into an overseas radiographic facility and to compare and appreciate the educational and training facilities that we Western radiographers have available to us. The experience was both humbling and thought provoking. I was buoyed by the immense personal abilities of the staff at AKU to perform an essential service for the community in the context of such dire training standards.

We were lucky enough to spend our evenings exploring the historical bustling city of Karachi, sightseeing and shopping in the crowded souks for local handicrafts. Our last night in Karachi was spent enjoying a barbecue on the seafront hosted by the radiology department.

### Acknowledgements

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### SCoR Overseas Placement Fund

If you would like to apply for the Society and College of Radiographers Overseas Placement Fund, please contact Gill Smith at the Head Office, 207 Providence Square, Mill Street, London SE1 2EW. Tel: 020 7740 7203/Email: [gills@sor.org](mailto:gills@sor.org).



Staff from the radiology department.