SPECIALIST REGISTRAR
IN
PAEDIATRIC HISTOPATHOLOGY

JOB DESCRIPTION

SEPTEMBER 2011
INTRODUCTION

It is assumed that the appointee will enter this post from a previous general training post, but training may be modified to some degree according to previous experience and the desired route of higher specialist training.

Trainees in paediatric histopathology will usually have completed the general training period in Histopathology and will have obtained the FRCPath Part I or will be eligible to take this examination and be expected to achieve this shortly following appointment. They would then enter Year 3/4 (stage C) of training.

It may also be possible to accommodate trainees who are more advanced in their histopathology training, but who wish to change direction and train in Paediatric Histopathology.

THE HOSPITAL AND RELATED UNITS

The Division of Children’s Services

In 2009 the Division of Children’s Services (previously spread over three sites) relocated to the newly built Royal Manchester Children’s Hospital (RMCH) on Oxford Road, Manchester. The new Children’s Hospital is part of a large Hospital complex including St Mary’s Hospital, the Eye Hospital and the Manchester Royal Infirmary. The Hospitals all form part of the Central Manchester University NHS Foundation Trust. This is situated close to the Medical School and to the other facilities in the University of Manchester.

In addition to providing general paediatric services to local populations, RMCH also provides tertiary referral services for the North West region and beyond.

St Mary’s Hospital provides women’s and children’s services for the increasing number of residents of Central Manchester. In addition, St. Mary’s offers tertiary services to Manchester and Lancashire. There are over 4000 babies delivered annually and there are 28 neonatal medicine cots (14 intensive) and 14 neonatal surgical cots.

The Regional Genetics Service is based on the same site and incorporates one of the two National Genetics Reference Laboratories and is a partner in Genetics Knowledge Park based in Manchester. There is an excellent working relationship between the Department of Paediatric Histopathology and the Department of Genetics; often joint examinations are undertaken for fetal abnormality.
THE DEPARTMENT OF PAEDIATRIC HISTOPATHOLOGY

The Department of Paediatric Histopathology provides a diagnostic surgical histopathology and necropsy service to the Royal Manchester Children’s Hospital and is managerially part of the Directorate of Laboratory Medicine of the Trust. However the department is located in the Children’s Hospital and has retained its identity as a Department of Paediatric Histopathology.

The Current Staff Profile is:-

4 Consultants in Paediatric Pathology
1 STR in Paediatric Pathology – (ST3 post advertised)
1 BMS 8b
1 BMS 8a
2 BMS 7
2 BMS 6
1 MLA 3

2 Anatomical Pathology Technician
2.5 Medical Secretary

The specialist registrar has a dedicated spacious office equipped with a single headed microscope, a double-headed and ten headed teaching microscope and PC. There is a full range of reference books and relevant journal holdings.

WORKLOAD

The Department provides a paediatric surgical pathology, and paediatric, perinatal and fetal pathology/autopsy service.

Surgical-paediatric:

The department receives a wide range of paediatric surgical specimens including tumours, renal biopsies, muscle biopsies, gastro-intestinal biopsies, lung biopsies, skin biopsies for electron microscopy and biopsies from the general surgeons.

In 2009 the Department handled a total of 6326 surgical specimens. Increasing numbers of cases are being referred for expert opinion from the region and further afield. From January to July 2011, there were a total of 3865 surgical specimens, with 127 external referrals.

In 2009, there were approximately 130 biopsies or resections involving paediatric solid tumours. All tumour samples are received fresh and sterile which allows tissue
to be taken for cytogenetics, molecular diagnostic tests, electron microscopy and frozen storage as appropriate. The molecular diagnostic laboratory is present on site. Facilities are available for research.

Other specimens received in 2009 included 135 bone marrow trephines, 3105 samples from the gastro-intestinal tract, 61 muscle biopsies (from both children and adult patients), 244 placentas, 160 rectal biopsies for the investigation of constipation, 50 native renal biopsies and 27 renal transplant biopsies.

The electron Microscopic facilities are shared with the department of Adult Histopathology in the Manchester Royal Infirmary.

At the present time, multidisciplinary meetings are held with clinicians as follows -:

- Oncology – weekly
- Bone Marrow - weekly
- Nephrology – monthly
- Surgery – monthly
- Gastroenterology – weekly
- Genitourinary surgery – every two months
- Perinatal Mortality - monthly

There are plans to expand the range of meetings held to include other clinical disciplines.

**Autopsy Service**

In 2009 a total of 402 post mortem examinations were performed, of which 130 were at the request of HM Coroner. From January to July 2011 there were a total of 203 autopsies.

The department provides a hospital post mortem service for children dying within the Trust. Additionally, it provides a regional perinatal service for many of the surrounding hospitals in Manchester and Lancashire. The consultant histopathologists are asked to perform post mortem examinations for many of the Coroners in the Lancashire and Manchester Region and are frequently asked by the police to assist in suspicious infant and child deaths.

There is a monthly perinatal mortality meeting in the Trust.

**Mortuary Facilities**

Staffing: There are 2 full time MTOs at present

The Children’s Hospital has a new paediatric mortuary in which all paediatric post mortems are carried out. The mortuary is equipped with x-ray, photographic and video camera facilities. In addition there are excellent working relationships with the
Department of Radiology, for the reporting of x-rays and, when necessary, x-rays are carried out in the Radiology Department.

Manchester has adopted a standard protocol for the investigation of all sudden unexpected deaths in infancy/SUDI. Lancashire is developing a similar protocol.

Regular MDT meetings discussing post-mortem infections are held on site between histopathologists, microbiologists and virologists.

TEACHING

The Department is involved into both undergraduate and postgraduate teaching and training of medical, nursing and allied professional groups. The undergraduate medical curriculum provided in the Faculty is now delivered through problem-orientated, student-centred learning.

There are well-equipped postgraduate departments. PubMed and other resources are available on line from Consultants’ offices in the department. The Director of Postgraduate Education for the Trust is Dr Julian Wright. The Children’s Divisional lead for Postgraduate Education is Dr Guy Makin. The Divisional lead for Undergraduate Education is Suzanne Conney. The postgraduate tutor (paediatric pathology) for the Royal College of Pathologists is Dr John Grainger, Consultant Haematologist. They are responsible for career advice and guidance to Junior Doctors, and for approving the study leave of junior staff. The Dean of Postgraduate Medical Studies for the North West Region is Professor Dr. Jacky Hayden.

It may be that other Histopathology trainees may be attached to the department for short periods in order to gain some experience of paediatric pathology as part of their general training. Such attachments will be at the mutual convenience of the trainee and departments involved.

LIBRARY AND EDUCATIONAL FACILITIES

All trust staff are eligible to join the library. Literature searching by the professional team is a free service. Access to local, national and regional core content (including clinical databases, e-books and e-journals) is available via the National Library for Health. The library service offers training on various electronic resources.

The trainees are encouraged to attend the programme of educational meetings, seminars, grand round presentations and special topic lectures run at Royal Manchester Children’s Hospital.

It is also expected that the SpR will attend the annual Advanced Course in Paediatric Pathology, which is recognised as the official training programme for the discipline, organised by the International Paediatric Pathology Association (IPPA). Furthermore, regular attendance at meetings of the British Paediatric Pathology Association (BRIPPA) and at annual meetings of the Paediatric Pathology Society (PPS) is encouraged.
RESEARCH FACILITIES

There are good opportunities for clinical research. The Region commissions research in line with local and national priorities; applications for research funding are encouraged.

CLINICAL AUDIT AND QUALITY ASSURANCE

The Trust has a robust culture of clinical audit that is integrated with the hospital policy of quality assurance and risk management. The Department has regular audit meetings with gastroenterologists, oncologists, surgeons, radiologists, nephrologists, clinical geneticists, intensivists and rheumatologists.

The Department participates in National Technical and Immunocytochemical External Quality Assurance Scheme (NEQAS) and the Consultant Pathologists participate in the National Paediatric Pathology EQA Scheme (CPA accredited).

DUTIES ASSOCIATED WITH THE POST IN THE DEPARTMENT OF PAEDIATRIC HISTOPATHOLOGY

It is expected that the successful candidate will spend the majority of their time in the Department of Paediatric Pathology in Royal Manchester Children’s Hospital participating in routine diagnostic activities, under Consultant supervision. It is envisaged that the Specialist Registrar will be exposed to forensic aspects of paediatric pathology and neuropathology.

The training programme and routine professional activities in paediatric pathology will offer the candidate substantial practice in:

- Dissection of surgical resection and biopsy specimens;
- Reporting surgical resections and excision and endoscopic biopsies;
- Routine and special aspects of perinatal and paediatric autopsy, in particular the investigation of sudden unexpected deaths in infancy, investigation of stillbirth, neonatal death, fetal abnormality and late fetal loss;
- Recognition and monitoring of iatrogenic diseases relevant to modern paediatric management;
- Special techniques in paediatric pathology such as photography and imaging;
- Investigation and identification of specific groups of diseases (inherited metabolic diseases, bowel motility disorders etc) in the context of histological and autopsy material;
- Paediatric oncology and haematology (tissue handling and procedure of paediatric malignancies);
• Identification of syndromes important for genetic counselling;

• Prenatal, perinatal and paediatric infectious disease;

• Developmental physiology particularly in respect postnatal adaptation and

• Basics of embryology, cytogenetics and clinical genetics as they apply to the practice of paediatric histopathology.

In addition the candidate will be exposed to:

• An adequate and representative sample of case material from conception to the end of paediatric/adolescence age group;

• A clinical environment devoted to neonatal and paediatric medicine and surgery;

• Appropriately experienced specialist trainers (both in pathology and clinical disciplines);

• A larger body of paediatric pathologists both nationally and internationally through conferences, meetings and courses;

• Organisation of clinico-pathological conferences for both perinatal and paediatric cases, the organisation of perinatal audit and involvement in local and national projects;

• Facilities for obtaining higher qualifications (eg MD) and

• Stimulating facilities for participation in basic and applied research projects to lead to publication in peer review journals.

The successful candidate may also be offered opportunities to spend some of his/her time of training both in local and regional highly specialised centres and also in national or overseas centres of excellence in the field of paediatric pathology.

MODEL TRAINING SCHEME

YEAR 3

This will be the usual point of entry for Post Part 1 trainees.

There will be an initial introduction to the Departmental Health and Safety policy, following by the opportunity for the appointee to become familiar with the departmental standard operating procedures. During this time (1-2 weeks), the
appointee will observe the work passing through the department, both surgical and autopsy.

The appointee will then spend time performing both surgical and autopsy work. Surgical work will consist of performing the daily surgical cut-up, and then reporting the resulting histology under supervision. During the course of the year, in addition to general surgical work, the appointee will encounter other specialist areas of paediatric surgical pathology including tumour pathology, renal pathology, muscle pathology, gastro-intestinal pathology and haematological pathology. In due course there will be opportunities to start to present the histological findings at the relevant multi-disciplinary meetings. Tumour pathology involves special handling of the tissues and the appointee will have the opportunity to take part in this. As part of the routine assessment of tumour biopsies, molecular techniques such as FISH and RT-PCR are required; there will be opportunities to observe and learn to perform these. Sometimes frozen section assessment of tumour biopsies is required; there will be an opportunity to observe and take part in this procedure.

Assessment of rectal biopsies for Hirschsprung’s Disease is an important part of paediatric pathology and there will be ample opportunity to gain experience here. Surgical resection of intestine affected by this disease is often done under frozen section control and again there will be opportunities to take part in this procedure.

Autopsy work will consist of carrying post mortem examinations under supervision and then completing the written report by correlating the macroscopic findings, the histological findings and the results of other investigations. During this year, this activity will be closely supervised. Initially the cases encountered will be hospital post mortems (most of which are perinatal cases), but by the end of this year the appointee will be carrying out post mortem examinations for H M Coroner under supervision; many of these involve infants and older children. As part of the Coroner’s investigation, a high proportion of these cases involve attendance at an inquest. As part of the perinatal service the appointee will also carry out placenta cut up and will report the resulting histology under supervision.

During the year, the appointee will have the opportunity to see and report, under supervision, cases in which electron microscopy is carried out; these are mainly muscle biopsies, renal biopsies and skin biopsies for certain specific diseases (mainly Batten’s disease).

There will also be an opportunity to see and report, under supervision, paediatric cytological samples.

Therefore, by the end of this year, the appointee will have been exposed to the full range of paediatric and perinatal pathology work and will have gained a grounding in most of the relevant procedures and conditions relevant to the paediatric and perinatal periods.

**Year 4**

The appointee is expected to be able to
- Undertake most general surgical cut up without supervision (though histological reporting will always be with supervision)
- Undertake perinatal post mortem examinations without supervision (though the final report will always be produced with supervision)
- Undertake simple Coroner’s post mortems with supervision
- Know how to approach the dissection of tumour specimens and how to approach the assessment of the resulting histology with a view to making a diagnosis

During the course of this year – the appointee should (with some supervision) -:

- Perform and complete at least 20 perinatal post mortems, including placental examination. The appointee should be able to assess the consent given and know how to rectify any errors
- Perform and complete at least 5 Coroner’s post mortem (at least some of which may involve attendance at an inquest)
- Be competent in most aspects of general surgical pathology
- Report – with supervision- at least 5 tumour cases with immunocytochemistry and follow through all the special techniques involved in diagnosis, including molecular techniques
- Report at least 5 renal biopsies (including immunofluorescence and electron microscopy)
- Report at least 5 muscle biopsies (including immunocytochemistry and electron microscopy)
- Report at least 2 skin electron microscopy studies

The appointee should be able to present the histological findings at MDT meetings.

During the course of the year, the appointee will gain experience in aspects of laboratory management such as-:

- Health and safety
- The writing of Standard Operating Procedures
- The process of Clinical Pathology Accreditation
- Clinical Governance as it relates to laboratory practice – including an introduction to national EQA schemes
- Budgeting and the preparation of a business plan
- The Human Tissue Act, 2004 and how it affects laboratory practice
- The Coroners’ Rules as they relate to autopsy practice

The appointee will be encouraged to attend relevant regional, national and international conferences.

By the end of this period of training the appointee will be equipped to sit Part 2 of the FRCPath examination in Paediatric Pathology, should they wish to do so.

**Year 5**
The aim of this part of the training is to provide sufficient experience to pursue an independent career in Paediatric Histopathology and to acquire the CCST in the discipline.

Following acquisition of the Part 2 examination, reporting of both surgicals and post mortems will be increasingly independent. The appointee will eventually report and authorise cases independently. There will therefore be experience gained in the computerised systems in use.

In addition to acquiring further general experience, the appointee should aim to develop a specific interest, present at appropriate conferences and gain publications in peer-reviewed journals.

The appointee should take appropriate measures (e.g. attend appropriate courses) to be able to teach at undergraduate and post graduate levels and should gain some experience.

There will be sufficient experience to be able to handle fresh tumours independently and to report emergency biopsies (eg renal, rectal cases) independently if called upon to do so.

The appointee will be expected to fully participate in any MDT when required to do so.

The appointee will undertake and successfully complete an audit project.

The appointee will attend an appropriate management course.