Proficiency Testing and Education in Diagnostic Non Gynaecological Cytology

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Introduction

UK NEQAS Cellular Pathology Technique (CPT) is an international organisation providing a comprehensive range of accredited external quality assessment (EQA) and proficiency testing programmes for tissue diagnostics. External Quality Assurance (EQA) schemes are well established for Gynaecological Cytology but not for Diagnostic Non Gynaecological (DNG) Cytology. UK NEQAS CPT offers an accredited EQA / proficiency testing service and provides support, expert advice and feedback to participants in the UK, Europe and internationally.

Development

DNG cytology is carried out in many laboratories on a broad range of samples but evidences a lack of consistency and common agreement on sample collection, preparation and technique. The DNG Cytology EQA scheme was developed to introduce an international process to compare and raise technical standards.

Assessment

Slide submissions are assessed by expert peer assessor scientists and pathologists in pairs, preventing any conflict of interest or collusion. 6 distributions are assessed annually, allowing regular assessment of laboratory performance, to support proactive identification and correction of issues. Both PAP and Romanowsky stains are assessed for a number of different specimen types. Reports are issued within 48 hours of assessment for efficient feedback and quality assurance.

Effectiveness

UK NEQAS CPT monitors the progression of the DNG Cytology scheme, its effectiveness and its future growth and improvement, utilising feedback from surveys and implementing requests and ideas based on participant needs. 57 laboratories took part in the 2014 pilot, and over 250 now registered as participants. Data analysis shows a significant upward trend in participant scores and quality for all samples types, techniques and staining methodologies (Graph 1).

Feedback

Reports show a detailed summary of the scoring against designated criteria, including explanations of criteria for that submission and constructive comments to enable participants to improve their techniques. Common criteria comments include; loss, drying artefact, excess RBC’s, poor chromatin detail, and variable nuclear and cytoplasmic staining and preparation thickness (Image 1).

Education

Education is key to ensuring improvement in quality in DNG cytology. An additional need for Specialist Workshops was identified to supplement specialist training and development where in-house training is limited. This additional specialist training is available to all UK NEQAS CPT Participants and any personnel both in the UK and overseas, to help bridge the knowledge and skills gap many DNG cytology departments are experiencing (Image 2). These specialist workshops provide a mixture of theoretical and practical teaching taking participants back to first principles; looking at reagent components, why they are applied, rationale behind the overall methodology and moving on for more advanced attendees, looking at new techniques and technologies and discussing case studies. The educational workshops also give attendees time to discuss day-to-day challenges and opportunities with their peers. They also help young scientists develop a professional network outside of their own laboratory, opportunities of which historically only been available to senior members of staff.

Summary

One of the main aims of UK NEQAS CPT and its DNG cytology EQA scheme remains educational, supporting issues with quality, and offering advice and troubleshooting within the clinical laboratory. Educational workshops, participant meetings, workshops, away days / conferences and e-learning all provide a foundation to support personal development. In our ongoing aim to provide not just an accredited DNG cytology EQA scheme but an accredited EQA scheme of quality. UK NEQAS CPT are continually expanding and reinventing their proficiency testing service provision to meet the demands of a rapidly changing service in Cellular Pathology and more specifically Diagnostic Non Gynaecological Cytology.

References


Non-gynaecological technical EQA update. Dr Paul Cross et al, Scan 2013, 24:2, 10-12.