EUROGIN COLPOSCOPY COURSE
Amsterdam - October 8, 2017

Room G104

Not included with congress registration / Separate registration required

Professor Albert Singer, University of London, UK
Mr Ahfaq Khan, Director Dysplasia and Vulvar Clinic, Whittington Hospital, London, UK

8.30 – 9.00 Registration

9.00
1 Current role of HPV testing in Cervical screening
Mr A. Khan

Discussion points: HPV in triaging ASCUS , HPV test of Cure
What is the best HPV test as screening tool?

HPV is the major cause of cervical and lower genital tract neoplasia. It has three major roles in clinical practice . the most important being in relation to screening for cervical precancer. Although cytology has served clinicians well for the last 70 years its sensitivity is a problem when used as a screening test. Sensitivity ranges from 40 to 85%. When compared to the HPV screening we find that sensitivities average around 90%. In many countries HPV is now replacing cytology in screening. HPV screening has a positive predictive value of approximately 16% so therefore when it is employed the positive HPV women must be further triaged by using other techniques such as colposcopy, cytology(using its high specificity in this case) or other bio markers such as methylation to identify those with CIN. Its other two usages are as a result of the triage of those women presenting with an ASCUS smear in whom it is important to identify those 15% of women who have an underlying high great CIN lesion. A positive HPV test in these women will necessitate a mandatory colposcopy

The final usage is in respect of the follow-up of women who have had treatment for CIN. A number of studies have shown that if the HPV is negative in association with a negative smear then the chances of residual or recurrent disease is no more then 3 to 5% : in some studies been lower than these figures

During the presentation new evidence will be presented showing the introduction of new HPV methods used in screening especially those only looking at to high risk HPV types(type 16/18).

9.30
2 The colposcopy examination
Prof A. Singer
Discussion points: How to perform colposcopy, role of acetic acid, iodine, transformation zone, endocervix examination

Colposcopy is the visual examination of the epithelial cervix using either uni or binocular vision . Specific abnormalities associated with both squamous and glandular precancer can be identified especially after the application of a 5% acetic acid solution. After this application the abnormalities become visible as a result to changes in the epithelium and blood vessels in the stroma. These changes occur within an area of the cervix called the transformation zone an area bounded by the junction of vaginal epithelium and the glandular epithelium arising from the endocervix (canal). Within this area a change occurs in which and glandular epithelium changes to squamous by a process of transformation, called metaplasia . The upper border of this metaplastic change is called the new squamo columnar junction. The inability to see this junction means that abnormality may exist higher up in the endo cervix
A sample of any abnormality within the transformation zone can be taken by a simple punch biopsy. Abnormality extending into the endocervix above the new squamo columnar junction will need a limited surgical excision of the endocervix. Colposcopy is an essential part of the diagnosis and treatment of cervical precancer. It is indicated in the presence of abnormal cytology or in the finding of a positive HPV report and also when there is clinical signs on the cervix of possible malignancy.

10.00
3 Colposcopy of abnormal cervix
Prof A. Singer
Discussion point: CIN/AIN pathology, CIN and glandular changes, role of the biopsy, early invasive cancer (microinvasion)

The epithelium containing squamous precancer within the transformation zone has certain characteristics. These reside within the epithelium or in the presence of blood vessels penetrating the epithelium and existing in the underlying stroma. The epithelium when painted with a solution of 5% acetic acid takes on a white appearance due to the obstruction of reflected light from the underlying stroma due to the cellularity of the epithelium.This epithelium is now called aceto-white epithelium and has all degrees of whiteness from a partially translucent appearance to one with extreme white denseness. The blood vessels can appear as red spots on the white epithelial background and this change is called punctuation.Likewise a mosaic appearance in the epithelium is also associated with abnormality and is called mosaic change. Both changes are as a result of increasing epithelial vascularity. An extreme form of this vascularity is called atypical vessel formation where the previous regularity in the blood vessels (punctation and mosaic) now

becomes extreme in structure and adopts a marked irregularity, usually is indicative of possibly early invasive cancer(microinvasion).

10.30
INTERVAL 15 MINUTES

10.45
4 HPV biomarkers: how can they help a colposcopist?
Mr A. Khan

Discussion point: Role of surrogate markers in the management of CIN2, role in screening and in cases of persistent LSIL and in ASCUS-H
Duration: 30 minutes

HPV biomarkers markers are playing an important part in assisting the clinician to accurately diagnose and to rationally and safely treat cervical precancer. Its role in screening has been defined in the first lecture of this course. As was pointed it out it is one of the three uses of HPV in the management of the ASCUS or borderline cytological smear. Approximately 15% of these smears harbour a high-grade premalignant lesion (HSIL) which needs to be identified. A positive HPV test is taken reflexively in many screening programs as it identifies those women who have a one in six chance (positive predictive value) of processing HSIL. Its role in follow-up after treatment has also been outlined in the first lecture
The question of dealing with a histological finding of CIN 2 is made easier by the use of the histochemical staining using p16(INK4a) expression. This markers positivity is shown by a diffuse brownish staining of the epithelium which indicates the presence of the high risk types of HPV . The progression rate is significantly higher for the patients showing p16(INK4a) overexpression than for those not showing p16(INK4a) overexpression with the the regression rate also found to be significantly lower. In young women with small biopsy proven CIN 2 lesions there is a realistic chance of preventing or at least delaying their first treatment due to possible regression, by the usage of this marker.
Other uses of HPV markers would it will be given during the lectures

11.15
5 Treatment of CIN: Why, When and How?
Mr A. Khan / Prof A. Singer

Discussion points: Ablative or excisional treatment

There are a number of objectives in treating cervical. precancer .The first of these is to prevent cancer by the monitoring of low grade disease(LSIL):secondly to treat high grade disease(HSIL) and thirdly to minimise residual disease remaining after treatment. In young women it is essential to minimise possible adverse obstetrical outcomes. There are also certain prerequisites to treatment which include valid indications as well as precise

definition of the abnormality with colposcopy and pathology. There must be suitable conditions for treatment including analgesia and exposure with suitable counselling and adequate and effective follow-up also important . Deciding on **who to treat** is evident when there is a reasonable expectation that the untreated patient will run the risk of the subsequent development of cancer. In the non-pregnant patient this will invariably be those women with a diagnosis histologically or in some cases colposcopically of high-grade disease (HSIL). As outlined in the previous lecture some women with CIN2 will also be treated and very occasionally those with CIN1(LSIL). **How to treat** these lesions demands a knowledge of the cervical anatomy especially of the cervical crypts(glands). The latter extend to a depth when involved with CIN to just under 4 mm. Therefore any treatment must go below this level(ie 6-7mm).
Two main methods of treatment can be employed. Either the lesion can be destroyed by local methods such as cryo therapy, diathermy or thermal ablation. Secondly and more commonly the lesion can be removed by excision using a electro diathermy loop. Recently a diathermy needle can also be employed. Carbon dioxide laser can be used to either vaporise the lesion as a form of local destruction or can be employed to excise. The various methods will be discussed and the pros and cons considered.

11.50
6 Complications of treatment
Prof A. Singer

The treatment of cervical precancer as it outlined above, although conducted in most cases in the outpatients/office environment is still associated with complications. These can be divided into three groups. Firstly immediate or short term complications which occur in no more than about 3 to 5%. These are mainly concerned with bleeding, infection, pain and discharge. Secondly long-term complications relate to cervical stenosis (2%) and the increasing problem of premature rupture of membranes and preterm labour. The third group of complications are those related to the need for further treatment which is evident in about 5 to 7% of those treated for squamous precancer and up to 15 -30% of those with previous glandular precancer (CGIN) . The various presentations of all these complications and their management will be discussed. The question as to why women who have had treatment are at an increase risk for obstetrical complications will be discussed .Is it related to the actual surgical event itself, which in most cases is excision ? Recent evidence suggesting there may be an intrinsic abnormality not only in relation to impaired healing and immunity but also evidence that the micro biome system may be involved in some way in women with CIN. These various mechanisms will be discussed. The effects of treatment on fertility will be also considered

12.15 – SUMMARY and CLOSE