

Introduction to Gynecologic Oncology

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Objectives Cervical Dysplasia and Cancer

- Discuss the incidence and risk factors for cervical dysplasia and cervical cancer.
- Discuss the strategies for prevention of cervical dysplasia and cancer.
- Discuss the investigation and treatment of women with an abnormal pap smear.
- Discuss signs and symptoms and the work up of women with cervical cancer.
- Discuss the staging and treatment options for women with invasive cancer of the cervix.

Cervical Dysplasia Case Discussion

- A 28 year old woman has a Pap test showing a low grade squamous intraepithelial lesion (LGSIL)
- How will you discuss risk factors and prevention?
- How will you discuss investigation?
- How will you discuss treatment options?

Cervical Cancer Case Discussion

- A 47 year old woman presents with post coital bleeding and low back pain
- What is your differential diagnosis?
- What pertinent history will you elicit?
- What focused physical examination will you perform?
- What investigation will you order?
- What treatment options are available?

Cervical cancer in Canada

- 1400 new cases / year of cervical cancer in Canada
- 400 deaths/ year in Canada
- 5 million Pap smears annually
- 8% (~320,000 smears) are abnormal, requiring follow-up
- Potentially preventable disease, but still 11th most common malignancy among women

Pap smear

- Screening tool
- Purpose is to screen for intraepithelial lesions (dysplasia) before they progress to invasive cancer

Screening test

- Natural history of disease understood
- Recognizable latent or early stage
- Acceptable test or examination
- Effective treatment
- Cost effective
- High sensitivity (low false negatives)
- High specificity (low false positives)
- High positive predictive value

Pap smear – screening test

PITFALLS

- False negative Pap smears
 - Sampling errors
 - errors within laboratory
 - Interpretative errors
- False negative results ~ 20-30% (sensitivity results of 70-80%)

BENEFITS

- Screening has ↓ incidence and mortality from cervical cancer
- (BC provincial program. Finland, Sweden, and Iceland have nationwide programs)

Strategies to improve Pap smear

- **Sample collection**
 - Quality of sample collected
 - Inflammatory cells, necrotic debris, blood
 - Instrument to take the sample
 - Need to sample both ectocervix and endocervical canal

Liquid based cytology vs conventional Pap “smear”

Pap smear recommendations

- Start screening at age 21
- Repeat Pap every 3 years
- Continue screening until age 70
 - Can D/C screening only if 4 normal paps in last 10 years

HPV DNA Testing

- HPV DNA test for 14 strains high risk HPV
- Not indicated for low risk HPV
- Triage for ASCUS Pap
- Potential primary screening modality

Reporting of pap smears

Papanicolaou classification

CIN1, 2, 3

Bethesda classification

- Squamous intra-epithelial lesion or neoplasia (SIL)
 - Low-grade (LSIL)
 - CIN1
 - High-grade (HSIL)
 - CIN2 or 3
 - ASCUS (atypical squamous cells of unknown significance)
- Glandular

HPV Vaccination

- Quadrivalent vaccine against HPV 6, 11, 16, 18
- Bivalent vaccine againsts HPV 16, 18
- Primary prevention indicated in girls and women age 9-26
- Decreases risk of 70% of cervical cancer and 90% of genital condylomas (quadrivalent vaccine)
- Importance of maintaining secondary prevention with Pap test

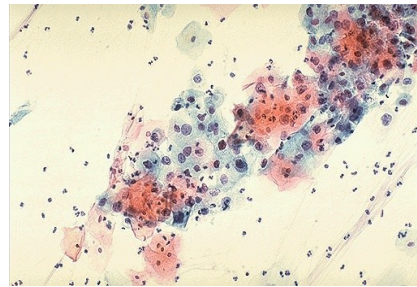
What to do with an abnormal pap

- HSIL → refer to colposcopy
- LSIL → repeat pap in 6/12
If LSIL again → colposcopy
If normal → repeat pap in 1 year
- ASCUS
 - If ASC-H (ASCUS, cannot rule out HSIL) → colposcopy
 - Otherwise (if ASCUS only), repeat pap in 6/12
 - If ASCUS again → colposcopy
 - If normal → repeat pap in 1 year

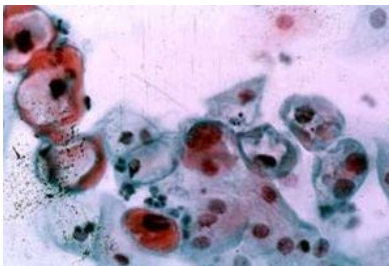
What to do with an abnormal pap

- AGUS (atypical glandular cells of undetermined significance) → refer to colposcopy

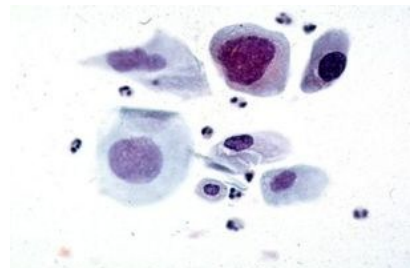
Normal pap smear



Pap – LSIL



Pap - HSIL



Dysplasia

- Cervical intraepithelial neoplasia
- spectrum of pre-invasive squamous disease
 - CIN 1,2,3, LSIL, HSIL
 - takes many years to develop into cancer
- Risk factors – related to HPV exposure
 - Smoking
 - Multiple partners, high risk male partner
 - Immunocompromised

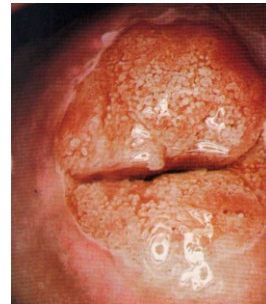
Colposcopy

- Magnification of cervix (+ vagina, vulva)
- Transformation zone vs. squamo-columnar junction
- Acetic acid
- Schiller's test (Lugol's solution)

Normal SCJ



Normal SCJ



LSIL



HSIL



HSIL



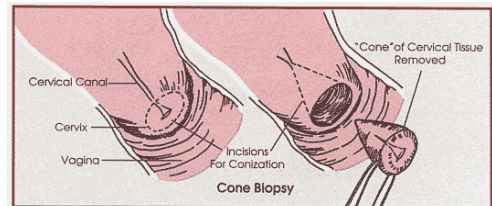
Treatment for dysplasia

- Laser
 - Vaporizes tissues
 - Rx- low grade dysplasia, lesions seen in entirety
- Cryosurgery
 - Crystallizes intracellular water
 - Rx - low grade dysplasia, lesions seen in entirety

Treatment for dysplasia

- Loop excision
 - Wire loop provides histologic specimen (unlike laser and cryosurgery – ablative procedures)
 - Rx - high grade dysplasia (HSIL)
- Cone biopsy
 - Excision of cone or cylinder-shaped portion of cervix
 - Rx – unsatisfactory colposcopy (can't see entire lesion, or the pap and colposcopic findings are very different), or if you suspect cancer
 - *Not* the treatment of choice for all other cases of dysplasia (longer, may need general anesthetic, potential pregnancy complications)

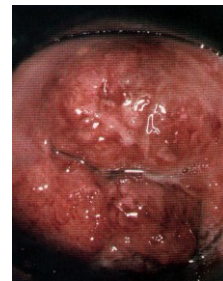
Cone biopsy



Management?



Description of findings?



Cervical cancer



Cervical cancer

- In the presence of a gross lesion on the cervix, a pap smear is NOT appropriate
- Need a biopsy to confirm

Cervical cancer

- Investigations - clinical staging
 - Pelvirectal exam (assess extent of primary tumour)
 - IVP or U/S (to assess kidneys)
 - CXR
 - CT (not included in FIGO staging)
- Treatment
 - Surgery for early stage (Stage I)
 - Chemoradiation (weekly chemotherapy during pelvic radiation) for locally advanced disease (Stages II, III, IVA)

Cervical cancer treatment

- Stage I
 - Radical hysterectomy and pelvic lymph node dissection (alternative to surgery – pelvic radiation)
 - Different from simple hysterectomy (need wide margin around cervix)
 - Adjuvant pelvic radiotherapy if nodes (+) or if adverse prognostic factors (deep stromal invasion, lymphovascular space invasion)

Cervical cancer treatment

- Stage II, III, IV (locally advanced)
 - Pelvic radiotherapy and brachytherapy (internal), with concurrent weekly cisplatin chemotherapy

Summary

- Pap smear is a screening tool for cervical cancer
- Different indications for referral to colposcopy, depending on pap smear result
- Different methods of treating dysplasia, depending on severity
- Any grossly abnormal lesion requires a biopsy (not a pap smear)