Cervix Cancer History

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Disclosure

I have no disclosure to report.
Objectives

Correlate the timeline effect of different diagnostic tools and cervical cancer

- USA incidence
- Worldwide incidence
- Mortality rate
- New tools for diagnosis and prevention

Tools of Diagnosis

- 1826 Lugol
- 1933 Schiller staining
- 1933 Patients' history
- 1933 Physical examination and biopsy
- 1921 Colposcope, (USA 1960)
- 1926-48 Cervical cytology or Pap smear
- 1950-60 Organized screening with cervical cytology
- 1980-1990 HPV etiology and cause for cancer established
- 1990 Molecular screening
- 2006 Vaccination for eradication

*Meigs book, page 9; 1933
Schiller W. Early Diagnosis of Carcinoma of the Cervix, Surg Gyn and Obs, 56:210-22, 1933*
Diagnostic Tools to Stage Cancer

<table>
<thead>
<tr>
<th>Stage</th>
<th>Time</th>
<th>Tools</th>
<th>stage of Ca</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1800-</td>
<td>history / P E</td>
<td>3 - 4</td>
</tr>
<tr>
<td>2</td>
<td>1933</td>
<td>staining</td>
<td>↓</td>
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<tr>
<td>3</td>
<td>1940</td>
<td>cytology</td>
<td>↓</td>
</tr>
<tr>
<td>3 a</td>
<td>1950-80</td>
<td>screening</td>
<td>↓</td>
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<tr>
<td>3 b</td>
<td>1980</td>
<td>HPV</td>
<td>↓</td>
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<tr>
<td>4a</td>
<td>90-00</td>
<td>Pap + HPV</td>
<td>↓</td>
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<tr>
<td>4b</td>
<td>2000</td>
<td>vaccine</td>
<td>1-0</td>
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Meigs Theory in 1933

- Early diagnosis is the key to cure.
- Pay attention to the symptoms especially discharge >6 months.
- Surgery or radiation is the 2nd key to cure
- What is the cause of cervical cancer?

Meigs book 1933
Advocated for Early Detection

DR Meigs strategy

“Propaganda surpasses its harm”.

Meigs book IN 1933

Cancer and Schiller Staining

- Carcinoma of the cervix uteri can be diagnosed in the preinvasive stage and in the early invasive stage before the appearance of any symptoms and before the development of ulceration or tumor.
- The Schiller (Lugol) test is a definite aid in locating the optimal site for cervical biopsy.
- Cancer detection should be an integral part of every gynecological examination.
  
  Permanente Foundation Medical Bulletin. 1944 Oct;2(4):165-74
Schiller

- Mortality from cancer can be reduced only on a large scale. This presupposes that the public will be made to realize the importance of periodic examinations and that every one of them will be given a complete examination to detect cancer, regardless of the patient's complaint.
The First Screening in USA

American Society for Control of Cancer and NCI grant

- 1940-1943 two clinics did screening
- Memorial hospital
- Philadelphia

Incidence Over Time

Cervical cancer is the most common cancer in the world, 2\textsuperscript{nd} cause of death in developing but #12 cause in developed countries with cervix cancer screening.

<table>
<thead>
<tr>
<th>Sites</th>
<th>Time period</th>
<th>% /100,000</th>
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</thead>
<tbody>
<tr>
<td>Cervix</td>
<td>1900-1933</td>
<td>24.1 to 37.1</td>
</tr>
<tr>
<td></td>
<td>2008</td>
<td>7.5</td>
</tr>
<tr>
<td>Breast</td>
<td>1900-1933</td>
<td>22.5</td>
</tr>
</tbody>
</table>

Meigs book of gynecology 1933' 1
ACS statistic 2008
Incidence of Cancer

Parsons and Sommers chapter 5mcabcer if cervix pages 1303; 1978
ACS 2008 statistics

Incidence Worldwide/100,000.

North Africa
South Africa
America
North. Central South
Asia and Europe
South East Asia
Polynesia
Incidence in Canada
After screening

Canadian screening task force for cervical cancer prevention showed the similar drop in the cancer incidence

American J Ob - GYN 1974

Canadian and Scottish Task Force

From 1960 to 1970

- The mortality rate from Cervical cancer dropped in 50%

CMA JOURNAL/JUNE 5, 1976/VOL. 114
Lancet 1: 1221; 1974
HPV

- Has changed our focus on how to manage Cervical cytology.
- It can guide the clinician and has lowered the # of office colposcopies
- Vaccination may eradicate cancer all together.
- HPV can be used for treatment?

Summary

- Cervical cytology has decreased the incidence, M & M from cervical cancer
- The HPV discovery has shed light on cervical cancer etiology, detection, possible treatment and eradication.
- Our goal should focus on cancer prevention
- Door is open for future discovery of molecular and individualized treatment.
Additional References

- Papanicolaou GN; Traut HF. Diagnosis of Uterine Cancer by Vaginal Smear. New York, Commonwealth Fund, 1943.
- ACS website

Thank you

Any questions?