Colposcopy for early stage cevical cancer

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During the past decades, the incidence of cervical carcinoma in industrialized countries has decreased. This decrease is, however, restricted to cervical squamous cell carcinoma, whereas the incidence of AC and its precursor AIS has remained stable or increased (1). In 1952. 4,5% of all cervical cancers were Acs (2). Nowadays, this percentage has risen to 20% (3).

The term preclinical invasive cancer is applied to very early invasive cancers (e.g., stage 1) in women without symptoms and gross physical findings and clinical signs, that are diagnosed incidentally during colposcopy or by other early-detection approaches such as screening.

The primary responsibility of a colposcopist is to ensure that if preclinical invasive carcinoma of the cervix is present in a woman, it will be diagnosed.

Missing a cervical cancer has seroius ramifications, for both the patient and clinician. It happens because of any of several potential inadequacies (4):

1) an inadequate case load (i.e., not enough patients to develod an adequate level of expertise)

2) a poor understanding of the disease processes

3) deviation from or deficiensis in a diagnostic protocol

4) insufficient biopses (i.e., too small, no stroma, inadequate number) or samples frpm the wrong sites

5) failure to perform an ECC when indicated

6) failute to excise when ECC is positive

7)cervical ablation without prior biopsy

8) failure to correlate cytologic, colposcopic, anf histologic findings

9) failure to appreciate the indications for excision

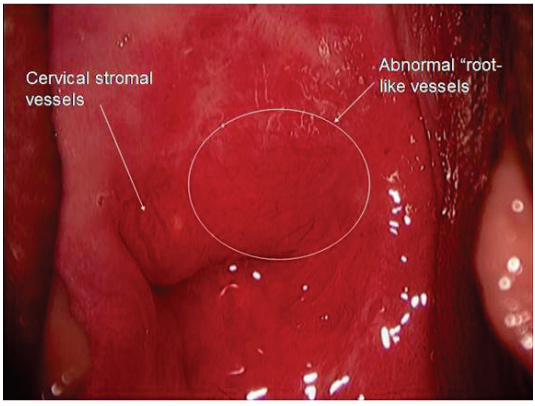
10) misscommunication with the pathologist

The incidence of microinvasive and occult invasive cancers increases as women grow older. The incidence begins to gradually rise in the late 20s,

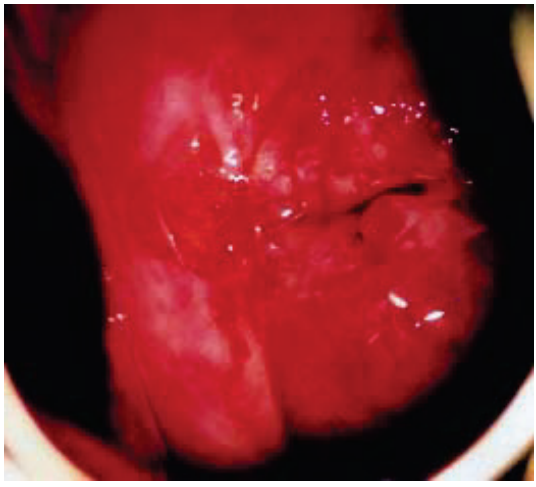
reaching a pleateau in the 40s, and peaking in the late 50s (5). While increasing age increases the risk of invasive cancer, the risk for colposcopist in missing cancer may be greatest for young women with cancer because of its extreme rarity.

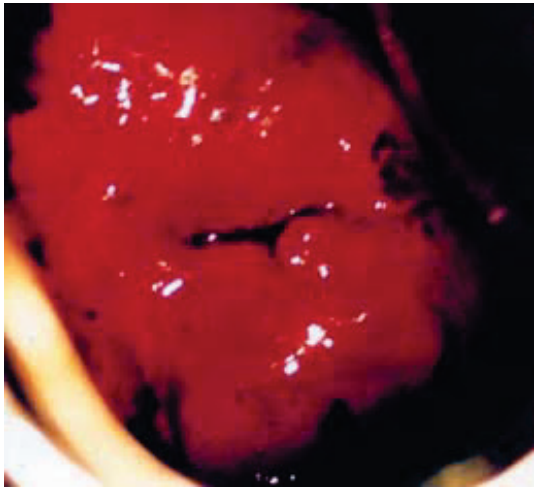
Large high-grade lesions, involving more than three quadrants of the cervix, should be thoroughly investigated for the possibility of early invasive cancer, especially if associated with atypical vessels. Other warning signs include the presence of a wide abnormal transformation zone (greater than 40 mm2), complex acetowhite lesions involving both lips of the cervix, lesions obliterating the os, lesions with irregular and exophytic surface contour, strikingly thick chalky white lesions with raised and rolled out margins, strikingly excessive atypical vessels, bleeding on touch or the presence of symptoms such as vaginal bleeding.

One of the earliest colposcopic signs of possible invasion is blood vessels breaking out from the mosaic formations and producing irregular longitudinal vessels. As the neoplastic process closely approaches the stage of invasive cancer, the blood vessels can take on increasingly irregular, bizarre patterns. Appearance of atypical vessels usually indicates the first signs of invasion. The key characteristics of these atypical surface vessels are that there is no gradual decrease in calibre (tapering) in the terminal branches and that the regular branching, seen in normal surface vessels, is absent.

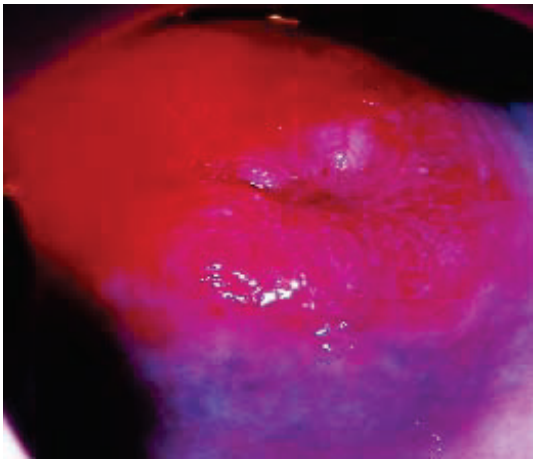


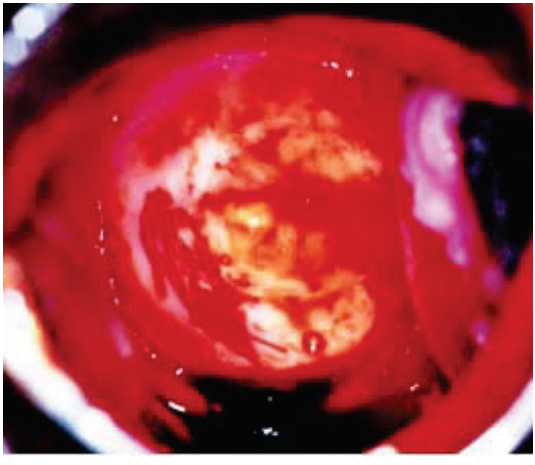
Early preclinical invasive cancer may also appear as dense, thick, chalky-white areas with surface irregularity and nodularity and with raised and rolled out margins . Such lesions may not present atypical blood vessel patterns and may not bleed on touch. Irregular surface contour with a mountains- and valleys- appearance is also characteristic of early invasive cancers. Such lesions frequently involve the endocervical canal and may obliterate the external os. Infiltrating lesions appear as hard nodular white areas and may present necrotic areas in the centre. Invasive cancers of the cervix rarely produce glycogen and therefore, the lesions turn mustard yellow or saffron yellow after application of Lugol's iodine. Biopsy should be taken from the periphery of the growth, avoiding areas of necrosis, to ensure accurate histopathological diagnosis.





There are no obvious colposcopic features that allow definite diagnosis of adenocarcinoma *in situ (AIS) and* adenocarcinoma, as no firm criteria have been established and widely accepted for recognizing glandular lesions(6,7). Most cervical AIS or early adenocarcinoma is discovered incidentally after biopsy for squamous intraepithelial neoplasia. Glandular disease often goes unnoticed because of imperfect cytologic findings, including inadequate sampling and failed screening. There is also the challenge of mixed disease because the colposcopist is satisfied to have recognized a squamous lesion and not search for a coexisting glandular one (8,9). 48%of AIS lesions involve only one cervical quadrant versus only 10% occupyng four quadrants. The linear length of AIS disease usually does not exceed 15mm.





The accurate colposcopic diagnosis of preclinical invasive carcinoma and glandular lesions depends on several fact (10):

- continuing alertness on the part of the colposcopist
- strict adherence to the step-by-step approach to examination,
- the use of a grading index,
- close attention to surface blood vessels
- the honest appraisal of when an examination is inadequate
- the appropriate use of ECC to rule out lesions in the canal
- taking of a well directed biopsy of sufficient tissue on which to base a reliable histopathological diagnosis

References

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