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ABSTRACT

OBJECTIVE: To estimate if cervical biopsy at the time of colposcopy changes the management or outcome of abnormal cervical cytology during pregnancy.

STUDY DESIGN: Retrospective cohort study of pregnant women with abnormal cervical cytology (CC) who underwent colposcopy from 2005-08. Women who had a cervical biopsy (CBx) at the time of colposcopy were compared to those that did not. The primary outcomes were the rates of regression, persistence, and progression. Regression and progression were defined as ≥ 1 degree of difference between antepartum CC or colposcopy and post partum CC. A multinomial regression analysis was used to control for confounding.

RESULTS: 177 pregnant women with abnormal cervical cytology were referred to colposcopy. The incidence of ASCUS high risk HPV, LGSIL, and HGSIL cervical cytology was 41%, 52%, and 3% respectively. The colposcopic diagnosis was CIN1 in 41%, CIN2 in 11% and CIN3 in 1%. Comparing the results of antepartum to postpartum CC, the performance of a CBx was not associated with a significant difference in outcome (table 1, $p=.825$). Comparing colposcopy to post partum CC, performance of a CBx was associated with a lower rate of progression even after controlling for age, tobacco use, previous abnormal CC, and trimester at the time of cervical cancer screening (table 2, $p=.026$). No women were treated by excisional procedure and no cases of cervical cancer were diagnosed during the study period.

CONCLUSION: Biopsy of suspected cervical lesions can be safely deferred until after pregnancy because there were no significant changes between antepartum and postpartum CC and no missed cases of cervical cancer were detected.

BACKGROUND

- Each year in the United States abnormal cervical cytology (ACC) affects 2-7% of pregnant women (ie. 80,000-320,000)
 - 0.5-1% will be diagnosed with cervical intraepithelial neoplasia
- Several published reports support the accuracy of visual colposcopic impression during pregnancy
- Perceived risks limit the number of cervical biopsies performed during pregnancy
 - By not performing a biopsy, there is a small chance:
 - of progression to invasive cancer during pregnancy
 - that invasive cancer will be missed

- Objective: to estimate if cervical biopsy (CBx) at the time of colposcopy changes the management or outcome of ACC during pregnancy**

MATERIALS & METHODS

- Retrospective cohort study of pregnant women with ACC who underwent colposcopy from 2005-08
 - Only women who returned for postpartum cervical cytology were included
- Women who had CBx at time of colposcopy were compared with those that did not
- Primary outcomes were the rates of regression, persistence, and progression
 - Progression and regression were defined as ≥ 1 degree of difference

RESULTS

- 177 pregnant women met the inclusion criteria
- Women who had a CBx were older, more likely to have a history of ACC, and more likely to use tobacco (table)

Table: Maternal demographic characteristics

Demographic Variable	CBx (n=25)	No CBx (n=152)	p
Age (y)	24 (18-39)	22 (13-41)	.031
History of prior ACC	18 (72%)	51 (34%)	<.001
History of excisional procedure	2 (8%)	5 (3%)	.258
Tobacco use*	11 (44%)	34 (22%)	.023
HIV positive [†]	3 (4%)	1 (2%)	.463
History of STD	16 (64%)	91 (60%)	.695

*data missing for 1 woman; [†]data missing for 9 women

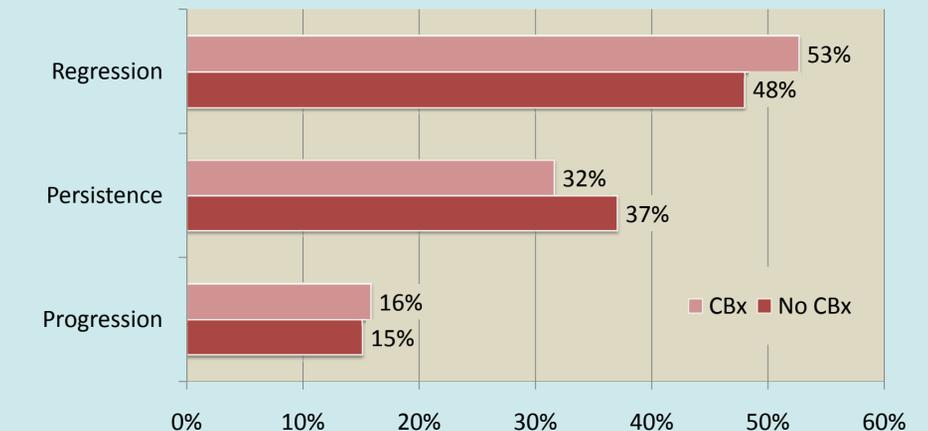
		Biopsy Result					
		NORM	HPV	CIN1	CIN2	CIN3	
Visual Impression	CIN1	4	2	6	0	0	48% Concordant
	CIN2	1	1	1	4	3	40% Over
	CIN3	0	0	0	1	2	12% Under

Figure 1: Accuracy of visual colposcopic impression

- Colposcopy was performed in the 1st, 2nd, and 3rd trimester in 14%, 62%, and 24% respectively
 - The incidence of high-grade cervical cytology (11%) and cervical intraepithelial neoplasia grade 3 (3%) were low
- Figure 1 shows the final biopsy diagnosis compared to visual impression
 - No women were treated by excisional procedure during pregnancy**
 - No cases of cervical cancer were diagnosed by biopsy (or as a result of post partum cervical cytology)**

RESULTS (cont)

FIGURE 2: Outcome rates compared by biopsy group



- In an additional analysis, there was no difference in the rates of regression, persistence, and progression comparing colposcopic diagnosis to postpartum cervical cytology ($p=.897$)
- There was no difference in the rates of regression, persistence, and progression comparing antepartum to postpartum cervical cytology ($p=.825$; data not shown)

CONCLUSIONS

- Antepartum knowledge of cervical biopsy results did not change the management of ACC during pregnancy**
- For most pregnant women with abnormal cervical cytology, CBx can be safely deferred until after pregnancy**
 - ASCCP Guideline:** only when there is a suspicion of CIN2,3 or cancer should a CBx be performed during pregnancy
- The low incidence of cervical cancer during pregnancy and small sample size should be taken into consideration when interpreting these results**