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## OBSTETRICS

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# Pelvic Examination in ANC Clinic : a rural hospital experience

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### ABSTRACT

**Background** Routine pelvic examination and Papanicolaou (Pap) smear were recommended as standard of care for first-time visitor to antenatal care (ANC) clinic. This study was conducted to determine the abnormalities that could be detected by such recommendation in ANC clinic of a rural hospital.

**Methods** Five hundred and thirty pregnant women whilst their first visit to ANC clinic at Phanomphrai hospital, after group counselling, had received speculum examination, bimanual palpation, Pap smear, and those with vaginal discharge received wet smear.

**Results** Abnormalities were detected in 69.8 percent of pregnant women. These included 13.0 percent of abnormal Pap smear, 8.5 percent of fungal infection, 0.6 percent of Trichomonas vaginitis, 55.8 percent of non specific vaginitis, 0.4 percent of cervical polyp, and 4.0 percent of unequal uterine size relative to gestational age. After excluded 3 unsatisfactory smears, 12.5 percent of Pap smears were class II and 0.5 percent were class III (n = 527).

**Conclusions** Pelvic examination can detect many abnormalities in pregnant women. This procedure should therefore be emphasized as routine care for first-time visitor of ANC clinic.

**Key words:** pelvic examination, papanicolaou smear, antenatal care

The objective of prenatal care is to assure that every wanted pregnancy culminates in the delivery of a healthy baby without impairing the health of the mother.<sup>(1-2)</sup> One of antenatal care (ANC) clinic aims is to detect any complication early in pregnancy and give early treatment. Gynecologic complication is one of the most common disorders during pregnancy, some of them, if present in early stage, are asymptomatic. Appropriate and effective screening test should be cheap, specific, sensitive, risk free and the test performance must be acceptable to the population.<sup>(3)</sup> Pelvic examination and Papanicolaou (Pap) smear fulfil most of these criteria.<sup>(4)</sup> Pelvic examination and cervical

cytology test is recommended as initial assessment during prenatal care,<sup>(1)</sup> nonetheless this procedure is often omitted. Provider who does not perform this procedure may think it is unnecessary and cannot detect so much abnormality in normal pregnancy.

This study is aimed to assess abnormality that could be detected by pelvic examination and Pap smear in ANC clinic of a rural hospital.

### Methods

#### *Patient selection*

Women considered eligible for this study were those who attended ANC clinic at Phanomphrai

Hospital for the first time from August 1997 through May 1998.

### **Exclusion criteria**

Women with history of preterm labor, antepartum hemorrhage, previous gynecologic examination and treatment, ruptured fetal membranes, in true labor or those without permission.

### **Methods**

All women presenting to ANC clinic at Phanomphrai Hospital for the first time, after group counsel, were asked by nurse practitioners whether to participate in the study, and informed consents were obtained from all those who enrolled. The women enrolled in the study, after history taking, were examined in the pelvic examination room. The examination included speculum examination, bimanual examination, Papanicolaou smear and wet smear.

### **Statistical analysis**

All the recorded data and results were analysed and reported in *mean, range, standard deviation (S.D.) and percentage*.

## **RESULTS**

From August 1997 through May 1998, five hundred and thirty pregnant women were enrolled in this study. The mean age was 25.7 years (range, 15 to 49, S.D.  $\pm$  5.5). The mean gravidity was 2.0 (range, 1 to 7, S.D.  $\pm$  1.0), and mean gestational age was 16.3 weeks (range, 4 to 36, S.D.  $\pm$  6.3).

Four hundred and ninety three women (93.0 percent) were asymptomatic, 10 (1.9 percent) had

abnormal vaginal discharge, 16 (3.0 percent) had abnormal vaginal discharge and pruritus vulvae, and 11 (2.1 percent) had pruritus vulvae (Table 1).

Three hundred and seventy women (69.8 percent) had abnormal findings which included 69 cases (13.0 percent) with abnormal Pap smears, 45 (8.5 percent) with fungal infections, 3 (0.6 percent) with *Trichomonas vaginitis*, 296 (55.8 percent) with non specific vaginitis, 2 (0.4 percent) with cervical polyps, and 21 (4.0 percent) with unequal uterine size (Table 2).

Twenty-one women with unequal uterine size (i.e. discrepancy of uterine size and gestational age greater than 3 weeks) received sonographic confirmation for precise knowledge of gestational age. There were 13 women (62.0 percent) whose uterine size were large- and 8 (38.0 percent) were small-for-age.

After exclusion of 3 unsatisfactory smears, 69 women (13.0 percent) had abnormal Pap results. There were 66 cases (12.5 percent) with class II and 3 (0.5 percent) with class III. Those with class III were followed and all show HPV infection, one with anti-HIV positive.

There were 333 abnormal findings (67.5 percent) among asymptomatic women (n=493). These included 278 women (56.4 percent) with non specific vaginitis, 16 (3.2 percent) with fungal infection, 20 (4.1 percent) with unequal uterine size and 68 (13.8 percent) with abnormal Pap results which included all women of class III results.

**Table 1** Complaints at first visit to ANC clinic (n=530)

Complaints	Number (percent)
Asymptomatic	493 (93.0)
Symptomatic	37 (7.0)
Abnormal vaginal discharge	10 (1.9)
Abnormal vaginal discharge and pruritus	16 (3.0)
Pruritus vulvae	11 (2.1)



**Table 2** Findings of pelvic examination in ANC clinic (n = 530)

Findings	Number (percent)
<b>Normal</b>	<b>160 (30.2)</b>
<b>Abnormal</b>	<b>370 (69.8)</b>
Non specific vaginitis	296 (55.8)
Fungal infection	45 (8.5)
Unequal uterine size	21 (4.0)
Trichomonas vaginitis	3 (0.6)
Cervical polyp	2 (0.4)
Abnormal cervical cytology	69 (13.0)

**Table 3** Findings in Asymptomatic women (n = 493)

Findings	Number (percent)
<b>Normal</b>	<b>160 (32.5 percent)</b>
<b>Abnormal findings</b>	<b>333 (67.5 percent)</b>
Non specific vaginitis	278 (56.4)
Fungal infection	16 (3.2)
Unequal uterine size	20 (4.1)
Abnormal cervical cytology	68 (13.8)

## Discussion

This study shows high prevalence of abnormalities on pelvic examination in ANC clinic. The majority of these women were asymptomatic and those who had symptom only had complaints of abnormal vaginal discharge, pruritus, or both. If routine pelvic examination and Pap smear were not performed, about two thirds of women who had abnormalities might be missed.

The high prevalence of non specific vaginitis in this study, compare with other (55.8 percent vs. 10-30 percent),<sup>(1,5)</sup> may be due to the criteria used. Any increase in number and kinds of bacteria, any reduction in numbers of lactobacilli and finding of few leukocytes or present of clue cells is sufficient for the diagnosis.<sup>(6)</sup> It is controversial whether asymptomatic

pregnant patients should be treated. Numerous reports have suggested that this condition may enhances preterm labor, preterm rupture of membranes, intra-amniotic infection, endometritis, and histologic choriarnionitis.<sup>(6-8)</sup> Some authors recommend treatment of all pregnant women with bacterial vaginosis.<sup>(7)</sup> Fungal infection has been found lesser than previous studies (8.5 percent vs. 20.5-30 percent).<sup>(1,5-8)</sup> Asymptomatic vaginal candidiasis requires no treatment.<sup>(7)</sup> Trichomonas vaginitis has been found slightly less than previous study (0.6 percent vs. 1.0 percent).<sup>(5)</sup> All women with this abnormality were symptomatic. Treatment during pregnancy is controversial.<sup>(6-7)</sup> Most agree that treatment can be considered for women with moderate-to-severe symptoms in the second and third trimester of pregnancy.<sup>(6-7)</sup>

Almost all women with abnormal cervical cytology were asymptomatic. The prevalence of abnormal smear is higher than previous study (13.0 percent vs. 3.4 percent).<sup>(5)</sup> It is interesting to note that all 3 women with Pap class III were asymptomatic. One of these women had evidence suggestive of human papilloma virus (HPV) infection and was asymptomatic, correspond with previous study which report that the largest group of obstetric patients with HPV infection were asymptomatic and had subclinical disease.<sup>(9)</sup> The traditional approach to the abnormal Pap smear in pregnancy is careful colposcopic assessment of the cervix,<sup>(10)</sup> but this is not practical for rural hospital.

Pelvic examination and Pap smear, when integrated with other services at ANC clinic, can improve quality of care for every pregnant women.<sup>(11)</sup>

The result of the present study suggests that pelvic examination and Pap smear can detect many abnormalities in pregnant women, even in rural hospital. This procedure should therefore be emphasized as routine care for every first-time visitor of ANC clinic. Further study is needed to evaluate the feasibility if the procedure as such be performed by health care personnel in every ANC clinic.

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