Results of Cervical Cone Excision Biopsy in Iran

Fatemeh Ghaemmaghami¹, Mojgan Karimi Zarchi², Azamsadat Mousavi³, Zeinab Ale Mohammad³, Azadeh Fallahi⁴

Abstract

Aims: The prevalence of cervical cancer in a developing country, and diagnostic therapeutic value of knife conization for CIN, indications, cytopathologic results and complications of conization, were evaluated. Methods: This retrospective- descriptive study concerned 44 cases that underwent conization. Results: The age range of patients was 18-75 (mean=43), and parity ranges were from 0-10 (mean 4-5), ten cases were post-menopausal. The main indication was inability to visualize the entire T zone (19 cases) that was more prevalent in post-menopausal (5 cases and 14 cases premenopausal). The most common pap smear result was HSIL in 16 cases before conization. The most common colposcopic biopsy result was moderate dysplasia in 16 cases. Two cases had invasive cancer on colposcopic biopsy: one of them had ASCUS in pap smear result and another one HSIL. The most common histologic result after conization was mild dysplasia in 23 cases. Four cases had invasive cancer in histology of the cervix with conization. Active hemorrhage occurred in 2 cases and urinary infection in 1 case after conization. Conclusions: Pap smear results in screening of cervical cancer are not reliable and colposcopy is more acceptable for LSIL and ASCUS. All gynecologist should develop the skill to perform accurate knife conization, because the classical indications for conization continue to be valid, and it has low risk of complications.

Key Words: Cone biopsy - knife conization - LEEP - dysplasia - CIN - Pap smear

Introduction

Cancer of the cervix is the most common malignant disease among the women of developing countries (Nieminen et al., 1995). Kolstad and Klem (1979) showed that knife conization is as appropriate as hysterectomy in treatment of in situ carcinomas and more than 95% of high grade CIN patients may be completely cured (Jones, 1990). Although there are new techniques being invented every day, conization can still be used (Campion 2004). Knife conization is used for those lesions that are extended into the endocervical canal with no proven invasive carcinoma and unsatisfactory colposcopy result (Spitzer et al., 1998).

In general, indications of knife conization include: not completely visualized T-Zone, no agreement between colposcopy and pap smear results, suspected invasive carcinoma or in situ adenocarcinoma. Among these, not completely visualized T-Zone has been the most important indication for conization in different studies (Massad et al., 1997; Spitzer et al., 1998; Montz, 2000; El-Toukhy et al., 2001).

At the John Hopkins hospital there are only two indications for performing a cold knife cone, and these are both settings where the ability to obtain an optimal specimen for pathologic assessment is critical: adenodisplasia of endocervix and a biopsy result consistent with microinvasive cancer (Montz, 2000). Disadvantages of knife conization are mostly need to general anesthesia and it’s complications but many reports have proved that it can be done safely with few complications and side effects (Krebs, 1984; Warwick et al., 1992).

Other methods of conization include Co2 laser excision, with which depth and width of conization can be adjusted according to the lesion topography and T-Zone (Kolsted and Klem, 1979). Obtaining adequate amount of tissue for pathology examination is the main advantage of knife conization (Phelps et al., 1994). Also, by eliminating thermal artifact and tissue destruction produced by other techniques, an optimal specimen for histologic analysis can be provided (Montz et al., 1993). In a study on 699 patients, conducted by Mohamed Noor (1997), the treatment results with conization for CIN lesions were good and El-Toukhy (2001) obtained similar results.

The present study was designed to determine whether we can rely on the results of biopsy performed while colposcopy or still we need to go for knife conization. Also indications, complications and results of pap smear and colposcopic biopsy has been compared with that of histologic results of knife conization.

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Table 1. The Results of Colposcopy Biopsy According to Pap Smear

<table>
<thead>
<tr>
<th>Pap Smear</th>
<th>Conization Histology</th>
<th>Total</th>
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<tr>
<td>Normal</td>
<td>Normal</td>
<td>5</td>
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<td>Benign</td>
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<td>ASCUS</td>
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<td>HSIL</td>
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Patients and Methods

Cases

In this descriptive retrospective study all the patients who had undergone knife conization in Vali-e-Asr hospital, between 2001 and 2004, were included. The information was gathered by using the patients files.

Statistics

Statistical analysis was conducted with SPSS Ver. 12 software, using Mean and SD for qualitative variables and No. and percentage for quantitative variables.

Results

The number of patients was 44, with an age range from 18 to 75yrs. (Mean 43, Median=40). The parity of the patients was from 0 to 10 (Mean=4.36, Median=4) and 10 patients were post-menopausal. The indications for knife conization included: not visualized T-Zone in 19 cases, no proportion between colposcopy results and pap smear in 14 cases, suspicious invasive carcinoma in colposcopy in 7 cases and insitu adenocarcinoma in 4 cases. Suspicious invasive carcinomas were more frequent among menopause cases than pre-menopause patients.

The condition was the same for non visualized T-Zone, of menopause cases and pre-menopause patients. There were 2 cases with active hemorrhage and 1 with urinary tract infection.

The histology report of knife conization was mild dysplasia in 23 cases, moderate dysplasia in 7 cases, severe dysplasia in 10 cases and invasive carcinoma in 4 cases. Colposcopic biopsy results were mild dysplasia in 15 cases, moderate dysplasia in 16 cases, severe dysplasia in 11 cases and invasive carcinoma in 2 cases. The pap smear results were as follows: Normal in 10 cases, Benign cellular changes in 5 cases, ASCUS in 7 cases, LSIL in 6 cases and HSIL in 16 cases. The colposcopic biopsy results according to pap smear findings in Table 1 and the knife conization results according to pap smear in Table 2 are summarized.

Discussion

Knife conization of cervix has been a diagnostic and treatment method for CIN lesions, since years ago. In most studies, the most important indication for knife conization has been non visualized T-Zone during colposcopy (Spitzer et al., 1998; Montz, 2000; El-Toukhy et al., 2001; Massad et al., 1997).

In this study, 43.2% of cases underwent knife conization due to the same reason. After menopause the frequency of non-satisfactory colposcopy, increases significantly (Sheets, 2003). In this study, the frequency of menopause cases was more than those of pre-menopause too. The histology examination result of conization in this study, was mild dysplasia in most cases (52.3%) but in a study done by El-Toukhy et al (2001), severe dysplasia and mild dysplasia has been seen in 36% and 11% of cases respectively. The difference arises because many colposcopists do not rely on colposcopy results and insist more on conization even in mild dysplasia.

Conization histology considering pap smear, shows that among 4 cases of invasive carcinoma, 1 case had ASCUS in pap smear and the remaining 3 had HSIL. In 10 cases of severe dysplasia, 2 had normal pap smear, 2 ASCUS, 3 LSIL, and 3 HSIL.

Considering the small number of cases and that this is a descriptive study, statistical analysis was not performed but we could judge that the pap smear results are not reliable measures for cervical cancer screening so colposcopy in LSIL or even ASCUS cases is recommended.

The results of colposcopic biopsy considering pap smear confirms this conclusion too because among 2 cases of invasive carcinoma, 1 had ASCUS and the other had HSIL in pap smear. In 11 cases of severe dysplasia, 2 had normal, 1 had ASCUS, 2 had LSIL and 6 had HSIL pap smear results so it’s again confirmed that pap smear is only a screening mean and because of large number of false negative results can not be used as a diagnostic tools.

In the study conducted by Sasiemi (1996) on patients with cervical cancer showed that 49% of these patients have been well examined and followed-up during the recent 5 years before diagnosis. According to the study of Margariti (1998), Pap smear alone is not enough for screening of pre-invasive cervical malignancies.

The most significant complication of knife conization in previous studies has been bleeding, the frequency has been 20% (Spitzar, 2002; Jones, 1995; Hagen 1998) have reported it’s frequency around 5-10% but according to...
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Massad LS, Chronopoulos FT, Cejtin HE (1997). Correlating
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El-Toukhy’s study (2000), bleeding occurs in 4% of the
patients. In our study, bleeding was seen in 2 cases (4.5%)
which is almost the same as recent studies but cervical
stenosis as another complication of knife conization could
not be evaluated.

Since some of cases with ASCUS pap smear result,
had severe dysplasia and invasive carcinoma, it seems
that in cases of abnormal pap smear even those with
ASCUS, more investigation with colposcopy is needed,
we recommend that correct technique of obtaining pap
smear and more accurate histology reports, should be
highly considered. Disadvantage of knife conization is
mostly because general anesthesia and it’s complications
but although there are new techniques developed in recent
years, knife conization has it’s own specific indications.
Knife conization is an accepted method in CIN control
and if is correctly done, the complications would be
the least. It’s necessary for every gynecologist to
increase self skill for an accurate knife conization of the
cervix (Montz, 2000). More careful colposcopy and more
accurate histology reports decreases the number of
conization in LSIL pap smear and the patient is not to
suffer a surgery.

Pap smear results in screening of cervical cancer are
not reliable and colposcopy is more acceptable in LSIL
and ASCUS. Any Gynecologist should develop the skill
to perform an accurate knife conization, because the
classical indications for conization continue to be valid,
and it has low risk of complications.

Acknowledgement

Written informed consent was obtained from all the
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