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Assessment of Outcome after LLETZ in Cervical Cancer Prevention

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Abstract: ***The aim of the present retrospective study was to assess the recurrence rate of preinvasive disease and the newly detected invasive disease rate in a cohort of women treated with excisional methods for high-grade cervical intraepithelial neoplasia (CIN). Women were treated with large loop excision of the transformation zone (LLETZ) . Surgical specimens underwent histological examination and the status of endocervical as well as ectocervical margins was recorded. Follow-up protocol included testing for HP HPV DNA at 6 months after the initial treatment following which the patients either went to normal recall if tests were normal, had annual smears or repeat LLETZ if clinically indicated. Majority [54.5%] patients had negative TOC after LLETZ. In TOC positive patients, colposcopy was normal in 67.8% patients, low grade and HPV were seen in 14.28% patients each. No moderate or high grade seen. Colposcopy was normal in 75% of patients in TOC negative group. 78.9% patients were able to go for normal recall with their GP. Only 6.2% were advised annual smears. Among the 8 patients taken up for a biopsy, 3 turned out negative, 3 had HPV and only 2 showed CIN 1 changes. NO patient had cervical changes CIN2 or above. NONE of the patients needed a repeat LLETZ. Women having undergone excisional treatment for high-grade CIN indicate a very low risk for recurrent disease and potentially negligible risk for invasive cancer, provided that a strict and vigorous follow-up is offered after treatment.***

Keywords: cervical conization, cervical intraepithelial neoplasia, CIN2-3, colposcopy, LLETZ

1. Introduction

Cervical cancer presents a significant global health burden with an estimated 2,66,000 deaths and 5,28,000 new cases worldwide recorded in 2012[1]. Approximately 85% of cervical cancer cases occur in developing countries and they comprise 12% of all female cancers.[1] The current estimates indicate approximately 1,32,000 new cases diagnosed and 74,000 deaths annually in India.[2] Indian women face a 2.5% cumulative lifetime risk and 1.4% cumulative death risk from cervical cancer.[2]Unfortunately, no mandatory government funded programs have been formulated to raise awareness and pick up the disease in its incipient stages to prevent it from progressing into cancer.

The National Health Service [NHS] Cervical Screening Program addresses the issue of cervical cancer prevention in the UK. Since its introduction, screening has resulted in 60-70% reduction in mortality from cervical cancer. Between age 25and 49 years, 3 yearly screening

tests are done following which 5 yearly tests are done up to 64 years.[3] Liquid based cytology is the standard screening modality.

Women with abnormal cytology are referred to colposcopy clinic for further treatment in the form of cervical biopsy, LLETZ [Large Loop Excision of the Transformation Zone] etc. for CIN [Cervical Intraepithelial Neoplasia]. Women who have had treatment for CIN or early stromal cancer remain at risk of recurrence.[3] Testing for HR-HPV DNA after treatment offers a more accurate prediction of residual/recurrent CIN than conventional cytology based follow up. This investigation is known as test of cure.

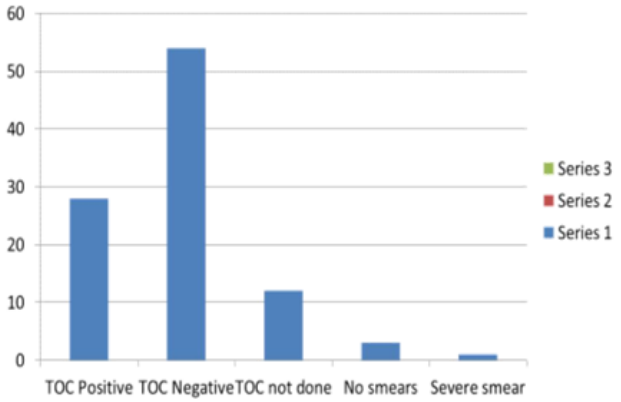
In order to determine the efficacy of LLETZ treatment of cervix, its outcome was assessed in our hospital.

2. Material and Methods

All the patients who underwent LLETZ at James Paget University Hospital, Gorleston, Great Yarmouth from the time period of 1/1/15 to 30/6/15 were included.

Data was collected retrospectively from electronic medical records and was analysed with SPSS software.

3. Results

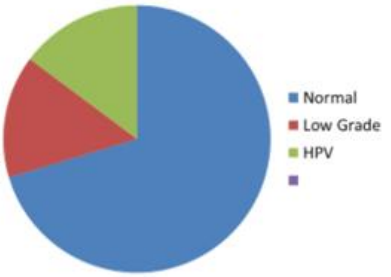


Colposcopy outcomes of TOC positive patients

Normal – 97.8%

Low Grade – 14.28%

HPV – 14.28%



TRASFORMATION ZONE

SEEN – 92.1%

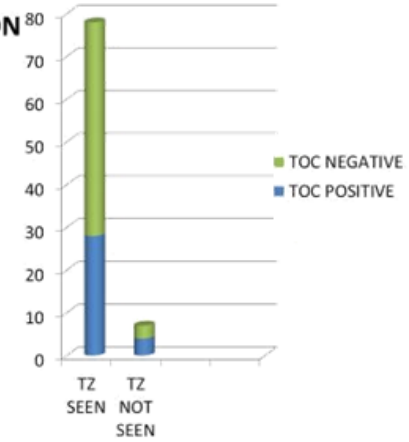
TOC POSITIVE – 30.4%

TOC NEGATIVE – 54.3%

NOT SEEN – 7.2%

TOC POSITIVE – 57.1%

TOC POSITIVE – 42.9%



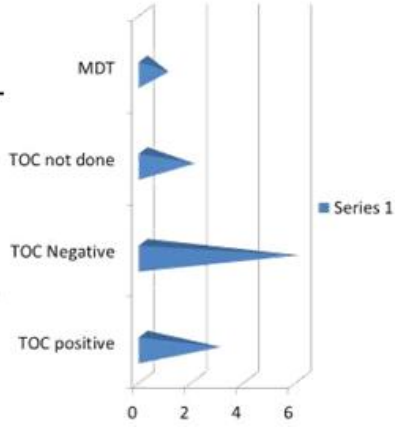
Smoking history - 12

TOC positive – 25%

TOC negative 50%

TOC not done – 16.7%

MDT – 8.3%



FOLLOW UP PLAN

NORMAL RECALL – 78.9%

TOC POSITIVE – 37.2%

TOC NEGATIVE – 62.8%

ANNUAL SMEARS – 6.2%

TOC POSITIVE – 16.7%

TOC NEGATIVE – 505

NO TOC – 16.7%

NO SMEAR – 16.7%

CERVICAL BIOPSY – 8.1%

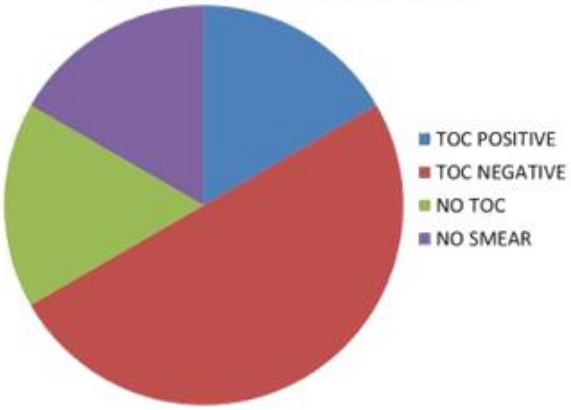
HPV – 37.5%

CIN1 – 25%

NEGATIVE – 37.5%

4 TOC negative patients went ahead for colposcopy

ANNUAL SMEARS



MARGINS

CLEAR – 68.7%

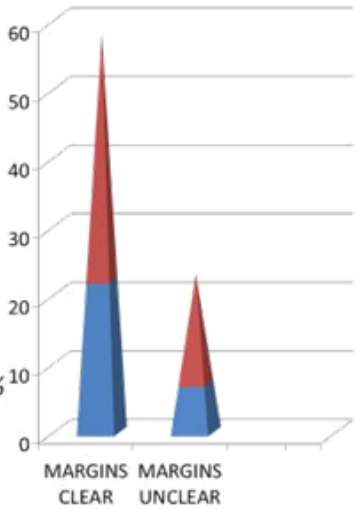
TOC POSITIVE- 32.4%

TOC NEGATIVE – 52.9%

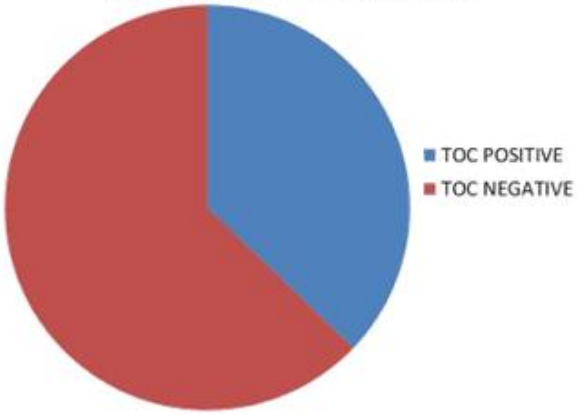
NOT CLEAR – 45.6%

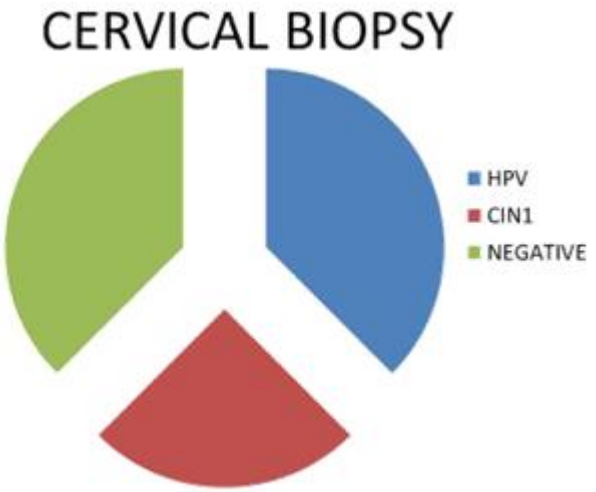
TOC POSITIVE –22.6%

TOC NEGATIVE – 51.6%



NORMAL RECALL





4. Discussion

Numerous trials have showed that testing for high-risk HPV DNA in order to detect post-treatment disease in women treated for CIN has higher sensitivity and almost equal specificity compared to follow-up cytology alone or histological assessment of the margins of the excised specimen.[4,5]..

Invasive cervical cancer after treatment for CIN can have 2 pathogenic pathways. First, it develops from a small residual lesion which was not removed or destroyed during treatment, or second develops de novo in various periods of time after treatment. In the first case it seems likely that the residual lesions have characteristics that make them difficult to detect[6] in respect to that, the most successful treatment modality has to be chosen in order to diminish, as much as possible, the risk of even the smallest lesion being left behind.

According to most studies, excisional treatment seems to be superior to destructive methods in this regard. In the second case, considering that the follow-up period in the abovementioned studies is very long (>20 years), one could expect that the rate of de novo development of cervical cancer in women treated successfully for CIN would be the same with the average population, unless one assumes that these women are characterized by a high-risk genetic profile, prone to interact badly with HPV infection. Although there are studies investigating a genetic predisposition for the development of cervical precancer and cancer, there is no evidence to date to clearly support this idea. In their extensive meta-analysis of 66 studies, Ghaem-Maghami et al,[7] who found a significant association between the frequency of post-treatment disease and frequency of incomplete excision (P <.001), stated at the end that the data do not show definitely whether post-treatment disease is due to recurrence of the original disease or to the development of new disease, but the association with insufficient excision suggests that recurrence of the original disease is the more likely reason.

In conclusion, our data from the follow-up of women having undergone excisional treatment for high-grade CIN indicate a very low risk for recurrent disease and potentially negligible risk for invasive cancer, provided that a strict and vigorous follow-up is offered after treatment.

5. Conclusion

Majority [54.5%] patients had negative TOC after LLETZ. In TOC positive patients, colposcopy was normal in 67.8% patients, low grade and HPV were seen in 14.28% patients each. No moderate or high grade seen. Colposcopy was normal in 75% of patients in TOC negative group. 78.9% patients were able to go for normal recall with their GP. Only 6.2% were advised annual smears. Among the 8 patients taken up for a biopsy, 3 turned out negative, 3 had HPV and only 2 showed CIN 1 changes. NO patient had cervical changes CIN2 or above. NONE of the patients needed a repeat LLETZ.

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