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ORIGINAL PAPER

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Cryotherapy of Erosion of Cervix and Low Grade Squamous Intraepithelial Lesion

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ABSTRACT

Introduction: Cervical erosion and squamous intraepithelial lesion of low grade are most common gynecological problems of women. These changes on cervix are cause of painful coitus and enhanced vaginal secretion. Cryotherapy is widely accepted method in treating these changes and symptoms. **Aim:** The aim of this study is to examine the efficiency of cryotherapy in eliminating erosion of cervix and LSIL, as well as conditions following these states. **Patients and methods:** Cryotherapy was performed in 124 women with cervical erosion (N-74) and LSIL (N-50). Symptoms that were followed are: vaginal secretion, abnormal vaginal bleeding and pain. Assessment of epithelisation of cervix and evaluation of symptoms were done 4 and 6 weeks after cryotherapy and PAP test after 4 months in women with LSIL. Statistical method used in result processing was X2 test. **Results:** The average age of examined women is 37,75±8,2. Enhanced vaginal secretion had 87,09% (N-120), painful coitus 61,29% (N-76), pain in lesser pelvis 52,41% (N-65) and abnormal vaginal bleeding 28,22% (N-35). Erosion of cervix had 14% (N-7) of women with LSIL. After cryotherapy, enhanced vaginal secretion remained in 21,77% (N-27) of women, painful coitus remained in 8,06% (N-10), pain in lesser pelvis remained in 5,6% (N-7) and abnormal vaginal bleeding in 6,4% (N-8). Four weeks after cryotherapy, complete epithelisation of cervix was in 87,90% (N-109) and after six weeks in 93,54% (N-116) of examined women. LSIL was eliminated in 92% (N-46) of women after cryotherapy and in 8% (N-4) results remained the same. **Conclusion:** Cryotherapy is successful method of elimination of cervical erosion, LSIL and pains with enhanced vaginal secretion.

Keywords: Cryotherapy, erosion of cervix, LSIL.

1. INTRODUCTION

Cervical erosion is one of the most common gynecological problems found in approximately

15 % of women (1). It occurs as consequence of cervical infection and represents a base for the development of cancer (2). Long-term cervical infection can cause premalign and malign changes of this organ. Squamous intraepithelial low grade lesion (LSIL) is in 17% of women associated with erosion of cervix (3). This change on cervix is cause of many gynecological symptoms like painful coitus, pain in the lower part of stomach, increased vaginal secretion and intramenstrual bleeding. Cryotherapy is widely accepted method in treatment of these changes and symptoms (4). Efficiency in treatment with this method is very high, between 85 and 97 % (5).

2. AIM

Aim of this was to examine the efficiency of cryotherapy in eliminating erosion of cervix and LSIL, as well as conditions following these states.

3. PATIENTS AND METHODS

Retrospective study was conducted over a period of 1 year, from February 2017 to February 2018. In private gynecological ambulance „Dr Mahira Jahić“ 1600 women were examined as routine screening in year. Total number of examined women with problems is 124: 70 patients with cervical erosion (N-74) and 50 patients with LSIL (N-50). Criteria for cryotherapy were: women between 25 and 45 years of age with cervical erosion and LSIL. Gynecological examination, colposcopy and PAP test were performed for each patient before the intervention. Symptoms that were examined are: enhanced vaginal secretion, abnormal vaginal bleeding, pain in lesser pelvis and painful intercourse. First checkup examination, assessment of cervix epithelisation and evaluation of previously present symptoms were conducted 4 weeks after the cryotherapy. If the epithelisation wasn't complete checkup was done in 6 weeks.

Symptoms followed-up were: enhanced vaginal secretion, bleeding and pain. All women with LSIL underwent PAP test 4 months later. Method of statistical evaluation of results used was X2 test.

4. RESULTS

The average age of all women (N-120) with changes on cervix was 37,75±8,2 (Table 1).

Lesion	Erosio cervix uteri (N-74)	LSIL (N-50)
Age	36,7±8,6	38,8±7,9
Nulipara	13	8
Multipara (1-4)	61	42
Previous abortions	52	20

Table 1. Vital characteristics of examined women

Symptoms	Erosion before cryoth	Erosion after cryoth	LSIL before cryoth	LSIL after cryoth	Statistical significance p
Enhanced vaginal secretion	100% (N-74)	33% (N-25)	92% (N-46)	4% (N-2)	P<0,01
Painful coitus	71% (N-53)	4% (N-3)	46% (N-23)	14% (N-7)	P<0,05
Pain in lesser pelvis	64% (N-48)	2,7% (N-2)	34% (N-17)	10% (N-5)	P<0,05
Abnormal vaginal bleeding	33,78 (N-25)	6,7% (N-5)	22% (N-10)	6% (N-3)	p>0,01

Table 2. Symptoms present in women with erosion and LSIL before and 4 weeks after cryotherapy

Before cryotherapy, enhanced vaginal secretion had 87,09% (N-120) of women, painful coitus 61,29% (N-76), pain in lesser pelvis 52,41% (N-65) and abnormal vaginal bleeding 28,22% (N-35). Erosion of cervix had 14% (N-7) of women with LSIL. After cryotherapy, enhanced vaginal secretion remained in 21,77% (N-27) of women, painful coitus in 8,06% (N-10), pain in lesser pelvis in 5,6% (N-7) and abnormal vaginal bleeding in 6,4% (N-8).

Cryotherapy	Complete epithelisation after 4 weeks	Complete epithelisation after 6 weeks
Erosio PVU	89,18% (N-66)	93,24% (N-69)
LSIL	86,00% (N-43)	94% (N-47)
Total	87,90% (N-109)	93,54% (N-116)

Table 3. Results of cervix epithelisation 4 and 6 weeks after cryotherapy

Complete epithelisation 4 weeks after cryotherapy was in 87,90% (N-109) and 6 weeks after cryotherapy in 93,54 (N-116) of examined women (Table 3).

LSIL lesions N-50	Normal	LSIL
PAP test	92,0% (N-46)	8,0% (N-4)

Table 4. Results of PAP tests 4 months after cryotherapy in women with LSIL

After cryotherapy, LSIL was eliminated in 92,0% (N-46) of women and in 8% (N-4) results of PAP test weren't improved. (Table 4).

5. DISCUSSION

One of the main reasons for treating lesions of cervix uteri is prevention of cancer but also elimination of symp-

thoms like enhanced vaginal secretion, pain in lesser pelvis and bleeding during intercourse (7). Elimination of LSIL and erosion reduces the risk of cervical cancer. Untreated LSIL has risk of 13% to develop in HSIL during 2-years monitoring (14) and Barken states that in Germany, 13 to 16% of untreated LSIL develops in cancer (15). In their research of identification of factor which causes the infection, Toon and Duttaguptau find high presence of HPV (Human papilloma virus) in women with cervix erosion (8, 9).

Patil finds enhanced vaginal secretion in 55% of women with cervix erosion (2). Our study shows enhanced vaginal secretion in 87% (N-108) of women who have changes on cervix but also shows significant reduction of 21,77% (N-27) in both groups of examinees (p<0,05) after cryotherapy. Postcoital bleeding occurs in 6,8%-17,8% of women with LSIL, and in women with cervical cancer in 3-5% (16, 17).

Abnormal vaginal bleeding was present in 28,22% (N-35) of our examinees with erosion and LSIL and after cryotherapy it reduced to 6% (N-8). In his study of evaluation of symptoms of women with cervical erosion, Patil finds symptoms such as infrequent menstruation in 28,3%, and in 5% postcoital bleeding (2). Postcoital bleeding mostly occurs with surface lesions of cervix like cervicitis, erosion, LSIL, polyp of cervix and cervical cancer (19). About 15% -30% of women with vaginal bleeding have painful coitus (18).

From total amount, 64% (N-48) of women with cervical erosion have pain in lesser pelvis and 71% (N-53) painful intercourse. After cryotherapy this number was significantly reduced (p<0,05) to 3% (N-2) and 6% (N-3), which is very high grade of improvement expected from this safe method. Mohanty, in 1985, records that cryotherapy eliminates enhanced vaginal secretion and pain in 98%, and ectopy in 92% 6 weeks after and 98% 12 weeks after the treatment (20).

Four weeks after the treatment, epithelisation of cervix was found in 87,40%, and after 6 weeks in 93,50%. In similar research of efficiency of cryotherapy, Jahic finds efficiency in 89,3%, Peck in 91%, Alvarez in 92%, Gay in 95% while the Alliance for prevention of cervical cancer confirmed that the efficiency of cryotherapy in women with cervical intraepithelial lesion is 98,5% (6).

LSIL is eliminated in 92% (N-46), and remained in 8% (N-4) of women after cryotherapy. In 5-10% of cervical lesions, cryotherapy was unsuccessful and can be repeated in purpose of lesion elimination (10).

6. CONCLUSION

Cryotherapy is successful method of elimination of cervical erosion, LSIL and pains with enhanced vaginal secretion.

- Author's Contribution: M.J. gave substantial contribution to the conception or design of the work and in the acquisition, analysis and interpretation of data for the work. M.J. had role in drafting the work and revising it critically for important intellectual content. She gave final approval of the version to be published and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.
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