POSSIBLE PERSPECTIVES IN CERVICAL EROSION TREATMENT BY INFRARED COAGULATION

Summary. Cervical erosion is a common condition which occurs when cells from inside the cervical canal (endocervix), known as columnar epithelium are protrude on the vaginal portion of the cervix (ectocervix). The aim of this research was to evaluate the possible perspectives in the treatment of cervical erosion by using infrared coagulation. A random selection of two hundred (200) patients aged between 20 to 46 years was examined. Clinical criteria for selecting patients were those complaining for having virginal discharge, painful coitus, postictal bleeding, irregular vaginal bleeding and dysuria among patients within their reproductive age. However, after exclusion of malignancy and other chronic conditions a total of 40 patients were diagnosed with cervical erosion and they were taken as a study group. They were divided into two sub-groups of 20 patients in each. As a result 50% were treated with infrared coagulation and another 50% by electro coagulation and compared the obtained results. The study showed that 90% of the patients who were treated by infrared coagulation totally recovered within 4th and 6th week and 75% of those who were treated by electro coagulation recovered within 4th and 6th week.

Key words: cervical erosion, infrared coagulation.

Introduction. Cervical erosion is a common condition which occurs when cells from inside the cervical canal (endocervix), known as columnar epithelium are present on the vaginal portion of the cervix (ectocervix). It is one of the most common
reason leading women to seek gynaecological advice. It is often discovered during routine gynaecological check-up of women in their reproductive ages. A benign lesion is sometimes much troublesome due to its chronicity and nature of recurrence and most of the time associated with the lower genital tract infections [3]. The prevalence of cervical erosion in women of reproductive age is variable and has been quoted to range between 14 and 37 per cent in women attending outpatient clinics in England and Wales. According to the studies the prevalence of cervical erosion varies between 17% and 50%. It is more common during reproductive ages and incidence decreased after menopause and most of the time present as asymptomatic disease [6, 11]. Although cervical erosion is not a life threatening disease, yet the long term association with the disease and a number of symptoms both related to genitourinary system as well as psychological imbalance in the patient, needs consideration [9]. The aim of cervical erosion treatment is to induce and accelerate the healing process of the cervix by causing destruction of the presence erosion and new formed metaplastic layer, and allowing the process of re-epithelialisation to takes place more quickly with less chance of abnormal metaplasia. The treatment may include cryocauterisation (CC), electrocoagulation (EC), laser, microwave therapy, cautery by chemicals and others [5, 7]. Nowadays infrared coagulation (IRC) is a part of these treatments. This technique is easy, affordable and comfortable to use compared to the other methods and this research study focused on IRC procedure. Because cervical erosion is so common, this research is conducted to determine the possible perspectives in the treatment of cervical erosion by using infrared radiation. The research will look on advantages and disadvantages of using this technology and possible outcomes after treatments and suggest affordable and sustainable solution for dealing with cervical erosion in order to improve the health services in the society.

Materials and methods

The research was conducted in Mnazi Mmoja hospital-Zanzibar/ Tanzania. Analyse of case history from general department 200 patients from them was taken history with possible cervical pathology (including criteria were vaginal discharge, painful coitus, dysuria, postcoital bleeding and irregular vaginal bleeding). Speculum examination of the cervix of all 200 patients to check cervix for any visible lesion was done, however, from that group only twenty per cent (20%) were diagnosed with cervical erosion hence the study focused on those one. The remaining 80% were excluded from the study because some of them (78.5%) had normal cervix and (1.5%) have premalignant changes of the cervix. Also women with systemic diseases like diabetes Mellitus, hypertension and others were excluded from this study. Questionnaire was distributed to main group patients (40) with cervical erosion; the main of question was to find any correlation of erosion with anamnestic data and gynaecological status. Forming of 2 subgroups A and B of main group. Group A was treated with IRC and group B with EC. And after that; control visit was done after 2 weeks, 4 weeks and 6 weeks respectively with speculum examination and ask the patients if they notice any decreasing or increasing of complains and the note was taken. VIA (Visual Inspection with Acetic acid) test was performed at week 4 and 6 after the treatment to visualise the nature of cervix. The data collected and analysed by using Statistical Package for Social Sciences (SPSS) Computer Software version 21.

Results. Discussion

From the study, age of participants varied between 20 and 46 years which give the mean age of 33 years. Most of our patients fall under the age group 20-29 years (47.5%) and 30-39 years (42.5%), while minority (only 10%) fall under age group of 40-49 years. From 200 patients who were examined during the study, Pap smear results shows that 1.5% have premalignant change. This result is indicating the importance of having regular cervical cancer screening programme in Zanzibar city since the prevalence of cervical cancer seems to be high in this area. The studied risk factors were use of contraceptives, smoking, vaginal delivery and history of sexual transmitted infections. 60% of the patients were using either way of contraception in their life, while 40% were not. The most preferable way of contraception was either oral contraceptive pills or injection progesterone (22.5% and 27.7% respectively) and only 2.5% using barrier methods. From their histories we found that majority of women who participate in this study performed at least one virginal delivery in their life (87.5%), where by the remaining twelve point five per cent (12.5%) were nulliparous. Normal delivery can cause cervical erosion as a result of local trauma to the cervix [1]. The mean parity was 2.25, the result which is very close to the study of Neelam and Neeraj Kumar [10] which show that; most of the patients who suffering from cervical erosion were either multiparous or multigravidas. Mean gravidity and parity from their study were 2.92 and 2.28 respectively. Smoking was confirmed not to be a factor of cervical erosion in Zanzibar society since 100% of the study group were non-smokers. The main complain of the patients was painful coitus (dyspareunia) (30%), vaginal whitish discharge (26%), dysuria (painful micturition) (16%) and menstrual problem (20%), while less number of patients (only 8%) were complaining of post coital bleeding. If we look from the other studies we can see that; Majority of the patients who were diagnosed with cervical erosion complaining of per vaginal discharge, back ache, abdominal pain, painful micturition dyspareunia and menstruation complains [4, 8]. From the study, it has been founded that; 90% of patients who received IRC treatment totally recovered between 4 and 6 weeks. On the other 75% from those who received EC treatment recovered between 4 and 6 weeks. If we look on the other study [2] in which the effectiveness of EC and cryosurgery for the treatment of cervical erosion were compared, we can see that EC healing rate was (74.2%) and that of cryosurgery was (90%). In addition to that from our study the result revealed that those patients who were
treated with IRC, some complain like vaginal discharge was decreased for 72% compared to those who were treated with EC, in which vaginal discharge decreased for 46% after four (4) weeks. The initial increase in vaginal discharge for 18% was noticed from those who were treated by EC. Some complication was observed during EC treatment. From this group 35% were complaining of pain and discomfort during procedure despite of local anaesthesia (2% lidocaine) being used, unlike to those who were treated with IRC, they were very comfortable and free from pain during the procedure and hence anaesthesia was not necessary for the procedure. Also during EC procedure, 25% were experiencing bleeding together with the adherence of tip of electrode to the tissue of the cervix (30%).

Conclusions and prospects for further development
1. The efficacy of IRC and EC were measured in terms of time taken for complete healing, success rate, and associated complications. The study has shown that the healing rate is high in IRC compared to that of EC although the time taken for complete healing in both ways was not different. Also the relief of other symptoms like vaginal discharge were highly appreciated from those who were treated with IRC.

2. During IRC procedure patients were more comfortable and they were not complaining from any pain. Unlike the EC the use of local anaesthesia was mandatory since the procedure itself can cause some pain and discomfort. Also other complications like bleeding and tissue adherence to the instrument were observed during EC. The fact that IRC is a modern technology and yet not common in many developing countries can make this procedure to be more expensive compared to EC.

Further study which will include large study group with long term follow up is necessary in order to compare the impact of IRC with the other treatment modalities.

References
качестве перспективного метода лечения эрозии шейки матки. Были обследованы двести (200) пациенток в возрасте от 20 до 46 лет, отобранных случайным образом. Критериями отбора были наличие вагинальных выделений, болезненный коitus, посттакальные кровотечения, нерегулярные вагинальные кровотечения и дизурия. Однако, после исключения злокачественных новообразований и других хронических заболеваний, у 40 пациенток была диагностирована эрозия шейки матки, из которых и была сформирована исследуемая группа. Результаты лечения 50% пациенток с применением метода инфракрасной коагуляции сравнивались с результатами лечения другой половины пациенток, для лечения которых применялась электрокоагуляция. Исследование показало, что 90% пациенток, лечившихся методом инфракрасной коагуляции, выздорели в промежуток времени между 4-й и 6-й неделями лечения, в то время как в тот же период выздоровели только 75% пациенток, для лечения которых был применен метод электрокоагуляции.

Ключевые слова: эрозия шейки матки, инфракрасная коагуляция.

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