

# **Laparoscopy Versus Laparotomy in Treatment of Early Stages of Cervical Cancer**

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**ABSTRACT:** Cervical cancer is a significant health problem in developing countries. Therefore, this paper will point out laparoscopy versus laparotomy for treatment of early stage cervical cancer.

The data-recall facility of the used references was carried out with the help of the following mechanisms such as: Google, SAGES, EATS.fr, links available at World Laparoscopy Hospital, Pub Med pages available at "Queen Geraldine" University Hospital-Tirana, Gyno pro. The terms used for this paper are as following: cervical cancer, early stage, treatment laparoscopic and open surgery. There were nine articles related to laparoscopic radical hysterectomy (TLRH) and total abdominal radical hysterectomy (TARH). Some articles indicated that TLRH has been performed with a vaginal assisted or without vaginal assisted portion of procedure.

There was no difference in demographic or etiologic tumor factors between two groups [4]. Intraoperative, early and late complications did not differ between the 2 surgical procedures. In two articles patients who underwent TARH required a blood transfusion compared with TLRH [2, 3]. The median duration of hospital stay was significantly shorter for TLRH. The data demonstrates that early cervical cancer can be treated successfully with two procedures, but the major benefits of TLRH are less intra-operative blood loss and shorter hospital stay. It is a safe procedure with a lower overall morbidity and complication rates.

**KEYWORDS:** Early cervical cancer, laparoscopy assisted, vaginal hysterectomy, peri operative morbidity.

## **I. INTRODUCTION**

Cervical cancer (CeCa) is the second most common cause and the third leading one of cancer fatalities among women worldwide. In Albania tumorous diseases are in second place which leads to death. Mortality of CeCa from 0.5 in 1999 reaches 1.1 in 2003 [3]. On the other hand, in Korea CeCa is the most common gynecologic cancer and the third most common cancer among women [9]. The standard treatment of early stage cervical cancer is TARH, but in 1986 this field started to use a laparoscope in order to assess the pelvic lymph nodes. In the following years, laparoscopy became more and more popular. Some years after 1986 the laparoscopic treatment of malignant problems became the most popular technique [10]. Nezhath *et al.* [10] shows the importance of the stage of CaCe in laparoscopic treatment. According to the established International Federation of Gynecology and Obstetrics (FIGO) classification systems, the prognosis correlates with the stage of disease in patients with gynecologic cancer. Lymph nodes status is one of the most important prognostic factors and the surgical removal of pelvic and/or para-aortic lymph nodes for histologic assessment is a crucial part of staging. Furthermore, cytoreduction of bulky lymph nodes may have therapeutic benefit. The first role of laparoscopic surgery in early stage CaCe is dismissing those patients who are not suitable for radical surgery. LARVH frequently requires perineal or vulvar incisions to facilitate the dissection. These quite painful incisions are avoided with the laparoscopic radical hysterectomy technique [10]. This procedure has advantages such as:

- proper working space
- proper ureteral tunnel dissection
- more complete dissection
- depisiotomy not necessary
- more complete diagnosis of metastasis;
- avoids untouched lymphadenectomy and less pelvic adhesion.
- in LARVT the cervix and the upper part of the vagina are removed
- the lymph nodes in pelvis are also removed [1]

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*Operative technique consists of:*

- Dissection of pelvic peritoneum
- Dissection paraacetal space
- Dissection of cellulolympathic tissue around the external iliac vessel, obturator nerve and hypogastric artery
- Dissection uterine artery and free in of ureter
- Intraoperative serial sampling of specimen [1]

The objective of this paper is to review the surgical treatment of patients with early stage of cervical cancer. Laparoscopic treatment versus open abdomen is specific and its objective consists in looking at the access technique, duration of surgery, intra and postoperative complications, postoperative hospital stay.

## II. MATERIALS AND METHODS

In this paper is presented a retrospective research studies and one is on phase III randomized clinical trial. In all the research studies is important the inclusion's and exclusion criteria's.

*Inclusion Criteria:* [4, 5, 6, 7, 13, 14, 16]

- Histologically confirmed primary adenocarcinoma, scuamous cell carcinoma or adenosquamous carcinoma of the uterine cervix.
- Patients histologically confirmed stage IA1 (with lymph vascular invasion), stage IA2, or IB1 (in one study include only stage IA2, IB1) (FIGO Classification)
- Patients with adequate renal and hepatic function
- Patients must be suitable candidates for surgery
- Patients who have signed an approved Informed consent
- Females, aged 18 years or older
- Negative serum pregnancy

*Exclusion criteria*

- Any histology other than adenocarcinoma, SCCA or adenoscuamous ca of uterine cervix
- Tumor size greater than 4 cm
- FIGO stage II-IV
- Patients with a history of pelvic or abdominal radiotherapy
- Patients who are pregnant
- Patients unable to stand prolonged lithotomy and Trendelenburg position.

There are two solutions which can be offered in a laparoscopic treatment: the purely laparoscopic radical hysterectomy laparoscopically assisted vaginal radical hysterectomy and with open surgery patients had undergone (Wertheim) radical abdominal hysterectomy [5, 7, 8, 11, 14, 15, 16]

The primary outcome measure is disease free survival (time frame 5 years from surgery 0 and secondary outcome like intra, peri, post-operative complications, cost, hospital stay, quality of life. All the research studies are retrospective.

## III. RESULTS

Nine articles were found that total laparoscopic radical hysterectomy although technically difficult to perform is a feasible and safe procedure that has little intraoperative and postoperative morbidity than abdominal radical hysterectomy [2, 5, 6, 8, 13]. The long term outcomes are likely equivalent to those abdominal radical hysterectomies [2, 5, 6, 8, 13, 15, 16]. As laparoscopic technology and equipment improve and as surgeons become more comfortable with minimally invasive techniques and TLRH will be performed more commonly [2, 5, 6, 8, 13, 15, 16]

Operative time was significantly longer for TLRH than for ARH. [6, 8]. Some articles estimated blood loss and transfusion requirement were significantly higher in ARH [8, 15].

Return of bowel movement was significantly faster and postoperative hospital stay was shorter [13].

In TLRH versus ARH. [5, 6, 8]

Survival outcome did not differ between TLRH and ARH [6; 8].

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There were no differences between the two groups with respect to the amount of parametrium or vaginal cuff resected or the number of patients with negative margins. There was also no statistically significant difference in the number of patients in the ARH and the TLRH groups, who had lymph node metastasis (26% compared with 14% respectively,  $P=0.19$ ) [5]. The total number of pelvic lymph nodes resected was significantly higher with ARH than with TLRH (18.7 compared 13.5 respectively;  $P<0.01$ ) [5]. Interestingly, when evaluated by side, there was a significant difference in the number of right pelvic nodes resected (9.6 for AHR compared with 6.3 for TLRH,  $P=0.01$ ), but no significant difference in the number of left pelvic nodes resected (9.1 for open compared with 7.2, respectively,  $P=0.06$ ) [5]. Recently published research by Li and his work group compared 90 laparoscopies, 35 open radical hysterectomies and pelvic lymphadenectomies. They found increased operative time in the group that underwent on TLRH and no difference in intraoperative complications or time to return of urinary function. It was also reported earlier return of bowel function in the TLRH group. The same group of researchers found no difference in blood loss (370 ml for TLHR compared with 455 ml for ARH), no difference in length of hospital stay between the two groups 913.8 days for TLRH compared with 13.69 days for ARH) [13].

## IV. DISCUSSION

The finding in all research may be attributable to their criteria for selection of candidates for surgery. For example, decreased blood loss in many research may be explained from application of laparoscopic technology to open surgeries, but they adapted many of instruments developed for laparoscopy, such as the harmonic AcE and ligasure to surgeries performed by laparotomy. Many published papers indicate longer operative times. This fact is explained by two factors: Firstly, as with any new technique, there is a learning curve. Secondly contributing to longer operative time shows that some of the institutions graduate medical training program.

## V. CONCLUSION

In this paper it is shown that laparoscopic radical hysterectomy is a feasible alternative to abdominal radical laparotomy in patients diagnosed with early stage cervical cancer (FIGO Classification).

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