THE EVALUATION OF THE LAPAROSCOPY CONTRIBUTION TO THE DIAGNOSIS AND THERAPY IN THE CANCER OF CERVIX

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Abstract: *The paper presents diagnostic and therapeutic possibilities and indications operators stages of cervical cancer by laparoscopic methods. The main conclusion of this paper is those that laparoscopy surgery can and should be integrated into the therapeutic algorithm of cervical cancer, for well selected cases, due to the multiple benefits of the method in the complex algorithm of the radio-chemotherapy and surgerical treatment.*

Cuvinte cheie: *cancer de col, chirurgie, laparoscopie*

Rezumat: *În lucrare sunt prezentate posibilităţile diagnostice şi terapeutice, precum şi indicaţiile operatorii stadiale ale cancerului de col uterin prin metode laparoscopice. Concluzia principală a lucrării este aceea că, laparoscopia operatorie poate fi şi trebuie să fie integrată în algoritmul terapeutic al cancerului de col uterin, pentru cazuistică bine selecţionată, datorită multiplelor avantaje oferite de metodă în cadrul algoritmului terapiei complexe radio-chimio-chirurgicale*

ARTICOL ŞTIINŢIFIC PREDOMINANT TEORETIC

Therapeutical considerations. The treatment of the cervix cancer is very complex using multiple therapeutical means, that should come next one after another and to combine - iradiation, surgery, chemotherapy, adjuvant treatment. The moment of the aplication of each therapeutic sequence holds on the detailed analysis of each case, the stadium of the disease, by the local and general status of the patient, so as its aspect receives the form of a truth therapeutical strategy.

The treatment pursues firstly the vital prognosis, sacrificing the functionality in favour of the oncological radicality – the extension of the surgical exeresis beyond the seemingly limits of the tumoral lesions, with the extirpation in block of the ways of propagation and of the satellite lymphatic stations.

In the treatment of the cervix cancer the first principle is the ***oncological radicality***, the surgical act pursues the extirpation of the whole primary lesion and its extensions, together with the locoregional limphatic nodes (surgery of limphatic teritory).

Another principle refers at the place of the surgery i***n the sequence of the therapeutic means.*** With the exception of CIE and of the patient in stadium $I_{a,}$, in the rest of the evolutive stadiums the treatment with radiotherapy is applied, then the surgical one (stadium I_b, $II_{a,b}$ and some patients in stadium III). The treatment may be exclusivelly radiologically in the majority of the cases in the III-Ivth stadium.

The optimal moment of the surgical intervention is situated at 4-6 weeks after the iradiation. Radical hysterectomy Wertheim-Meigs continues to be the main method of the surgical treatment of the cervix cancer precocious invasively (stadium IB/IIA).

Although there are controverses regarding the indicated process for each invasive lesion , it is accepted the fact that radical hysterectomy eradicates only partially parameter is curative for the precocious invasive lesions. Many practicioners consider the surgical therapy sufficient in the cases with negative lymph nodes.

Also this form of, treatment is considered superior to the radiotherapy. In many hospitals in the world the majority of the cases with stadiums IB and IIA benefits of extensive abdominal hysterectomy and bilateral pelvine lymphadenectomy as a primary treatment . The standard ttreatment for the IB stadium is surgical for lesions with maximal dimensions of 3-4 cm. Aproximativelly 85% of those cases are with no ganglionar invasion.

The cases with negative ganglions should be analyzed carefully from the perspective of the tumoral prognosis factors , grouped in the category of „high risk " and treated with adjuvant radiation . In many hospitals, the tumors with dimensions of 3-4 cm are initially treated with radiation. In other hospitals, the surgery is used as a primary method (operable cases) regardeless the volume of the tumors.

In those situations the number of the cases with positive ganglions is big and adjuvant radiotherapy is indicated. The data resulted from trials are insufficient for comparing the results regarding the pelvine examination, the survivals and complications observed through the two therapeutical techniques (primary surgery/RT adjuvant or unique radiological treatment).

The treated cancer determines healings more or less durable rapported to the method of treatment applied and with the evolutive stadium of the disease . The main statistical criteria is the survival at 5 years.

Precocious recidives (under 5 years) and tardive ones (over 5 years) are frequent. They depend on stadialization, on the hystological type of cancer, degree of cellular differentiation , the patient's age , localization, associated affections, and by the applied therapeutical formula .

Principles and laparoscopic surgical indications in the therapy of the cervix cancer. The progresses regarding the equipment and devices in the advanced laparoscopic surgical techniques

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made possible the approach through this method the therapy of the cervix cancer.

At present, there is a consens regarding the fact that the laparoscopic surgical treatment of the cervix cancer is not the therapeutic standard, except that this method should be integrated in the arsenal of the complex means of therapy . It is neccessary to elaborate precisely therapeutic means (eventually with statute of research protocols) that should include in the therapeutical algorithm laparoscopic techniques.

In the cervix cancer, laparoscopy may be used for the realisation of the surgical stadialisation , and as therapy in the surgical treatment chirurgical of the 0, I, II A stadium.

When the laparopic surgical treatment is applied the same principles should be respected as for the laparotomic process, the surgical intervention being integrated in the algorithm of the therapeutical means rapported to the stadialisation.

The method is applied only when the benefits for the patient are greater than through the laparoscopic surgical method without raising the risks and when there are no contraindications of general order or linked to the surgical antecedents or to the evolutive stadium of the disease.

The advantages of using laparoscopy in the therapy of the cervix cancer. Implementing the laparoscopic surgery in the therapy of the malign gynecological pathology is based on a series of advantages offered by this therapeutic method.

The use of the laparoscop gives a panoramic image on the peritoneal cavity. Not a single detail of the pelvis remains unnoticed , but also the great peritoneal cavity may be completly explored, inclusivelly the diaphragmatic dome. We may say that is a facile exploration more complete than the one realized through xifo-pubic laparotomy. The risk of classifying in the 0 stadium a tumor that, in reality, belongs to the III stadium, is smaller in the case of laparoscopy comparatively to the transverse suprapubic laparotomy, or even median pubo-umbilical. The same affirmation is valid for the exploration of the retroperitoneal space. The same minimal approach permits the exploration of the extraperitoneal pelvine and pre-rachidiane structures. This first specificity of the laparoscopic surgery places the method in an excellent position regarding the stadialisation surgery.

Another advantage of the use of the laparoscope is an increased visualization. Operating with the help of the laparoscope is realised a genuine microsurgery. The risk of harming ,for example, of the ganglionar capsule is diminished. The limphostasis may be effectuated in a precise manner . Preparing the peri-visceral structures may be done at an adequate distance , respecting the vascular and nervous structures. Offering the possibility of a microsurgical dissection, the laparoscopic surgery constitutes the ideal method for the preparation of the radical surgery and for the complete execution of this radical surgery.

Another third advantage of the laparoscopic surgery is to have the possibility to choose preciselly the place of opening that permits the extraction of the surgical piece . The laparoscopy permits the resection from distance of the lesions, permitting also the choosing in an adequate manner, the topography and the dimensions of the laparotomy, that will permit “atraumatic”extraction. It should be known that these laparotomies of extraction, practiced in the last moment and immediatelly closed, doesn′t change the post-surgery evolution that remains identical with the one after the pure laporoscopic surgery. Regarding the uterine tumors ,the problem is inexistent: the extraction is done through the vagina, respecting the classical rules of the vaginal hysterectomy for cancer (for the obliterating the cervix).

Eliminating the great parietal incisions avoids the risk of infections and of post-surgery dehiscents or eventrations and influences favorably the post-surgery evolution .

The de–dramatisation of the surgical act represents the main advantage of the laparoscopic surgery. There were many debates on the theme of the rapport cost benefit. Numerous evaluations gave in contradictory results. Using the device of one single use,grows sensitively the cost of the laparoscopic surgery, and this increase isn′t always compensated by the decrease of the number of hospitalisation days . It has been disscused about the quality of the immediate post-surgery evolution . Besides, the decrease of the duration of hospitalisation linked to a post-surgery less painfull evolution it has been said that the laparoscopic surgery permits a more rapid re-insertion in the social life and professional. Not to forgive that while the laparoscopic surgery was born and developed,the traditional surgery was making enormous progresses and that the differences are not so striking as said . The same thing may be said about the global results on long and medium term. The patients treated in a conventional manner and benefiting of a long stay in the hospital and a longer convalescence are often more satisfied because they have the impression of being treated with increased consideration. Regardless this fact ,it is certain that a woman that has no scar realises frequently, completely and rapidely the psychological work that leads her to the “negation of the malady„ that is known to be in oncology as one of the best warrant of healing.

The smaller rate of the aderential syndrome after the laparoscopic interventions rapported to the laparotomic ones, permiting this way the effectuation especially of the repeated laparoscopic second-looks and so a better pursue of the therapeutical results, represent another advantage of the laparoscopic surgery.

Materializing we may afirm that through the advantages the laparoscopy offers it may and it has to be implemented in the arsenal of the therapeutic resource of the cervix cancer.

Domains of use for the minimal invasive surgery. Before asking ourselves which place is occupied by the laparoscopic surgery in the treatment of the cervix cancer, is important to specify which is the role of the surgery , in general, and of the oncological surgery especially. The surgery is attributed nowadays 5 roles: the stadialisation,the radical exeresis, the volumetric tumoral cytoreduction, the evaluation of the therapeutical results, the preparation for radical vaginal hysterectomy interventions or laparotomic ones.

In the therapy of the cervix cancer the laparoscopy is used in the following purposes:

a. In diagnosis purpose: - stadialisation laparoscopy; for the surgical stadialisation of the cervix cancer, to evidentiating the visceral and ganglionar metastasis (next to the pulmonary radiography, computed tomography, etc.); the diagnosis of the ganglionar metastasis through biopsy (pelvine and paraaortic ganglions); marking the non-eradicable limphatic nodes regarding radiotherapy

Evaluation techniques of the limphatic nodes in the cervix cancer:

- Laparoscopy permits the evaluation of the limphatic nodes (important in the therapeutical conduct and prognosis).
- The pelvine and para-aortic nodes may be evaluated
- Approach way – transperitoneally and extraperitoneally
- The evaluation is done through the histo-pathologic exam of the limphatic nodes, extemporaneus or at paraffin

b. In therapeutic purpose: - laparoscopic surgery will be applied only in the algorithm of a complex therapy radio-chimio-surgical after therapeutic protocols having the same

general principles as for the classical surgical intervention.

c. Laparoscopic preparation of the radical vaginal or abdominal hysterectomy.

Modalities of approach in the surgical laparoscopy

There are three variants of the radical hysterctomy with limphadenectomy:

1. *Radical hysterectomy totally laparoscopic with pelvine limphadenectomy* – where the surgical time are executed totaly laparoscopically. The uterus extraction may be done abdominally, after the morselation, or vaginal.
2. *Radical laparoscopic hysterectomy colpo-assisted with pelvine limphadenectomy* - in this case the first four stages of the hysterectomy are executed laparoscopically, and the rest on vaginal way, the uterus being extracted through vaginal way.
3. *Radical vaginal hysterectomy assisted laparoscopically with pelvine limphadenectomy* – it is initiated laparoscopically, but at least four stages are executed on vaginal way, as the extraction of the uterus.

Stadium surgery indications

- *Stadium 0* – total hysterectomy with or without bilateral anexectomy in accordance with the age (HLAV; HVAL; HTL)
- *Stadium I*:
  - *Stadium IA* – radical hysterectomy with pelvine limphadenectomy (HR + LP)
  - *Stadium IB1* - (tumor under 4 cm)- radical hysterectomy with pelvine limphadenectomy (HR + LP)

The intervention starts with the extirpation and extemporaneous biopsy of the pelvine lymphatic nodes, or EHP at paraffin (re-intervention in 10-15 days), the conduct was established in accordance with the ganglions status:

- ganglions not invaded tumorally - HR + LP (exclusivelly surgery).
- 1-2 ganglions invaded - HR + LP (preferably laparotomy) + RT post-operatory.
- ≥ 3 ganglions invaded - RT, followed by HR + LP (preferably laparotomy)

The evaluation of the prognosis: (survival at 5 years)

- ganglions not invaded - 85%
- 1-2 ganglions invaded - 60%
- ≥ 3 ganglions invaded – little chances of survival at 5 years.

Ad*vanced stadiums (IB2, IIA, IIB)*

Stadim IB2 - (tumor over 4 cm) – evaluation of the paraaortic ganglions (preferably extraperitoneal approach)

- ganglions not invaded - RT pelvine followed by HR + LP (preferable laparotomy).
- ganglions invaded - RT pelvine and lombo-aortic followed by HR + LP (laparotomy). Stadium IIA – the same conduct as in the std. IB2

Stadium IIB - LP + RT pelvine and lombo-aortic followed by HR + LP laparotomy .

CONCLUSIONS

- Through the advantages that the laparoscopy offers may and has to be implemented in the arsenal of the therapeutical ways of the cervix cancer.
- The laparoscopic surgical approach of this type of pathology has to be done only in well selectionated cases in which the benefits are greater than through laparotomic approach, in general in the incipient stadiums of the affection.
- The laparoscopic surgical treatment of the cervix cancer, should be done in conformity with precise therapeutical and research protocols and only in the frame of the complex radio-chimio-surgical treatment.
- There is at present an accord on the fact that the specific surgical interventions of laparoscopic treatment of the cervix cancer doesn′t represent yet the therapeutic standard , but these methods should be integrated in the arsenal of the means of the complex therapy of the genital cancer.
- Radical hysterectomy with pelvine limphadenectomy colpo-assisted through the advantages offered may represent an alternative at the radical laparotomic hysterectomy in incipient clinical stadiums (0, I, II A) and should be included in the standard therapeutical protocols of the affection.
- The mortality rate isn′t greater as for the interventions of classical type , and the morbidity and the complications proved to be reduced.
- The survival rate at 5 years is similar to the one after classical interventions.
- Laparoscopic intervention will be integrated in the algorhitm of the complex means therapy and will be effectuated according some therapeutic and research protocols.

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