

Cervical carcinoma and pregnancy in a young primipara

M. Gojnic¹, V. Dugalic², S. Vidaković¹, M. Papić³, K. Jeremic¹, M. Pervulov¹, S. Milicevic¹

¹Institute of Gynecology and Obstetrics, Clinical Center of Serbia, University of Belgrade

²Institute for Surgery, Clinical Center of Serbia

³University Hospital "Narodni Front" (Belgrade, Serbia and Montenegro)

Summary

Cervical carcinoma is the fourth most common malignant disease in women, after breast, lung and colon cancer. It is present in two-thirds of all malignant diseases of the genital tract. Although in most of Europe patients are subjected to regular health screening, diagnoses of severe life-threatening alterations are often made when they are already in late stages.

Key words: Pregnancy; Cervical adenocarcinoma; Cesarean section; Wertheim's hysterectomy; Meig's procedure.

Introduction

Cervical carcinoma is the fourth most common malignant disease in women, after breast, lung and colon cancer. It is present in two-thirds of all malignant diseases of the genital tract. In the USA, 2% of women over 40 years of age have cervical carcinoma. The average age of the patient is 45 years, but the disease can be diagnosed even in the second decade of life, and sometimes during pregnancy [2, 3]. In Serbia and Montenegro, cervical carcinoma is present in 6% of women over 40 years of age [4]. The cause of cervical carcinoma is unclear, but it seems that coitus is positively related to the disease, especially early coitus with numerous partners. On the other hand, celibacy and nulliparity decrease the risk [4]. Cervical carcinoma is rare in the Jewish population, either because of inherited immunity or early circumcision in boys [4]. A great number of females exposed to even small quantities of *diethylstilbestrol* or other non-steroid synthetic estrogens during the first trimester of pregnancy, in utero, had cervical anomalies, adenoses or very aggressive clear cell carcinoma [3]. Plate layer cell carcinoma is present in 95% and adenocarcinoma in approximately 5% of the cases of malignant epithelial cervical neoplasms [2]. Occasionally, sarcoma is diagnosed. Pathology includes cervical intraepithelial neoplasia (CIN), epidermoid carcinoma, adenocarcinoma and invasive carcinoma [2].

Adenocarcinoma originates from glandular elements of the cervix. It consists of tall, cylindrical secretory cells organized in the glands, with poor supporting stroma. A more rare type of adenocarcinoma originates from embryonic rudimental residue of the mesonephric (Wolf) canal in the cervix. The cells are small, cubic and irregular, and glandular organization is poorly defined. Cervical adenocarcinoma is usually diagnosed in late stages when ulcerations have already appeared [2].

Hypertrophy and hyperplasia of squamous and glandular elements are discovered by biopsy during pregnancy

[1, 5]. However, intraepithelial and invasive carcinoma could also be present. During pregnancy gestational changes could hinder an accurate diagnosis.

Adenocarcinomas are divided according to stage as well defined, moderately defined and poorly defined adenocarcinomas. However, classification is not needed, even after examination of numerous isolated fragments, because there is expressed tissue variability [4, 5].

Case Report

Even though in most European countries patients are subjected to regular health screening, diagnoses of severe, life-threatening changes are often made when they are already in late stages.

The case of a young primipara, 20 years old, with her first sexual relations at the age of 16, came under our care at the 18th week of gestation because of contractions and bleeding. The pregnancy was desired. There were only ultrasonographic findings in her documents. Urgent gynecological examination was performed and no cervical insufficiency or uterine hypertone was found but increased vaginal secretions with elements of previous bleeding were evident. A positive family history of malignancies was excluded. Bleeding was related to coitus during pregnancy.

Speculum examination showed no significant deviations except for visible changes on the outer cervical labia (ectopic) and abundant secretions (colpitis, cervicitis). After performing antibiogram and secretion exams, a Pap test was done. The results pointed to the existence of trichomonas, gram positive and negative flora, and anaerobes. After obtaining the Pap test results (III group), a biopsy of the cervix was performed by loop diametry even though the pregnancy had been treated by tocolytics and antibiotics upon admittance to the hospital. Pathohistological findings obtained at the 21st week of gestation pointed to adenocarcinoma of the cervix.

Together with the patient's consent and in agreement with her family, after explaining the necessity of one of the most extensive gynecological procedures, we decided to maintain the pregnancy with a shorter duration, permanent hospitalization and preparation for surgery immediately after delivery. Of interest is that our patient was not positive for chlamydia, mycoplasma, ureaplasma ureolyticum or human papillomavirus. Her family had no history of gynecological malignancies. The patient had

been having sexual relations since she was 16. She related pain and pus mixed with blood before pregnancy with coitus.

After completing laboratory analyses and maintaining the pregnancy by tocolytics and antibiotics, to prevent any complications due to occasional bleeding related to cervix changes and severe cervical infection, the pregnancy was continued until the 26th week of gestation.

The condition of the fetus was monitored by ultrasonography and no visible disturbances were present in the anatomy. It is known that female fetuses have a much lower incidence of respiratory distress syndrome so with this in mind and with the patient's consent, we decided to conduct artificial fetal lung maturation by administering bethamethasone to the mother. Her body mass index was normal, thus the patient was given 12 mg of bethamethasone daily for two days and then fetal lung maturation was tested. As the number of lamellar bodies in the embryonic fluid was under 20,000, we decided to repeat artificial maturation after a week with prophylactic therapy of antibiotics and ranitidine.

At the 28th week of gestation with an identical procedure during amniocentesis and embryo fluid sampling, 10 µg of thyroxin were administered intraamniotically to the fetus and 0.25 mg of cephricalone into the embryo fluid. The obtained fetal lung maturity was 35,000 lamellar bodies, thus we decided to perform extensive surgery while waiting for the additional effects of thyroxin.

Cesarean section was performed and a female neonate weighing 1,100 g was born. Except for nasal oxygen no other support was needed. Antibiotics were given to the baby for the next 48 hours. On the third day after delivery, there was a need for endotracheal administration of surfactants, as expected in view of the fetal acid base status. No other medications were needed later.

After cesarean section and uterine hemostasis, a Wertheim-Meig hysterectomy was performed. Even though there were no enlarged glands in the region of the obturator cavity and ischiorectal region, all fatty tissue was removed together with the paraaortic glands. Rosenmuller's node was enlarged on the left.

The postoperative course lasted for five days without complications. The mother's lactation was stopped because of her psychological condition and possible need for further surgeries. Complete treatment ended with surgery because histopathological findings did not point to invasiveness or need for chemotherapy.

Discussion

Cervical carcinoma is a very common pathology among our population. Regular routine examinations are not conducted, thus the percentage of those subjected to Wertheim's procedure is increased.

The possibility for this young woman to be operated on to save her life was superseded by using well known methods of artificial fetal maturation. Ultrasonography confirmed a female fetus, thus our predictions and literature data coincided with the obtained results.

In the past, under these conditions, there was no other solution but to perform abortion or Wertheim's procedure.

Conclusion

Advancements in medical science have enabled us to deliver healthy babies out of such pregnancies. The necessity of better primary health care and proper health education of the entire population should be considered.

References

- [1] Liggins G.C., Howie R.N.: "A controlled trial of antepartum glucocorticoid treatment for prevention of the respiratory distress syndrome in premature infants". *Pediatrics*, 1972, 122, 4.
- [2] Clement P.B., Zubovits J.T., Young R.H., Scully R.E.: "Malignant mullerian mixed tumors of the uterine cervix: a report of nine cases of a neoplasm with morphology often different from its counterpart in the corpus". *Int. J. Gynecol. Pathol.*, 1998, 17, 211.
- [3] Feroze M., Aravindan K.P., Thomas M.: "Mullerian adenocarcinoma of the uterine cervix". *Indian J. Cancer*, 1997, 34, 68.
- [4] Gojnić M. *et al.*: "Gynecology and Obstetrics". Belgrade, Medical Center, 2005 (ISBN 86-7117-105).
- [5] Gojnić M. *et al.*: "Zdravo potomstvo iz prevremeno završene trudnoće: artifičijalna maturacija fetalnih pluća". Belgrade, Idea Print, 2002 (ISBN 86-81921-12).

Address reprint requests to:
M. GOJNIC, M.D., Ph.D., Asst. Prof.
Medical Faculty of Belgrade
Institute of Gynecology and Obstetrics
38 Milesevska Street
11000 Belgrade (Serbia and Montenegro)