PRACE KAZUISTYNE
ginekologia

Glassy cell carcinoma of the cervix – a case report with review of the literature

Glassy cell carcinoma szyjki macicy – opis przypadku i przegląd literatury

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Abstract

Background: *Glassy cell carcinoma of the uterine cervix is a rare neoplasm, first described by Gluksman and Cherry in 1956. It is a poorly differentiated adenosquamous carcinoma, comprising about 1-2% of all cervical cancers.*

Case presentation: *We report a case of glassy cell carcinoma of the uterine cervix in 67-year old female, nullipara, diagnosed two months after symptom onset, in IV-B stage of the disease according to the FIGO classification scale. Cervical smear test obtained three years previously was normal. She was offered a palliative antihemorrhagic radiotherapy of the pelvis and palliative chemotherapy with paclitaxel-carboplatin combination. The patient died within six months of diagnosis.*

Conclusions: *We present a case of a rare carcinoma of the uterine cervix with quick progression and poor outcome.*

Key words: **glassy cell carcinoma** / **cervical cancer** / **adenosquamous carcinoma** /

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Otrzymano: **15.08.2011**
Zaakceptowano do druku: **20.10.2011**

Streszczenie

Wprowadzenie: *Glassy cell carcinoma szyjki macicy jest rzadkim nowotworem, po raz pierwszy opisanym przez Gluksmana i Cherry'ego w 1956 roku, stanowiącym około 1-2 % wszystkich raków szyjki macicy. Jest to nowotwór niskozróżnicowany, wykazujący cechy zarówno struktur gruczołowych, jak i płaskonabłonkowych.*

Opis przypadku: *U 67-letniej kobiety, nieródki, dwa miesiące po pojawieniu się pierwszych objawów, zdiagnozowano glassy cell carcinoma szyjki macicy w stopniu IV-B według FIGO. Wynik poprzedniej cytologii pobranej przed trzema laty był prawidłowy. Pacjentkę poddano paliatywnej radioterapii miednicy mniejszej oraz chemioterapii dwulekowej palitakselem i karboplatyną. Chora zmarła w ciągu 6 miesięcy od rozpoznania choroby.*

Wniosek: *Przedstawiony przypadek prezentuje gwałtowny przebieg i złe rokowanie charakterystyczne dla tego rzadkiego nowotworu.*

Słowa kluczowe: ***glassy cell carcinoma*** / **rak szyjki macicy** / / **rak gruczołowo-płaskonabłonkowy** /

Introduction

Glassy cell carcinoma was first described in 1956 by Gluksman and Cherry. It was classified as a poorly differentiated cancer, with features of squamous as well as glandular structures [1]. It is a rare neoplasm, comprising only 1-2% of all cervical cancers, with an aggressive course with quick progression and resistance to radiotherapy [2, 3,14, 18].

The prognosis is poor. Therapy outcomes are similar as in cervical adenocarcinoma only in very early clinical stages and on condition that radical surgery is possible [3].

We present a case report of a female diagnosed with a glassy cell carcinoma.

Case report

A 67-year-old patient J.T.K. was admitted to the 1st Department of Obstetrics and Gynecology, Medical University of Warsaw, in January 2010 due to recurrent vaginal bleeding.

In anamnesis: menarche at the age of 15, last menstruation at the age of 46, nullipara. In 1990 she was diagnosed with phyllodes tumor of the left breast and underwent Patey's mastectomy. Two months prior she had noticed three episodes of vaginal bleeding and complained of urinary urgency and frequent urination. Cervical smear performed in November 2009 revealed presence of carcinomatous cells whereas the results of the previous test, three years before, had been normal. On admission she was in good general condition. The speculum examination revealed an exophytic tumor (4x2cm) of the cervix infiltrating the posterior vaginal fornix. The bimanual examination showed anteflexed, enlarged, soft uterus, with involvement of parametrium and enlarged adnexa bilaterally. Transvaginal ultrasound revealed heterogeneous cervix 45 mm in diameter and anteflexed uterus measuring 69x49mm with thickened (15mm) heterogeneous endometrium and fluid collection (30x40mm) in the uterine cavity. Doppler imaging showed increased vascularization with low-resistance flow signals. Ultrasound of the adnexa revealed bilaterally two cystic-solid masses measuring 59 and 52mm in diameter. Free fluid in the Douglas pouch was also observed. In laboratory test markedly elevated serum Ca-125 concentration (532U/ml) was found. An excisional biopsy of the cervical mass with simultaneous curettage of cervical canal and uterine cavity was performed.

The histopathological examination revealed glassy cell carcinoma of the uterine cervix. Figures 1-3 present microscopic images of analyzed specimens, with pathognomic for glassy cell carcinoma areas of eosinophilic stromal infiltration among the malignant cells. (Figure 3).

Imaging tests showed metastases in the abdominal lymph nodes, bones (ribs and vertebral column) as well as the left lung. The woman was offered palliative antihemorrhagic radiotherapy of the pelvis with a total dose of 20 Gy, radiotherapy of the lumbar spine L5 area with a dose of 800 cGY and palliative chemotherapy with paclitaxel-carboplatin combination. She died due to the disease in June 2010.

Discussion

In the year 2008 alone, cervical cancer was diagnosed in 3270 women in Poland, 1745 of who died due to the disease [7]. Such high mortality rates place Poland at one of the last places in the European cancer statistics. In order to improve the situation, a Population-based Program of Prophylaxis and Early Detection of Cervical Cancer has been introduced since 2006, in accordance with European and WHO Guidelines [8]. Although the number of participants has been constantly rising (21.15% of the covered population in 2007, 24,39% in 2008, 26.77% in 2009), the percentage of screened population remains significantly lower than in other European countries [8].

The pathological criteria of glassy cell carcinoma of the uterine cervix were described for the first time by Gluksmann and Cherry in 1956, with further modification by Littman in 1976 [3, 4]. The characteristic features of the malignant cells include: large amount of cytoplasm with ground-glass appearance, distinct cell membranes and large nuclei with prominent nucleoli. Gluksmann and Cherry classified glassy cell carcinoma as the least differentiated form of adenosquamous cancer of the uterine cervix. The WHO classification considers glassy cell carcinoma as a subgroup of other non-epithelial malignancies (adenosquamous carcinoma) [6]. Mean age at diagnosis reported in the literature is 35-42 years [2, 3, 11, 12, 14], which is 10 years earlier than in other histological subtypes of cervical carcinomas. The oncologists emphasize higher prevalence of this malignancy in multiparas [12], and some authors suggest its coincidence with pregnancy [1, 3, 5].

Ginekol Pol. 2011, 82, 936-939

Our patient was a nullipara, 25 years older than the mean age at diagnosis reported in the literature, and she was diagnosed with the late-stage disease (FIGO IVB). Usually an abnormal vaginal bleeding, often contact postcoital bleeding, is the first symptom indicating the presence of glassy cell carcinoma [2, 12, 18].

The median time between the onset of symptoms and diagnosis is 3 months [12, 18]. The malignancy is most often diagnosed in FIGO IB stage. In one third of the affected women the cervical cytology smear performed in the previous two years is normal [12].

Our patient had a normal Pap test three years earlier, and the one performed on the occurrence of symptoms revealed malignant cells. The time elapsed from onset of symptoms to diagnosis was three months. Glassy cell carcinoma is usually characterized by an exophytic growth, endophytic tumors in form of barrel-shaped cervix are found less frequently. It has a rapid growth pattern with metastases into lymph nodes and distant organs [1, 2]. Metastases are mainly observed in lungs, liver, spleen and bone marrow. In our patient at the time of diagnosis metastases were found in lungs and bones. Available treatment options depend on clinical staging and may include surgery, radio- and chemotherapy (similarly as in squamous cell carcinoma or adenocarcinomas of the uterine cervix), but the prognosis is poor [6]. 5-year survival rates of patients with stage I glassy cell carcinoma are 55-65% [11, 12], and for all stages only 13-30% [18].

Radical hysterectomy followed by radiation therapy is the treatment of choice for patients with stage I glassy cell carcinoma. Nasu et al., and Peters et al., reported a significant improvement of 5-year survival, reaching 80%, when cisplatin-containing chemotherapy was administered [14, 15]. There are also case reports available in the literature, reporting successful treatment of glassy cell carcinoma stage IIB and IIIB by means of neoadjuvant polichemotherapy (paclitaxel, carboplatin, etoposide, epirubicin, mitomycin C) followed by surgery after significant decrease in tumor size [13, 14]. Widely used paclitaxel-carboplatin combination is an effective two-drug regimen [14, 16, 17]. Our patient was offered palliative treatment with above mentioned chemotherapeutics on account of these reports.

Unfortunately, glassy cell carcinoma of the uterine cervix is relatively often diagnosed in women of reproductive age. Therefore, the need of conservative treatment may have to be considered. Trachelectomy with laparoscopic pelvic lymphadenectomy is increasingly more often offered to patients with early stages of cervical cancer. Plante reported successful use of this method in cases of glassy cell carcinoma [9]. Ferrandina et al., reported a case of conservative treatment with conisation and laparoscopic lymphadenectomy in a female diagnosed with stage IB1 glassy cell carcinoma [10]. During 3-year follow-up no signs of recurrence were noted.

Establishing clinical guidelines for the glassy cell carcinoma management depending on clinical stage is difficult due to low prevalence of this malignancy in general population. Treatment option is often selected on the basis of thorough analysis of the individual case, as well as the reports from the literature.

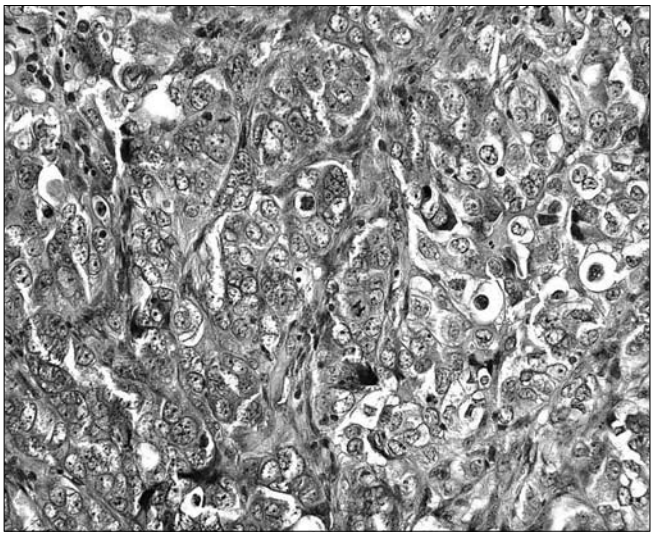

Figure 1. Groups of carcinoma clear cells separated with connective tissue fibers.

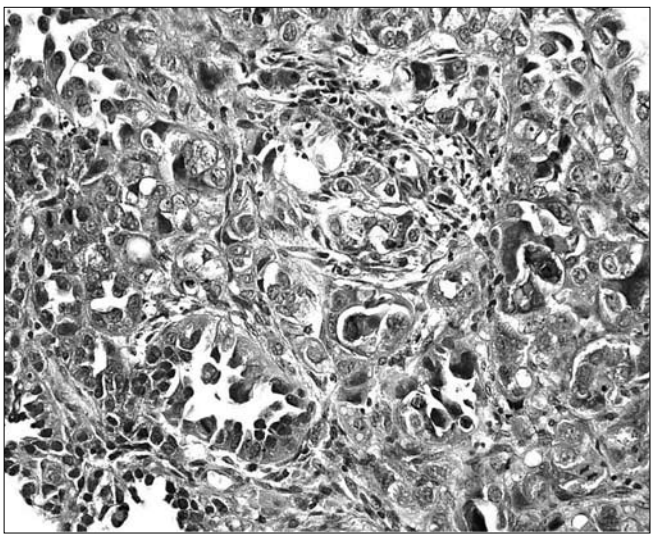

Figure 2. Carcinoma cells create quasi glandular ducts.

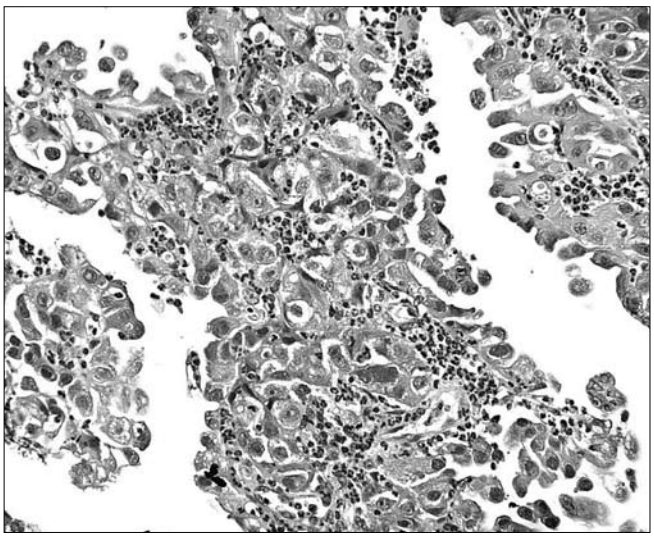

Figure 3. Areas of eosinophilic stromal infiltration among the malignant cells – a pathognomic symptom for glassy cell carcinoma..

Conclusion

Glassy cell carcinoma is a rare neoplasm of the uterine cervix. Our case report confirms its aggressive course and rapid progression: onset of clinical symptoms only two months before the diagnosis of late-stage carcinoma and eventual demise of our patient within 6 months.

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