

Stage Ib cervical cancer during pregnancy: planned delay in treatment - case report

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Summary

Approximately 0.05% of pregnancies are complicated with cervical cancer. Treatment of this malignancy during pregnancy depends on the stage of disease and gestational age at the time of diagnosis. In women with Stage IB cervical cancer immediate treatment, without regard to the pregnancy, is traditionally advocated in the first and second trimester. A planned delay of treatment, to achieve foetal maturity, may be acceptable if there are no adverse maternal and foetal consequences. We present a case of a Stage IB1 cervical cancer, diagnosed during a twin pregnancy, and treated with a planned delay of 19 weeks. We have reviewed the literature and focused on what is known about planned delay in therapy of Stage IB cervical cancer, diagnosed before 30 weeks of gestational age.

Key words: Cervical cancer; Pregnancy; Treatment delay.

Introduction

Invasive carcinoma of the cervix is the most common gynaecologic malignancy during the reproductive years and complicates about 0.05% of all pregnancies [1]. Several case control studies have suggested that pregnancy does not adversely influence survival [2-4].

Treatment algorithms are well established for cervical cancer in non pregnant women. Treatment of the patient with invasive cervical cancer in pregnancy depends on the stage of disease and gestational age at diagnosis. Traditionally immediate treatment is recommended in the first and second trimester, without regard to the pregnancy [1, 5]. Advances in neonatal medicine have been associated with improved survival of premature infants. A planned delay in therapy, to achieve foetal maturity, may be acceptable if there are no adverse maternal and foetal consequences. We present the first case of a Stage IB1 cervical cancer diagnosed during a twin pregnancy and treated with a delay of 19 weeks. In the literature review will we focus on what is known about delaying treatment in Stage IB cervical cancer, diagnosed before 30 weeks of gestation.

Case report

L.V., a 37-year-old Caucasian woman, was referred to our department in May 2004. At the time of referral this primigravida was 14 weeks pregnant, with dichorionic, diamniotic twins. A suspicious lesion was found on the uterine cervix at the first prenatal visit. A biopsy at the time of colposcopy showed squamous cell carcinoma in situ with possible stromal invasion and cold-knife conisation was performed. The anatomopathological examination of the cone biopsy revealed a 20 mm large moderately differentiated invasive squamous cell cancer, with both vaginal and endocervical positive section margins and at least 10 mm of stromal invasion. Clinical examination under anaesthesia showed no residual tumour, cystoscopy was normal and the chest X-ray clear. After these staging procedures and review of the pathology specimen was the diagnosis of a Stage IB1 squamous cervical cancer established.

One year before referral L.V. was diagnosed with a pT2N1M0 oestrogen-receptor positive well differentiated invasive ductal breast cancer. Wide excision and axillary lymph node dissection were performed followed by adjuvant radiotherapy and four cycles of adjuvant chemotherapy (CEF). She refused the last two cycles of chemotherapy and refused further adjuvant hormonal therapy.

Before conception, the patient and her partner were informed about the risk of becoming pregnant shortly after the diagnosis of a receptor-positive, node-positive breast cancer. After the diagnosis of the cervical cancer immediate radical hysterectomy with the foetus in situ, was proposed, but the patient and her partner wanted to keep the pregnancy at all costs. Treatment with cisplatin during the pregnancy was considered, but because of the scarcity of safety data this plan was abandoned. We planned to evaluate the disease clinically and with a magnetic resonance (MR) scan up to 31 weeks of gestational age, and at that time enhance foetal lung maturity by maternal corticosteroid administration. A caesarean section would then be performed followed by a radical hysterectomy and bilateral pelvic lymphadenectomy in the same séance. Unfortunately, the MR scan could not be performed due to overweight and claustrophobia, and we were dependent on clinical examinations only.

At 30 weeks of gestation the pregnancy was complicated with preeclampsia. We finally performed a caesarean section, followed by a radical hysterectomy and bilateral pelvic lymphadenectomy, on the planned date (at 31 weeks + 2 days). A female and a male, with respective weights of 1,843 g and 1,395 g were born. Both the caesarean section and the radical hysterectomy were uncomplicated.

Anatomopathological examination of the radical hysterectomy specimen diagnosed a 15 x 10 mm, moderately differentiated squamous cell cancer with 8-9 mm of stromal invasion. All section margins and pelvic lymph nodes were clear.

The patient is free of both breast and cervical cancer 17 months after primary treatment of her cervical cancer.

Discussion

Our patient was treated with a caesarean section followed by a radical hysterectomy and bilateral pelvic lymphadenectomy at 31 weeks of gestation, after a delay of 19 weeks.

Table 1. — Stage IB cervical cancer during pregnancy: planned delay in treatment.

	Case	Age	Stage	Histology diagnosis	Weeks at of delay	Weeks treatment	Weeks at Treatment	Status	Nodes
Nisker 1983			Ib			24		DOD	
Greer 1989	1	22	Ib	GCC	22	6	28 CS RH	DOD	+
	2	34	Ib	SCC	24	11	35 CS RH	NED	-
	3	31	Ib	SCC	24	10	34 CS RH	NED	-
	4	28	Ib	SCC	21	14	35 CS RH	NED	-
	5	31	Ib	SCC	20	17	37 CS RH	NED	-
Monk 1992			Ib		19-23	10-16	CS RH	NED	-
			Ib				CS RH	NED	-
			Ib				CS RH	NED	-
Duggan 1993	2		Ib1		19	84 d	CS RH	NED	-
	3		Ib1		15	150 d	CS RH	NED	-
	5		Ib1		30	171 d	VD ppRH	NED	-
	6		Ib1		28	136 d	VD ppRH	NED	-
	8		Ib1		27	53 d	CS RH	NED	-
Allen 1995		38	Ib	SCC	16	18	34 CS RH	NED	-
		28	Ib	SCC	16	19	35 CS RH	NED	-
Sorosky 1995	VF	29	Ib1	SCC	18	15	33 CS RH	NED	-
	LD	42	Ib1	SCC	8	22*	38 CS RH	NED	-
	RB	28	Ib1	SCC	16	29*	37 CS RH RT	NED	-
	MS	36	Ib1	SCC	21	16	37 CS RH	NED	-
	JS	36	Ib1	SCC	28	7	35 CS RH	NED	-
	PB	27	Ib1	SCC	18	19*	36 CS RH	NED	-
Sood 1996			Ib1	SCC				NED	
			Ib1	SCC				NED	
			Ib1	SCC				NED	
Zanetta 1998	1	27	Ib1	Adeno	25	13	38 CS RH	NED	-
	2	34	Ib1	Adeno	20	18	38 CS RH	NED	-
	4	30	Ib1	Adeno	20	15	35 TE VD RH	NED	-
	6	36	Ib2	SCC	27	5	32 CS RH	AWT	+
van Vliet 1998	2		Ib1		26	6	32 CS RH	NED	-
	3		Ib2		28	4	32 CS RH RT	NED	+
	6		Ib1		23	10	33 CS RH	NED	-
Takushi 2002	26	31	Ib1	SCC	18	13	31 CS RH	NED	-
	27	32	Ib1	SCC	17	15	32 CS RH	NED	+
	28	24	Ib2	SCC	26	6	32 CS RH RT	NED	-
Germann 2005			Ib		1st trim			NED	3/9 patients +
			Ib		1st trim			NED	
			Ib		1st trim			NED	
			Ib		1st trim			NED	
			Ib		1st trim			NED	
			Ib		2nd trim			NED	
			Ib		2nd trim			NED	
			Ib		2nd trim			NED	
			Ib		2nd trim			NED	
Stan 2005		33	Ib2	SCC	10	26	36 CS RH CRT	NED	-

(GCC: glassy cell cancer, CS: caesarean section, RH: radical hysterectomy, DOD: died of disease, SCC: squamous cell cancer, NED: no evidence of disease, d: days, VD: vaginal delivery, ppRH: postpartum radical hysterectomy, * copied exactly from original article, RT: radiotherapy, Adeno: adenocarcinoma, TE: tumorectomy, AWT: alive with tumour, trim: trimester, CRT: chemoradiation therapy).

Treatment algorithms are well established for cervical cancer in non pregnant women. Stage IB1 cancer has a good prognosis and can be controlled by surgery or radiotherapy [6]. Premenopausal patients are usually treated with a radical hysterectomy and bilateral pelvic lymphadenectomy. Stage IB2 disease is today most commonly treated with concurrent chemoradiation [7].

Immediate treatment, without regard to the pregnancy, is traditionally recommended in the first and second trimester [1]. Surgical procedures for cervical cancer, consisting of a radical hysterectomy with the foetus in situ or after delivery, can safely be performed during pregnancy [4, 7]. Case reports of neoadjuvant chemother-

apy during pregnancy, delaying the need for immediate surgery, have been published [9, 10, 18].

We have reviewed all cases of delayed treatment of Stage IB cervical cancer during pregnancy, diagnosed with certainty before 30 weeks of gestation, published after 1980, in journals cited by Pubmed (Table 1). Cases with neoadjuvant chemotherapy were excluded. Twelve articles [11-22] with together 45 cases of delayed treatment were reviewed. We were very strict in our selection and are aware of the fact that because of this we may lack some cases. We reviewed only cases in which the diagnosis was certainly made before 30 weeks of gestation.

Various treatment modalities were used, but the major-

ity of patients were treated with a caesarean section, followed by a radical hysterectomy and bilateral pelvic lymphadenectomy.

Of all cases, only two patients died of their disease during follow-up [11, 12] and one patient was alive with tumor [18]. One of the patients who died was diagnosed with a typical glassy cell cancer [12].

Not all reports are clear on the histology of each individual case. Almost all tumors were squamous cell cancers and only three of the cases, with certainty on the histological type, were adenocarcinomas. These cases were all published in the same report and all three patients were free of disease at a minimum follow-up of 40 months [18].

One report concentrated on the use of MR scanning during pregnancy in patients where treatment is planned-delayed [18]. In several of their patients MR scanning has given useful additional information on parametrial involvement and lymph node status. The use of a MR scan in non pregnant cervical cancer patients has been extensively studied earlier, and is known to supply additional information to the classical staging procedures [23, 24]. Due to overweight and claustrophobia the use of a MR scan in our case was not possible, and we relied on clinical findings only.

Two case reports have reported on the use of laparoscopic lymph node staging during pregnancy, before a possible delay of treatment. Pregnancy was terminated in the first case because of node involvement [25] and therapy was delayed in the second case because of a negative lymph node status [22].

We have reviewed what is known about delayed treatment of Stage IB cervical cancer in pregnancy. We have found 44 cases, diagnosed before 30 weeks of gestation. All series are small, the group shows a wide variety of tumour characteristics and treatment modalities, and the follow-up is rather short. In most cases the treatment was successfully delayed. Drawing conclusions on the basis of these data is difficult, and each case of cervical cancer during pregnancy should be multidisciplinary and individually treated.

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