Research Article

iMedPub Journals
http://www.imedpub.com

Journal of Universal Surgery
ISSN 2254-6758

2016
Vol. 4 No. 3: 54

DOI: 10.21767/2254-6758.100054

Vaginal Cancer Trends in Women of Low Resources Settings

Chhabra S, Bandebuche S and Deshpande A

Mahatma Gandhi Institute of Medical Sciences, Maharashtra, India

Corresponding author: Chhabra S

chhabra_s@rediffmail.com, schhabra@mgims.ac.in

Department of Obstetrics & Gynecology, Mahatma Gandhi Institute of Medical Sciences, Maharashtra, India.

Tel: +91-7152-284342

Citation: Chhabra S, Bandebuche S, Deshpande A. Vaginal Cancer Trends in Women of Low Resources Settings. J Univer Surg. 2016, 4:3.

Abstract

Background: Primary vaginal cancer is uncommon gynecological cancer though epiology is similar to cervical cancer, which is very common in this part of the world. However, vaginal cancer occurs mostly in elderly women.

Objective: Analytical study was carried out to know trends, presentation, and stage at diagnosis of vaginal cancer in women from low resource settings.

Materials and Methods: Vaginal cancer comprised of 1.6% cancers in women, 3.3% gynecological cancers between 1982-1987, 0.4% cancers in women, 0.6% gynecological cancers between 2008-2012. Only 7% women were of less than 50 years, 37% were of 50-60 years, 56% above 65 years. All women were multipara, 90% from low economic status. All cases reported in late stages 13%, stage II 87%, stage III and IV, no one with stage one. Management was according to stage. Since all cases were of advanced stage at diagnosis, they were treated with chemo radiotherapy/palliation.

Conclusion: Over the years, cases of cervical, ovarian cancers have been increasing, but vaginal cancers decreasing. Cervical cancer is rampant, not vaginal, though etiology is believed to be the same. Research is needed.

Keywords: Vaginal cancer; Trends; Advanced stage

Received: June 23, 2016; **Accepted:** July 22, 2016; **Published:** July 29, 2016

Introduction

Metastatic cancer in vagina is common and 80% to 98% of all cases with cancer in vagina are metastatic. In the majority primary cancer is either in the endometrium, cervix, vulva, ovary, breast, rectum, or kidney [1]. Acharya and Uprety [2] reported 84% of vaginal cancers from the adjacent organs, cervix (32%), endometrium (18%), colon and rectum (9%), ovary (6%) and vulva (6%). Primary vaginal cancer is uncommon. Siegel et al. [3] later reported that primary vaginal cancer contributed to 3% of malignant neoplasms of the female genital tract. Siegel et al. [4] reported around 3,000 vaginal cancer cases, with almost 900 deaths annually in the United States and latest report of American Cancer Society (ACS) [5] reveals, around 3,170 cases and 880 deaths annually. Earlier Daling et al. [6] reported that squamous cell cancer of the vagina accounted for 1 per 100,000 women, with an increase in incidence from 3.1 in 1979 to 3.4 in 1998, with steeper increase for women over 75 years. Human papilloma virus (HPV) has been recovered from 80% precursor lesions of vaginal cancer and 60% of squamous cell cancers [7]. Around 30% of women with vaginal cancer have history of cervical cancer, treated within last 5 years.

Objectives

Present study was done for knowing the trends, presentation of cases of primary vaginal cancer in women from low resources settings.

Materials and Methods

The present analytical study of cases of primary vaginal cancer in women of low resource settings was carried out at a rural institute in central India. Records of all the women with histopathologically confirmed primary vaginal cancer over a period of 30 years between 1982 and 2012 were analyzed. All these cases were of primary vaginal cancer. By clinical and investigative modalities, primary cancer at other places was ruled out. For knowing trends cases were divided in six blocks (A: 1982-1987; B: 1988-1992; C: 1993-1997; D: 1998-2002; E: 2003-2007; F: 2008-2012).

Results

During the period of analysis, a total of 13,856 cases (men and women) were diagnosed to be having malignancies of various

organs, 6,525 (47.09%) were in women. Of all the cancers in women, 1,856 (28.4%) were gynecological, 30 (1.6%) were of primary vaginal cancer. Vaginal cancer comprised of 1.6% of cancers in women and 3.3% of gynecological cancers between 1982-1987, 0.9% of cancers in women and 2.1% of gynecological cancers between 1988-1992, 0.5% of cancers in women and 1.4% of gynecological cancers between 1993-1997, 0.6% of cancers in women and 1.4% of gynecological cancers between 1998-2002, 0.15% of cancers in women and 0.4% of gynecological cancers between 2003-2007, 0.4% of cancers in women and 0.6% of gynecological cancers between 2008-2012. There was an increase in women with various cancers and also women with gynecological cancers but significant decrease in vaginal cancers over the years **(Table 1)**.

Only 7% women with vaginal cancer were of less than 50 years, 37% were of 50-60 years and 56% were above 65 years. There were no special features in the two cases of less than 50 years and no one was of less than 45 years, almost all were multipara. Almost 90% women belonged to low economic status. Four cases were of stage II, 15 stage III and 11 stage IV (around 87% stage III and IV) and no case of stage I **(Table 2)**.

They had no special risk factors. They were nonsmokers, married women with single partners. Most of the women (almost 80%) had reported with white discharge, quite a few had blood stained discharge. Backache, burning and difficulty in micturition were other complaints. Management was done according to the stage of disease. Since all the women had reported in advanced stage, they were treated by chemo radiotherapy. Those with metastasis had only palliative therapy **(Table 3)**. Follow up was a real problem. Survival and quality of life after therapy is not part of the study.

Discussion

Vaginal cancer is not a common gynecological cancer. Some report rising trends especially in women beyond 75 [6]. Hellman et al. [8] have reported that vaginal cancer can occur at any age. Squamous cell cancer of the vagina mostly occurs in older women, only 15% cases are in women younger than 40. Almost 50% cases occur in women of 70 years or older [8]. Up to 90% of vaginal cancers and pre-cancers, the mean age at diagnosis is 60 years. The disease is rarely seen in women in their 20s and 30s also. In the present analysis also 56% cases were above 65 years, two cases were of less than 50 years (7%) and 37% women were of 50-60 years. Also 87% cases reported in stage III and IV, rest in stage II, no one was of stage I.

According to ACS statistics [9], vaginal cancer is only 1 to 3 percent of gynecological cancers. Recently ACS [5] reported that only about 1 of every 100 cancers of the female reproductive system is vaginal cancers [10]. After having looked into 39 population-based cancer registries between 1998 through 2003, Wu et al. [11] reported that incidence rates for all vaginal cancers combined were 0.18 for *in situ* cases and 0.69 for invasive cases

Table 1: Histopathologically proved gynaecological cancers.

Year	Overall Cancers	Cancers in Women		Gyn Cancers Out of Cancers in Women		Vaginal Cancers Out of Gyn Cancers	
	No.	No	%	No.	%	No.	%
82-87	865	345	39.6	148	42.9	5	3
88-92	1144	453	39.5	190	41.9	4	2
93-97	1323	626	47.2	202	32.2	3	1
98-02	2380	1134	47.6	467	41.1	7	1
03-07	3319	1905	57	631	33.1	3	0
08-12	4825	2062	43.12	218	59.1	8	1
TOTAL	13856	6525	47.1	1856	28.4	30	2

Table 2: Age and parity of vaginal cancer cases.

	AGE	NUMBER	PARITY			
			NULLIPAROUS	PRIMIPARUS	MULTIPAROUS	TOTAL
A	<50	1	0	0	1	5
	50- 65	1	0	0	1	
	>65	3	0	0	3	
B	50- 65	2	1	0	1	4
	>65	2	0	0	2	
C	50- 65	3	0	0	3	3
D	<50	1	0	0	1	7
	50- 65	4	0	0	4	
	>65	2	0	1	1	
E	50- 65	2	0	0	2	3
	>65	1	0	0	1	
F	50- 65	5	0	1	4	8
	>65	3	0	1	2	
		30	1	3	26	30

Table 3: Management of vaginal cancer cases.

	Therapy	Stages			
		II	III	IV	TOTAL
83-87	C+R	1	3	1	5
88-92	C+R	-	2	-	2
	P	-	-	1	1
93-97	C+R	1	1	1	3
	P	-	-	1	1
98-02	C+R	1	3	-	4
	P	-	-	3	3
03-07	C+R	-	2	-	2
	P	-	-	1	1
08-12	C+R	1	4	2	7
	P	-	-	1	1
TOTAL		4	15	11	30

per 100,000 female populations. Akino et al. [12] also reported that primary cancer of the vagina was a rare entity, comprising only 1% to 2% of all gynecologic malignancies.

In the present analysis, overall 1.6% of gynecological cancer cases were primary vaginal cancer. In the recent past only 0.6% were primary vaginal cancers, significant decrease from 3.3% of all gynecological cancer cases earlier. Cervical cancer is rampant here but not vaginal. Our earlier study had revealed that 73.3% of all gynecological cancer cases were cervical with an increase in cervical cancer cases, over the years [13], but only 30 cases of primary vaginal cancer were diagnosed in 3 decades. Dhakal [14] has reported 2.7% vaginal cancer and 85.23% cervical amongst all gynecological cancers. Whatever does not allow vaginal cancer occurrence needs to be researched, so as to try prevention of cervical cancer also.

All women with vaginal cancer may not have symptoms or signs in early stages, similar to cervical cancer. It is reported that pelvic pain from extension of disease beyond the vagina is present in 5% cases, however as many as 20% are asymptomatic at the time of diagnosis [15-18]. Cresman [19] reported that common symptoms were vaginal mass, urinary symptoms (e.g., frequency, dysuria, hematuria), or gastrointestinal complaints like tenesmus, constipation, melena. Other studies reported that the most common symptom was painless vaginal bleeding (80%), such as after intercourse or after menopause followed by vaginal discharge (50%), may be bloody and foul smelling. Itching ("pruritis") is also common (30%). The disease is often misdiagnosed as an infection initially. If vaginal bleeding is present in a woman after menopause, there is a 30% chance of genital cancer, 98% of these cancers being cervical or uterine and 2% vaginal [6]. In the present analysis most women with vaginal cancer had white discharge (mostly blood stained), lower backache as the leading symptoms, some had urinary complaints, but no one had gastrointestinal symptom.

Risk factors that have been linked are likely to be mediated by HPV, as with cervical cancer. However here cervical cancer is very common but not vaginal, cause not obvious. Vulvar cancer also has been decreasing over the years [20,21]. Akino et al. [12] reported that infection of human papillomavirus; immunocompromised condition and chronic irritation of the vagina by prolonged pessary usage were known to contribute to the development of vaginal cancer. In general, vaginal intraepithelial neoplasm as well as invasive vaginal cancers are associated with the same risk factors as cervical neoplasia, multiple sexual partners, early age at first intercourse, and being current smoker [5,22]. Ikenberg et al. [23] reported that vaginal epithelium is more stable than cervical, undergoes constant metaplasia, and is thus less susceptible to oncogenic viruses. This could be one reason why cervical cancer is common and vaginal less common. Since many women with vaginal cancer have no known risk factors, it is not possible to completely prevent this cancer [9]. While there is no general screening test for vaginal cancer, Pap smear can be used. Colposcopy and biopsy are used for confirmation of diagnosis.

In the present study it is not possible to do multivariate regression analysis because it is a retrospective study where very few variables were included and information is included.

Treatment options for vaginal cancer depend on several factors, including the type of vaginal cancer and its stage. There is no consensus as to the appropriate management of vaginal cancer. Treatment needs to be individualized depending upon the age of the woman, location and size of tumor and clinical stage. Typically, treatment includes surgery, radiation and chemotherapy. Removal of small tumors or lesions, by partial, vaginectomy is possible. Several factors must be considered for management, psychosexual issues and also patients' desire to maintain a functional vagina. Local anatomic constraints may not permit wide negative surgical margins without an exenterative procedure (e.g., removal of the internal genitalia, supporting structures, recto sigmoid, lymphatic pathways, and bladder). Because of the proximity of the bladder, urethra, and rectum to the vagina, the administration of high dose radiation also is precluded. A single institution review suggested that tumor stage, site, and size were all important prognostic factors [24]. Shah et al. [25] also reported stage, tumor size, histology, and treatment modality significantly affected a woman's risk of mortality from vaginal cancer. There seemed to be a survival advantage that was temporally related to the advent of chemo radiation.

Due to rarity, treatment guidelines are difficult to standardize and there is controversy regarding the optimal treatment [26]. DeVita et al. [27], reported that the length of vaginal wall involvement and survival were associated with stage of disease in squamous cell carcinoma of vagina. The most important variable affecting prognosis is the stage at the time of presentation, reflecting the size and depth of tumor penetration [7,28-33]. All our cases reported late and compliance was a real problem. Even our cervical cancer cases have only 25% compliance [34].

Ciccone et al. [35] have reported that in cases of heart failure and diabetes physicians, care managers, and patients showed unanimous agreement regarding the positive impact on patient health and self-management, and attributed the outcomes to the strong "partnership" between the care manager and the patient and the collaboration between the physician and the care manager and the same could be tried for such cancers.

Conclusion

Vaginal cancer is uncommon and has decreasing trend. Most vaginal cancer cases were in elderly women and were advanced at diagnosis. Since the disease is rare, strong evidence based recommendations are lacking research needs to continue.

References

1 Jonathan SB (2006) Novak's gynecology cervical and vaginal cancer. 14th edn. Philadelphia, Lippincott Williams & Wilkins, USA. pp. 1445-1451.

2 Acharya S, Uprety DK (2012) Carcinoma of vagina in utero-vaginal prolapse; A Rare presentation. JNMA J Nepal Med Assoc 52: 82-84.

3 Siegel R, Naishadham D, Jemal A (2013) Cancer statistics, 2013. CA Cancer J Clin 63: 11-30.

4 Siegel R, Ma J, Zou Z, Jemal A (2014) Cancer statistics, 2014. CA Cancer J Clin 64: 9-29.

5 American Cancer Society (2014) Cancer Facts and Figures 2014.

6 Daling JR, Madeleine MM, Schwartz SM, Shera KA, Carter JJ, et al. (2002) A population-based study of squamous cell vaginal cancer: HPV and cofactors. Gynecol Oncol 84: 263-270.

7 A.D.A.M. American Accreditation HealthCare Commission, 1997-2008.

8 Hellman K, Lundell M, Silfverswärd C, Nilsson B, Hellström AC, et al. (2006) Clinical and histopathologic factors related to prognosis in primary squamous cell carcinoma of the vagina. Int J Gynecol Cancer 16: 1201-1211.

9 http://www.cancer.org/acs/groups/cid/documents/webcontent/003146-pdf.pdf

10 DeVita VT, Lawrence TS, Rosenberg SA (2001) Cancer: Principles and Practice of Oncology. 9th edn. Philadelphia, Lippincott Williams & Wilkins, USA. pp. 1311-1344.

11 Wu X, Matanosi G, Chen VM, Saraiya M, Coughlin SS, et al. (2008) Descriptive epidemiology of vaginal cancer incidence and survival by race, ethnicity, and age in the United States. Cancer 113: 2873-2882.

12 Akino N, Wada-Hiraike O, Matsumoto Y, Arimoto T, Oda K, et al. (2016) Vaginal cancer possibly caused by pessary and immunocompromised condition: Multiple risk factors may influence vaginal cancer development. J Obstet Gynaecol Res 42: 748-751.

13 Chhabra S, Bhavani M, Mahajan N (2010) Cervical cancer in Indian rural women: trends over two decades. J Obstet Gynaecol 30: 725-728.

14 Dhakal HP (1998) An experience in DCC BP Koirala Memorial Cancer Hospital. BPKMCH Newslett 1: 18-20.

15 Pride GL, Schultz AE, Chuprevich TW (1979) Primary invasive squamous carcinoma of the vagina. Obstet Gynecol 53: 218.

16 Gallup DG, Talledo OE, Shah KJ, Hayes C (1987) Invasive squamous cell carcinoma of the vagina: a 14-year study. Obstet Gynecol 69: 782.

17 Wilkinson EJ (1991) Pathology of the vagina. Curr Opin Obstet Gynecol 3: 553-560.

18 Barry PM, Kent CK, Philip SS, Klausner JD (2010) Results of a program to test women for rectal chlamydia and gonorrhea. Obstet Gynecol 115: 753-759.

19 Creasman WT (2005) Vaginal cancers. Curr Opin Obstet Gynecol 17: 71-76.

20 Saraiya M, Watson M, Wu X, King JB, Chen VW, et al. (2008) Incidence of in situ and invasive vulvar cancer in US, 1998-2003. Cancer 113: 2865-2872.

21 Chhabra S, Bhavani M, Deshpande A (2014) Trends of vulvar cancer. J Obstet Gynaecol 34: 165-168.

22 Madsen BS, Jensen HL, van den Brule AJ, Wohlfahrt J, Frisch M (2008) Risk factors for invasive squamous cell carcinoma of the vulva and vagina-population-based case-control study in Denmark. Int J Cancer 122: 2827-2834.

23 Ikenberg H, Runge M, Goppinger A, Pfleiderer A (1990) Human papillomavirus DNA in invasive carcinoma of the vagina: Abstract for Reference 18 of 'Vaginal cancer'. J Obstet Gynaecol 76: 432.

24 Lian J, Dundas G, Carlone M, Ghosh S, Pearcey R (2008) Twenty-year review of radiotherapy for vaginal cancer: an institutional experience. Gynecol Oncol 111: 298.

25 Shah CA, Goff BA, Lowe K, Peters WA (2009) Factors affecting risk of mortality in women with vaginal cancer. Obstet Gynecol 113: 1038-1045.

26 Wuntakal R, Amita M, Kerkar RA, Tongaonkar TB (2005) Primary invasive carcinoma of vaginal in association with genital prolapsed. J Obstet Gynecol India 55: 361-362.

27 DeVita VT, Hellman S, Rosenberg SA (2004) Cancer: Principles and Practice of Oncology. 8th edn. Philadelphia, Lippincott Williams & Wilkins, USA. pp. 1496-1543.

28 Nori D, Hilaris BS, Stanimir G, Lewis JL (1983) Radiation therapy of primary vaginal carcinoma. Int J Radiat Oncol Biol Phys 9: 1471.

29 Brady LW, Perez CA, Bedwinek JM (1986) Failure patterns in gynecologic cancer. J Gynecol Oncol 12: 549-557.

30 Kirkbride P, Fyles A, Rawlings G, Manchul L, Levin W, et al. (1995) Carcinoma of the vagina-experience at the Princess Margaret Hospital (1974-1989). J Gynecol Oncol 56: 435-443.

31 Perez CA, Grigsby PW, Garipagaoglu M, Mutch DG, Lockett MA (1999) Factors affecting long-term outcome of irradiation in carcinoma of the vagina. Int J Radiat Oncol Biol Phys 44: 37-45.

32 Tewari KS, Cappuccini F, Puthawala AA, Kuo JV, Burger RA, et al. (2001) Primary invasive carcinoma of the vagina: treatment with interstitial brachytherapy. Cancer 91: 758-770.

33 Beller U, Sideri M, Maisonneuve P, Benedet JL, Heintz AP, et al. (2001) Carcinoma of the vagina. J Epidemiol Biostat 6: 141.

34 Chhabra S, Barma S, Mahajan N (2013) Compliance to therapy and recurrence in cervical cancer. J Gynecol Oncol 8: 38-41.

35 Ciccone M, Aquilino A, Cortese F, Scicchitano P, Sassara M, et al. (2010) Feasibility and effectiveness of a disease and care management model in the primary health care system for patients with heart failure and diabetes (Project Leonardo). Vasc Health Risk Manag 6: 297-305.