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ANALYSIS OF PREVALENCE OF GYNAECOLOGICAL CARCINOMAS IN FEMALE POPULATION OF PAKISTAN

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Abstract:

The basic aim of the study is the analysis of prevalence of gynaecological carcinomas in females: A study based on Pakistani environment. This study was conducted at Ghurki Trust Teaching Hospital, Lahore during March 2019 to October 2019. This was done with the permission of ethical committee of hospital and with the permission of patients. Total number of participants from 2017 to 2019 was 1323 a (female) which belongs to different parts of Punjab. Studies have shown that with the passage of time prevalence of gynecological carcinomas is increasing in the world. On the other hand, the death rate in Pakistani woman due to prevalence of gynecological carcinomas has been doubled in the last decade. The main reason behind this is the fact that more than 70% of cancer patients report with very advanced stage of malignancy. This data suggests that the Prevalence of Gynecological tumors is on the rise and over the last few years this has contributed to high charge per unit of mortality in Pakistan.

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INTRODUCTION:

A human body is made up of various different types of cells which are polyclonal i.e divided into different sets of populations. Normally the cells turnover is maintained within homeostatic confines e.g the monthly replacement of endometrial lining after menstrual shedding in post-pubertal non-pregnant females[1]. However in any event of a Pro-carcinogenic insult e.g HPV infection, this polyclonal population of can be replaced by a monoclonal population. This monoclonal population can be benign or malignant[2]. Benign Tumors remain localized and do not spread beyond their locality of origin. Malignant tumors however have the tendency to invade locally and then disseminate throughout the body (Metastasis) via either Lymphatic or hematogenous route. This metastasis allows the tumor cells seed into several secondary tissues and continue to proliferate while escaping regulatory mechanisms even at these secondary sites. Studies have shown that with the passage of time cancer is increasing in the world. However a major bulk of this increased load can be attributed to early screening and more effective diagnostic methods[3]. Cancer is the 2nd leading cause of death in both adults and children worldwide. The most common causes of cancer mortality in adults are the Lung cancers. However on basis of Incidence the most common cancer in adults are the Breast/prostate cancers. Studies have shown that in Pakistan due to lack of awareness women do not understand the symptoms that they are facing leading to delays in reporting their ailment and thus usually present at a very late stage of the disease[4]. This constitutes one of the major reasons why it has become difficult to diagnose, intervene and treat cancer (Malignant Tumor) in its early stages of development.

Although various etiological factors can be attributed to the causation of cancer, but the most preventable of these factors is the infectious etiology. The most notorious of these infectious causes is Human Papilloma Virus (HPV) which spreads through sexual contact. There are different strains of this virus and each of these bears a different oncogenic potential. HPV 6 and 11 are low risk and usually cause warts, while HPV 16,18,31 and 33 are high risk and can cause dysplasia which can lead to tumor[6]. Most women are able to adequately resist the effects of this virus however 55% of the times this virus leads to cancer. Immunization against HPV (recommended at age 10 to 18 years) is the best preventive measure available to reduce the risk of HPV associated cancers (e.g cervical, vaginal, vulvar, penile, mouth and throat Squamous cell carcinomas). Most women's bodies are able to fight this infection, however 55 percent of the time the virus leads to cancer. On the other hand, when the treatment is taken under consideration, there are not many options[7].

Objectives of the study

The basic aim of the study is the analysis of prevalence of gynaecological carcinomas in females: A study based on Pakistani environment.

METHODOLOGY OF THE STUDY:

This study was conducted at Ghurki Trust Teaching Hospital, Lahore during March 2019 to October 2019. Total number of participants from 2012 to 2017 was 1323 a (female) which belongs to different parts of Punjab. The data attained was secondary data which was already recorded by the Hospital over the period of time. The basic reason behind using this method was to ensure the authenticity of the data.

Statistical Analysis

Statistical analyses (Anova Test and Post Hoc) were performed using the SPSS software program (17.0). All results were expressed as the mean ± standard deviation (SD). P value below 0.05 was considered to be statistically significant.

RESULTS:

After going through the Hospital records, following is the data gathered over the 5 years of time span.

Table 01: Demographic characteristics of different forms of cancer

Demographic characteristics		**(%)**		**P value**
		With infection	**Without infection**	
Age (years)	≤25 >31	56.1 44.0	61.5 38.5	0.345
Body mass index (Kg/m$^{2)}$	≤30 >30	52.2 47.8	42.3 57.7	0.13*
Max age of carcinoma (%age)	≤40% >40%	44.0 56.0	42.8 57.2	0.876
Types of carcinoma	Ovarian Cervical Vaginal Uterine Endometrial	25.34 22.7 5.6 2.7 2.3	28.3 26.5 14.2 13.6 12.34	0.012*

Table 02: ANOVA results for the year 2012-2017

	Ovarian cancer	**Cervical cancer**	**Vaginal cancer**	**Uterine cancer**	**Endometrial cancer**	**Mean**	**SD**
2012	0	0	2.5	23.25	3,369	81.65	324.76
2013	0.14	0.7	1.76	4.45	314.1	7.53	23.77
2014	0.04	0.4	1	3.45	146.13	7.20	18.23
2015	0.1	0.65	1.95	5.25	284.54	9.01	29.51
2016	0.28	0.71	0.92	1.45	25.54	1.39	2.02
2017	0.26	0.58	0.79	1.06	10	1.056	1.00

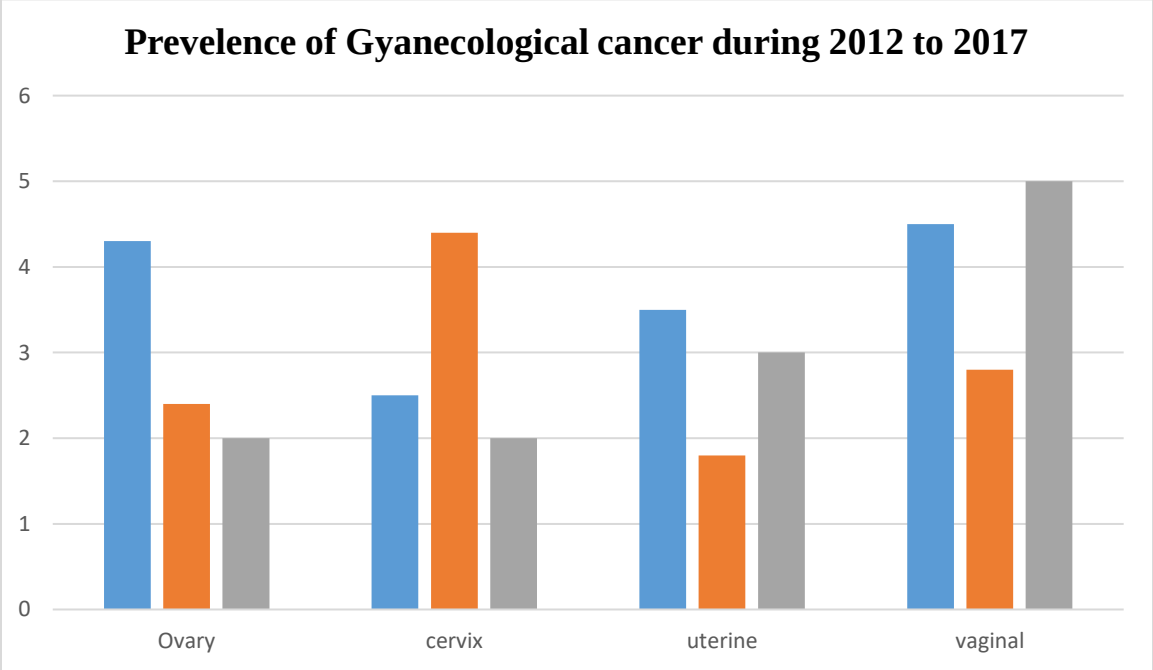

Figure 01: Graphical representation of major forms of gynaecological cancers

Findings

Following points are the main findings after conducting the research

1. 101 out of 1304 of total diagnosed cases in Nishtar Hospital in 2016 were reported.
2. From the above given data it can be seen that 6.4% of all cases are gynecological tumors of which 50% are ovarian and 96 patients were diagnosed out of 1483.
3. 107 out of 1341 of total diagnosed cases in Nishtar Hospital in 2013 were reported.
4. 129 out of 1403 of total diagnosed cases in Nishtar Hospital in 2015 were reported.
5. 101 out of 1323 of total diagnosed cases in Nishtar Hospital in 2012 were reported.

DISCUSSION:

The burden of gynaecological cancer is on the increase worldwide, but it is higher in developing than developed countries, with approximately five million new cancer cases diagnosed annually. The need for novel independent prognostic factors in metastatic breast cancer patients is much lower than the need for dynamic blood markers, which can indicate the treatment efficiency in a reliable and early fashion. Serum tumor markers are an easy, quick, cheap, but rather imprecise and sometimes misleading tool, to monitor the treatment efficacy. However, they are particularly valuable for treatment monitoring in patients that have disease that cannot be evaluated by radiology[10].

CONCLUSION:

After going through the above data it can be easily concluded that prevalence of gynecological carcinomas is increasing in Pakistan and something needs to be done about it. Hence, over the last few years this is the cause of the high charge per unit of mortality in Pakistan.

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