

Correlation between Visual Analogue Scale Score and Hospital Anxiety Depression Scale-Depression Score in Patients with Cervical Cancer in the Hospital Vina Cancer, Medan

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Abstract

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BACKGROUND: Makuza said that every year, 528 thousand new cases occur and approximately 266 thousand women die from cervical cancer. In cancer patients, the symptoms that are often experienced are a pain. The pain was found to be significantly associated with psychiatric disorders. The pain had a strong relationship with mood disorders in cancer patients.

AIM: To determine the correlation between scores of Visual Analogue Scale (VAS) and Hospital Anxiety Depression Scale-Depression (HADS-D) in patients with cervical cancer in Vina Cancer Center Hospital in Medan

METHODS: This study was an analytical study with a cross-sectional approach to determine the correlation between VAS and HADS-D score between 34 female patients in cervical cancer at Vina Cancer Center Hospital in Medan.

RESULTS: VAS was found to be moderate positively significant with HADS-D ($p < 0.001$, $r = 0.59$) in patients with cervical cancer in the Hospital Vina Cancer Medan. The value and direction of the correlation (r) VAS and HADS-D score is 0.59. The conclusion drawn value was ($p < 0.001$).

CONCLUSION: There is a significant correlation between VAS score and HADS-D score in cervical cancer patients, which shows that the higher the VAS score resulted in higher HADS-D scores.

Introduction

Cervical cancer is a severe and potentially life-threatening illness, which has adverse effects on the physical and psychological well-being of patients [1]. Cancer is one of the leading causes of death throughout the world. In 2012, around 8.2 million deaths were caused by cancer. Cervical cancer, lung cancer, liver, colorectal and breast cancer are the biggest causes of cancer deaths every year [2]. Cervical cancer is more common in developing countries. The highest incidence rate reported in Haiti is 64 per 100,000, Lesotho is 46 per 100 thousand, Bolivia is 42 per 100 thousand [3].

Human papilloma virus (HPV) is an important cause of cervical cancer, the type associated with cervical cancer is type 16 and 18 HPV [3], in addition,

there are several risk factors for the development of cervical cancer, which are associated with sexual behaviour, have multiple partners, high parity, early age during sexual intercourse, contraceptive use [4]. The first sexual intercourse before the age of 18 is also a risk factor for the Human Papilloma virus for cervical cancer. Nearly 40% of the study subjects had sexual intercourse 1-2 years after menarche [5]. Sign in Cervical infections are common problems among women are associated with clinical complaints of vaginal discharge [6]. Induced HPV cervical carcinoma can develop within two years after the initial infection of the unstable squamous epithelium on the endocervix. Progression of HPV infection to cancer can develop from one stage to another for 5-30 years [3]. In cancer patients, the symptoms that are often experienced are a pain. An international survey of cancer shows pain in about 90% in cancer patients [7]. In cancer cervix, the common site of pain

is back and lower abdomen due to pressure or involvement of upper lumbosacral plexus and pain in buttocks and perineal region due to lower lumbosacral plexus involvement. The most common site of pain was lower abdomen (73.2%), followed by back pain (51%) and pain in the perineum (33.6%), patients described the pain as cramping (42.3%), pressure-like (43.6%) or burning nature (14.1%) [8]. Pain is found to be significantly associated with current psychiatric disorders. A vast literature has confirmed that there is a strong relationship between pain and mood disorders in cancer patients. The relationship between pain and depression is complex. In depressed individuals, the pathogenic pathways of both pain and depression involve low levels of serotonin and noradrenaline, which can affect pain modulation and exacerbate pain [7]. Several studies have shown that depression is a common effect of psychological stress in cancer patients. Previous meta-analyses also found that the prevalence of depression 54.90% was significantly higher in Chinese adults with cancer compared with those who did not [9].

Methods

This study was an analytic correlation with a cross-sectional approach that was describing and analysing a situation in a given moment, using VAS instruments and Hospital Anxiety and Depression Scale-Depression (HADS-D). The sample in this study was determined on a non-probability sampling type consecutive sampling

Subjects were cervical cancer sufferers, aged 45-65 years, duration of illness < 6 months. Patients suffering from other psychiatric illnesses and suffering from other chronic diseases will be excluded. After signing the informed consent, patients were given a VAS and HADS-D questionnaire. After the VAS score and HADS-D score were obtained, management and data analysis were carried out. First, we used the Shapiro-Wilk test to normalise the data, and if it were normally distributed, we would use the Pearson correlation test, but otherwise, if it is not normally distributed, an attempt will be made to normalise the data, and then a spearman correlation test will be carried out.

This research was conducted at Vina Cancer Center Medan Hospital, from May to November 2018. The study sample was taken with non-probability consecutive sampling. Thirty-four research subjects with cervical cancer were screened to rule out previous psychiatric disorders, especially anxiety and depression, by interviewing mini International Classification of Diseases-10 (ICD-10) and fulfilling inclusion criteria and not having exclusion.

Results

This study got 34 subjects in cervical cancer in Hospital Vina Cancer Medan, sample in this study was determined on a non-probability sampling type consecutive sampling.

Demographic Characteristics of the subject of this study can be seen in Table 1. For the age of cervical cancer patients, where the mean age of the study subjects was 50.79 years with a standard deviation of 2.983.

Table 1: Distribution of Sample Based on Demographic Characteristics

Demographic Characteristics	Mean \pm SD	N (%)
Age (Year)	50.79 \pm 2.983	
Education Level		
Middle school		25(73.5%)
High school		9(26.5%)
Employment Status		
Employed		20(58.8%)
Unemployed		14 (41.2%)
Marital Status		
Married		26 (76.5%)
Not married		8 (23.5%)
First age Sexual Intercourse		
\leq 18 years		18 (52.9%)
>18 years		16 (47.1%)
Stage of illness		
Stage 2		14 (41.2%)
Stage 3		17 (50%)
Stage 4		3 (8.8%)

For the middle education level found 25 people or 75.5%. The most for middle education level was 25 people or 73.5%. Married status in getting the most married was 26 people or 76.5% and not married is eight people or 23.5%. The most for employment status was 20 people or 58.8%, and not employed is 14 people or 41.2%. The first age of sexual intercourse, the most was \leq 18 years is 18 people or 52.9% and > 18 years was 16 people or 47.1%. at Stage of illness in stage 2 the found 14 people or 41.2%, stage 3 found 17 people or 50% and stage 4 found three people or 8.8%

In Table 2., the mean VAS score obtained in the subject of this study is 5,35 and standard deviation of 0,884, and the mean HADS-D score obtained in the subject of this study is 14.74 and standard deviation of 1.421.

Table 2: Average Score VAS and HADS-D score

	N	Mean \pm SD
VAS Score	34	5.35 \pm 0.884
HADS-D Score	34	14.74 \pm 1.421

From the table, it can be seen that the value and direction of the correlation (r) VAS and HADS-D score is 0.59. The conclusion is drawn value (p) is < 0.001. VAS was found to be moderate positively significant with HADS-D.

Table 3: Score VAS and HADS-D in Cervical Cancer patient

<i>Hospital Anxiety Depression Scale</i>		
<i>Visual Analogue Scale</i> $r = 0.59$	$P \leq 0.001$	$N = 34$
Correlation test Spearman's $p < 0.05$.		

In this study, because the number of subjects is ≤ 50 , then the Saphiro-Wilk test was used, if the p-value is > 0.05 , then the data was normally distributed. In this data, p-value < 0.05 so that the data is not normally distributed, then the data transformation is done. After the data transformation test, it was still not normally distributed, where the p-value is < 0.05 , then the spearman's correlation test is performed.

Discussion

This study is across a sectional study that uses analytic correlation approach. The research sample was obtained by nonprobability consecutive sampling method. The study to find the correlation between pain scores and depression scores in cervical cancer patients who have been diagnosed at outpatient installations at Vina Cancer Center Medan Hospital in the period May to November 2018. The subjects of the study were 34 people.

From the results of this study, the demographic characteristics of the study subjects with an average age of subjects suffering from cervical cancer were 50.94 years with a standard deviation of 2.983; this study is by the study conducted by Endarti that the average age of cervical cancer patients is 51.01 [10]. A study conducted by Kim et al., most cervical cancer patients were found at the age of 51 years. For the education level, most were middle education which was 73.5% [11].

For the marital status is most married was 76.5%, by a study conducted by Dahiya et al. in India, that the most cervical cancer was obtained at the marital status of 73.13%.⁵ The most employment status is 58.8%, the study conducted by Endarti et al., found that the highest employed status was work is 71% [10].

In this study, the most at the first age sexual intercourse for ≤ 18 years is 52.9%, this study was by the results of a study by Wulandari that obtained 59.2% [12]. Likewise, with the study conducted by Dahiya in India, the results were obtained 70.15% for first age sexual intercourse ≤ 18 years [5]. This is because biologically from the cervix is immature during adolescence, making it more susceptible to HPV infection, and other sexually transmitted diseases [13].

The stage of illness, the most common is stage 3 by 50%. A study conducted by Hidayat et al., who conducted a study at Moerwardi Hospital that the most cervical cancer obtained was stage 3 by 48%. Early symptoms or stages of cervical cancer were difficult to detect. We recommend that women who have had sexual intercourse have to do a pap smear

to detect whether they have cervical cancer, but in Indonesia, the awareness to check-up is still low, this is due to a lack of knowledge about cervical cancer. So that 70% of patients who come to the hospital are at an advanced stage [14].

In this study, the average value of HADS-D was obtained at 14.74. This explains that people with cervical cancer in this study had moderate depression. Studies conducted by Bae et al. Found results in depression in cervical cancer by 11.08, which showed moderate depression [9]. In this study, the average VAS score in the study subjects was 5.35 and standard deviation of 0.884. In a study conducted in Singapore, patients who reported health problems about the pain experienced and anxiety/depression were 54.5% and 41.2% [9]. The study by Lau in Singapore, most patients at 76.8% experienced pain in advanced stages (III and IV), followed by 53% in stage II and 29.2% in stage I [15].

The limitations in this study did not assess the risk factors of cervical cancer from the subject partner, number of births and number of abortus.

In conclusion, there is a significant correlation with the Spearman correlation test between the VAS score and the HADS-D score in patients with cervical cancer in Vina Cancer Medan hospital with a correlation value of $r = 0.59$ with a p-value ≤ 0.001 . Showing that in the same direction, the higher the VAS score resulted in, the higher the HADS-D score.

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