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Research Article

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Association of Breast Cancer with Hormonal Contraceptive Use Among Women Between the Ages of 15 To 65 Years Abia State, Nigeria

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Abstract

Breast cancers are two of the leading causes of cancer deaths in women, accounting for more than 40% of all women's cancer and about two-thirds of cancer. deaths. The risk of breast cancer appears to increase with duration of use of hormonal contraceptives, however, after stopping taking it, the risk of invasive cancer declines, returning to the same as women who have never taken the pill 10 or more years after stopping.

Objectives: *Aimed to determine the prevalence of breast cancer with hormonal contraceptives use on women between 15-65years.*

Method: *The researchers adopted descriptive study, 740 participated in the research study and sampling technique was applied to make sure the target population had opportunity of participation. A well-structured questionnaire and preformed as tool for data collection.*

Result: *A total of 608(109.3) participants used contraceptives and between 10years 181 participants used the commodity. On breast examination, 83.4% heard normal breast in a visual inspection. 87.27% of participants heard a normal breast color. 77.03 heard no abnormal breast discharge while 22.97% said they were experiencing breast discharge.78.32% are not breast feeding while 21% were breast feeding mothers and are eligible for the screening. Kruskal Wallis H test as well as Mann-Whitney U test was employed. With a p-value of 0.038, there is enough evidence to infer that when one began to use hormonal contraceptives influences incidence of breast cancer.*

Conclusion: *Breast cancer has killed too many women either as a result of hormonal contraceptives or other causes.*

Keywords: Breast Cancer, Hormonal Contraceptives, Women's Health, Cancer Risk, Oral Contraceptives, Epidemiology, Contraceptive Use, Cancer Prevention, Public Health

Introduction

Cancer is a proliferation of the abnormal cells in the body, this condition affects both women and men leading to increase mortality of death in both sexes. Breast cancer is the leading cause of cancer in women worldwide, a multifactorial disease with multiple biological profiles could lead to breast cancer). Other factors act with a relative lower increase risk including endogenous and exogenous hormones especially oral contraceptive pills could be responsible in part for the burden of breast cancer.

Hormonal contraceptive contains synthetic versions of these female hormones that could potentially also increase cancer risk. They contain estrogen and progesterone which stimulate the development and growth of some cancers (e.g., cancers that express receptors for these hormones, such as breast cancer, which was reinforced by the recent classification of oral contraceptives (OC) as carcinogenetic agents .Breast cancer is a hormonally sensitive tumour, and the prognosis of women with current or recent breast cancer may worsen with use of the combined pill.

Walker, et al. (2015) states that the Low-dose methods of contraception, pills, IUDs, and implant, have been found to increase the risk of breast cancer in women [1]. Kirtlys (2014) talks about these new findings from a Denmark study. Jones, stated that the risk of breast cancer and hormonal family planning commodity, have now 50 years of data on the topic of hormonal family planning pills and the risk of breast cancer [2]. Largely, the studies have suggested that there's no significant increased risk of breast cancer in birth control pill users except maybe in women who used pills starting early in their teens, used them for a long time, and use them into their 40s. Recently, a study from Denmark looked at 1.8 million women between the ages of 15 to 49 who had used hormonal contraception between 1995 and 2012.Stating that the extra risk of breast cancer in women of this age group who took hormonal birth control of any type during this time period was 13 extra breast cancers per 100,000 women per year, that's a very small number, 13, out of a pretty big number, 100,000. That is, for every 100,000 women using hormonal birth control, there are 68 cases of breast cancer annually compared to 55 cases a year among non-users. Another way to crunch these numbers is to say there was one extra breast cancer for every 7,690 women using hormonal contraception. Summarily, for the users of hormonal patches, the extra breast cancers were 5 per 100,000, but it ranged from 1 fewer and 11 more, and essentially it wasn't different from women not using hormonal birth control, this is not clear, because the hormonal patch is kind of like the hormonal pill and for women using vaginal rings, there were two fewer breast cancers with statistical ranging from 32 fewer to 28 more and the same kind of numbers were seen for women using contraceptive implants or injections. There were about 5 to 10 fewer breast cancers, but the ranges were so large that there really wasn't an increase or a decrease. Hormonal IUD users had about the same increase as pill users with about 16 extra breast cancers per 100,000 women. Importantly, the risk for women under 35 years of age was 2 extra breast cancers per 100,000 women per year, a really small number.

According to Gierisch, Coeytaux, Urrutia, et al. (2013), Young women had a lower risk of breast cancer on hormonal contraception than older women and women who had used hormonal contraception for a long time, meaning 10 years or more, had a slightly larger absolute risk of contracting breast cancer than women who only used it a short time. So, considering a significant risk is 1 extra in 10 and low risk is 1 extra in 100[3]. A very low risk is 1 extra in 1,000, and an extremely low risk is 1 extra per 10,000. Breastfeeding decreases the risk of breast cancer, and certainly women who breastfeed are less likely to use hormonal birth control. Havrilesky, Moorman, Lowery, et al (2013) states that Over the past 20 years, researchers have been more interested in the progestin component of the hormonal contraception [4]. They thought that the risk for breast cancer was all about estrogen, but progestin also use in hormonal birth control seems to add a little risk as well. So, there's a possible biological reason for this very small increase in breast cancer in hormonal contraception users. In fact, women who have the breast cancer (BRCA) gene for breast and ovarian cancer have been suggested to take birth control pills because even if the risk of breast cancer is slightly greater, the risk of ovarian cancer, a cancer that's hard to detect and hard to treat, is so much less on birth control pills. Bernstein (2009), showed that taking the combined contraceptive pill (which contains oestrogen and progestogen) can increase your risk of breast cancer.

In a group of 10,000 women who don't use the combined pill, about 40 will probably develop breast cancer between the ages of 30 also a group of 10,000 women who do use the combined pill between the ages of 30s, about 54 will develop breast cancer between the ages of 30 and 39. So, using the combined pill during this time means about 14 extra cases of breast cancer are diagnosed in every 10,000 women. (Shah, Borenstein and Dubois 2005). Hunter, et al (2010) said that the equivalent to about 1 extra woman in every 1,000 taking the combined may develop breast cancer [5]. As the global burden of disease shifts from infectious diseases to non-communicable diseases (NCDs), cancer has increasingly become a major contributor to morbidity and mortality in low-income and middle-income countries (LMICs). Major reasons for these shifts include increasing life expectancy and changing diets and lifestyles. An estimated 14·1 million new cases and 8·2 million cancer deaths occurred worldwide in 2012, with more than 65% of cancer deaths occurring in LMICs. [6].

However, the same reproductive factors that protect against one form of cancer increase the risk of the other form. Women who have early and frequent pregnancies and who breastfeed their children have a lower risk of getting breast cancer. Therefore, the risks of using the combined pill in women with current breast cancer or a past history of breast cancer outweigh the benefits. However, there are no contraindications to women with a family history of breast cancer using the combined pill.

Methodology: Descriptive survey that ascertained the association of breast cancer with hormonal contraceptives intake among women aged 15-65 years in Abia State Nigeria was adopted. The study involved data collection and examination of the breast in a procedural format eg inspection and palpation to identify breast lump and any other sign of breast cancer. With the use of questionnaire, the researchers got the women who have used hormonal contraceptives for a long time and the type (s) frequently used. The two method inclined the researchers on the risk associated with breast cancer with the use of hormonal contraceptives.

The selected women were gotten from the six (6) Local Government out of the 17. With the application of simple random sampling both the LGAs and the participants were chosen. The research included girls who have started sexual intercourse and have used hormonal contraceptives and women that have used contraceptive for a long time.

Population of the Study: total number of women was about 1,415,082 population, National Bureau of statistics [7-10]. Projected 2,833,999 women in 2020.Out of this number, 1010 respondents were selected from the 17 LGAs in Abia State who leave in the rural and urban areas.

Sample Size and Technique: The simple random sampling was adopted which gave all the women of the age bracket equal

chance of being selected. Depending on the confidence level and the margin of error [11-14]. The researcher choosed a margin error of 2, 5% and a confidence level of 95% since our population is greater than one thousand (1,000,000), you need approximately 400 participants (it is advisable to round to the nearest hundred) for my sample [15-21].

Validity and Reliability of the Instrument: Breast cancers screen experts corrected the questionnaire, which includes doctors, nurses, midwives and analyst ascertained the accuracy of the instrument (questionnaire) The researcher constructed two questionnaires, using different items in each of the questionnaire but designed to measure the same concepts and administer them both to same group of respondents in the same sitting which yielded almost the same showing the reliability of the instructment [22-27].

Instrument for Data Collection and Data Analysis

Questionnaire were divided into A, B and C sections A was demographic data of the respondents [28-39]. Section B was design to collect data on the hormonal contraceptives,section C is the practical viewed the breast examination status[40-46].

All statistical analysis was done using the Statistical Package for Social Scientists (SPSS) version 23. Presented in frequencies and percentages and associations were analyzed using inferential statistics tools such as spearman rank correlation Pearson's product moment correlation (PPMC), creswell correlation coefficient scale and linear regression [47-52]. Results were presented in narrative format, tables and figures [53-60].

Results

Tables 1 and 2: Showed Correlation coefficient Between Breast Cancer and Hormonal Usage

In order to check the incidence of breast cancer, the Spearman's rank correlation is the non-parametric. Given that the test statistic returned a value of 0.079 [61-66].

Since the p-values from the test statistic are greater than 0.05, we fail to reject the null hypothesis and conclude that there is not a sufficient evidence to suggest that hormonal usage influences either breast [67-75].

Ho: There is no statistically significant difference between age of participants using hormonal contraceptives and breast cancer @=0.005

Table 3: showed Age as a Factor to Breast Cancer

In order to ascertain if age can be a significant influencing factor on breast cancer, a Kruskal Wallis H test was conducted. With a p-value 0.094, it can be concluded that there is not enough evidence to conclude that age influences breast cancer.There is no evidence of association between age and breast cancers [76-79].

Since the p-values from the test statistic are greater than 0.05, we fail to reject the null hypothesis and conclude that there is not a sufficient evidence to suggest that age influences either breast [80-83].

Table 4: Shows the Association and Hypothesis Between Intake of Hormonal Contraceptives and Breast Cancer

With the use of Kruskal Wallis H test as well as Mann-Whitney U test were employed. With a p-value of 0.038, there is enough evidence to infer that when one began to use hormonal contraceptives influences incidence of breast cancer [84-95].

Table 1: Showed Result of Correlation Coefficient of Breast Cancer with Hormonal Contraceptives

			What was the Result of The Breast Examination?
Spearman's rho	What was the Result of The Breast Examination?	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	252

Table 2: TEST of Hypothesis

H_o = There is no significant association between breast and hormonal contraceptive usage [96-99].

Decision Rule: Reject if test statistic returns a p-value less than 0.05. Otherwise, accept Ho Mann-Whitney U Test for Influence of Hormonal Contraceptive Usage

Case	Test Statistic value	P-value
Breast Cancer	2156.00	0.506

Table 3: Predictive factor Age (independent variable), and Breast Cancer (Dependent Variables) Using Kruskal Wallis H Test

Ranks	Age Range	N	Mean Rank
What was the Result of The Breast Examination?	(10-20) years	34	122.40
	(21-30) years	40	133.11
	(31-40) years	88	122.73
	(41-50) years	71	123.68
	(51-60) years	14	111.50
	Total	247	

Table 4: Shows the Association and Hypothesis Between Intake of Hormonal Contraceptives and Breast Cancer

Variable	Type of test	Statistic	P-value
Breast cancer and commencement of hormonal contraceptives	Pearson Chi-Square test for Independence	10.168	0.038

Disclosure

No conflicts of interest during the research study.

Declarations

The researchers took consent from the participants and health facilities used

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