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Nurse Navigator: Facilitating Management Among Clinically-Diagnosed Breast Cancer in VSMMC-Breast Center

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Objective: To determine the effectiveness of a nurse navigator in facilitating the management of patients diagnosed with breast cancer.
Methods: A retrospective study was conducted reviewing all patients seen at the Vicente Sotto Memorial Medical Center (VSMMC) Breast Center from November 20, 2009 to May 28, 2010. The management of patients utilizing a nurse navigator was compared with the management of those without a nurse navigator. With the expectation that patients clinically diagnosed with breast cancer should have the biopsy results within 2 weeks, operated on within another 2 weeks (if cancer is confirmed by the biopsy), or receive initial treatment within 1 month of initial consultation, duration of clinical courses were analyzed and compared statistically.
Results and Conclusions: Nineteen patients who were managed with a nurse navigator were compared with 21 patients without a navigator. The mean duration of the clinical courses (from clinical diagnosis to initial intervention) of both groups was not statistically different. However, there were less patients with delayed initial intervention in the group with a nurse navigator (P = 0.0284). Only 1 patient in each group had their initial intervention within 1 month from initial consultation. The most common cause for delays were financial problems at 39% of delayed cases.

Key words: nurse navigator

The current management of breast cancer is tedious and complicated. At VSMMC Breast Center, from March 21, 2001 to December 31, 2009, 65% of patients, clinically diagnosed with breast cancer, did not receive any intervention. To facilitate management, the institution of a nurse navigator was started on February 19, 2010. The critical role of the nurse navigator in the management starts in the monitoring and tracking of these patients through scheduling and conduct of diagnostic work-up and biopsy. Facilitation continues by making sure patients make it through their follow-up consultations and gathering results of laboratory work-up, until the initial intervention is started (surgery, chemotherapy, or radiotherapy).

To determine the effectiveness of a nurse navigator in improving the diagnostic and therapeutic compliance of patients diagnosed clinically with breast cancer at VSMMC Breast Center, a retrospective study was conducted.

Methods

A retrospective study was conducted to review all patients seen at the Vicente Sotto Memorial Medical Center (VSMMC) Breast Center from November 20, 2009 to May 28, 2010. The management of patients utilizing a nurse navigator (started February 19, 2010), was compared with the management of those without a nurse navigator. The Breast Center set the expectation that patients clinically diagnosed with breast cancer should have the biopsy results within 2 weeks from clinical suspicion on consultation. Ideally, these patients should be operated on within another 2 weeks (if cancer is confirmed by the biopsy), or receive initial treatment within 1 month of initial consultation, duration of clinical courses were analyzed and compared statistically.

Upon initial consult, each patient seen in the center is tracked by a nurse navigator. In this intervention group, a navigator would fill-up the tracking sheet containing the demographic profile, house sketch, contact numbers,

clinical factors, work-up and the intervention given. Any reasons for non-compliance or delays of any contemplated procedure or management are recorded in the data sheet. During the same 14 – week period, the data were compared to similar data collected from patients (control group), seen in the same center who were managed without a nurse navigator.

The data were analyzed using appropriate statistical tests.

Results

A total of 40 patients' records were reviewed and included in the study from November 20, 2009 to May 28, 2010. There were 21 patients in the control group (without a nurse navigator) and 19 in the intervention group (with a nurse navigator).

Ten patients, unfortunately, were lost to follow-up. Four of these were in the control group and 6 in the intervention group.

The mean duration from initial consultation to the availability of biopsy results, from biopsy to initial intervention, and overall clinical course (from initial consultation to initial intervention) were the same for both groups and were not statistically different. (Table 1)

The delays in each group were compared. The delays from initial consultation, where suspicion of breast cancer was made, to the time of the availability of the biopsy, and the delays from biopsy to initial intervention, were the same in both groups. However, there were more patients delayed in the overall clinical course (from initial consultation to initial intervention) in the control group (without nurse navigator) compared to the intervention group (P=0.0284). (Table 2)

Table 1. Mean duration of clinical course.

Clinical Course	Control Group (without navigator)		Intervention Group (with navigator)		P-value
	mean number of days	number of patients	mean number of days	number of patients	
Initial consultation to biopsy availability	16	14	13	16	0.2783
Biopsy to initial intervention	51	7	37	6	0.1142
Clinical course (Initial consultation to treatment)	64	7	47	6	0.0616

Table 2. Delayed clinical courses in the Control and Intervention groups.

Clinical Course	Control Group (without navigator)		Intervention Group (with navigator)		P-value
	mean number of days (range)	number of patients	mean number of days (range)	number of patients	
a. Initial consultation to biopsy availability					
not delayed	9 (5-14)	10	10 (5-14)	11	0.1660
delayed	33 (15-64)	4	20 (15-29)	5	0.2037
b. Biopsy to initial intervention					
not delayed	0	0	0	0	–
delayed	51 (10-89)	7	37 (10-59)	6	0.1142
c. Clinical course (Initial consultation to treatment)					
not delayed	28 (20-29)	1	23 (20-29)	1	0.5
delayed	70 (40-94)	6	52 (40-69)	5	0.0284

Among the factors identified as causing the delays and failures to comply, financial reasons were the most common at 39%, followed by unavailability of contact numbers at 28%. Other reasons were indecision on the part of the patient, transfer to another hospital, pregnancy and changes in addresses. (Table 3)

Table 3. Factors causing delays.

Factors	Number of Patients (%)
Financial	7 (39%)
No contact numbers/ incorrect numbers	5 (28%)
Undecided patient	3 (16.5%)
Transfer to other hospital	1 (5.5%)
Pregnancy	1 (5.5%)
Change of address	1(5.5%)
Total	18 (100%)

Discussion

All the patients included in the study were from Metro-Cebu. Only 1 from each group, whether with or without a nurse navigator, were operated on within 30 days. This is consistent with the findings of Pangato, et al. that participants living in Metro Cebu (41.1%) experienced delayed treatment compared to those living outside Metro Cebu (26.7%)[3]. The same is true with the findings of Gorin, et al. that participants living in metropolitan areas (population > 1 million) experienced the most delays compared with those smaller cities, towns, and rural areas.[4]

In a case series reported by Palmerie, et al. examining the time intervals between breast cancer screening, diagnosis, and treatment among low-income women in the NBCCEDP during two periods (1996-2000 and 2001-2005), reported the median interval from screening to diagnosis for the 2 periods was 25 and 23 days, respectively.[5] These findings were similar to a previous study, covering the years 1991-1995 reported a median interval from screening to diagnosis of 32 days, with 22% of women having an interval of more than 60 days.[6] Although the median interval from screening to diagnosis in the current study (37 days) was higher than that reported in the earlier studies, the trend for improved time duration of diagnosis emphasizes the crucial role of the patient navigator program.

Dohan and his group compared women in a patient navigator program with women not in the program and reported that more women in the patient navigator program had better follow-up care ($P<.0001$).[7] Similarly, a study conducted by Battaglia, et al. in 605 low-income women reported that patients using the program were 2 to 3 times more likely than those not using the program to experience follow-up within 60 days of an abnormal mammogram finding.[6]

In the study, financial problems (39%) are the leading reasons affecting patients' compliance and delays in consultation and treatment. Adewale and his cohorts report similar findings in Nigeria as well, presenting 45% of patients in their study giving financial problems as the cause for non-compliance to set schedules.[8]

Conclusion

The crucial role of the nurse navigator in monitoring and facilitating the complex and tedious management of breast cancer cannot be overemphasized. From the time of clinical suspicion, delays must be avoided in having the confirmation by biopsy, so that initial intervention can be started immediately. The nurse navigator will be useful in tracking these patients and augment current management. Other factors may, however, be beyond the role of the nurse navigator, such as financial problems, and these may adversely affect timing of treatment.

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