



ORIGINAL RESEARCH PAPER

Oncology

ADJUVANT THERAPY FOR HER-2 POSITIVE BREAST CANCER: EXPERIENCE IN THE "HOSPITAL ONCOLOGICO GENERAL SOLON ESPINOSA AYALA" SOLCA QUITO-ECUADOR

KEY WORDS: breast, cancer, adjuvant, HER2, trastuzumab, Quito, Ecuador

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ABSTRACT

Objectives: to describe the demographic variables in adjuvant therapy for HER-2 positive breast cancer, and to assess the response to trastuzumab comparing with chemotherapy alone.

Methods: A general descriptive analysis of women older than 18 years was carried out in whom therapy adjuvant was performed, assessing overall survival, survival estimation was performed by Kaplan Meier method and survival functions were compared using the Long Rank test.

Results: Adjuvant therapy was performed in 68 patients in stage I (21 / 30.9%) II (28 / 41.2%) and III (19 / 27.9%), with a overall survival of 61 months in patients treated with trastuzumab alone or TCH scheme, 58.2 months for patients treated with chemotherapy, and 68.2 months for patients treated with chemotherapy followed by trastuzumab $p = 0.16$, in terms of immunophenotype HER-2 positive vs HER-2 (positive)/ RH (hormonal receptor) was 68.9 months vs. 62.6 months $p = 0.21$

Conclusion: Although the main weakness of this study is that it is a retrospective trial, it should be noted that there were stage I patients treated only with trastuzumab and perhaps the benefit of the trastuzumab-taxane association was lost, however it should be noted that in any of the scenarios there is a benefit in associating adjuvant therapy with trastuzumab to using chemotherapy alone.

INTRODUCTION

The breast cancer in Ecuador has had an important increase in the last three decades; according to the national registry of tumors it occupies the first place of incidence and the third one in mortality (1,2)

Women with breast cancer HER-2 positive have a higher risk of progression and death, which is why strategies have been developed to block this signaling pathway allowing control of this biologically more aggressive variety, in Ecuador it has been possible to determine in previous studies an overexpression or amplification of HER-2 in a range of 11.58% -14.3%, with a greater presence in women under 60 years of age and of a Latin American racial group with little overexpression in indigenous or Afro-descendant women. (3,4)

Adjuvant therapy with trastuzumab has shown significant increase in overall survival and disease-free survival in relation to chemotherapy alone.

There are no previous studies in our country that demonstrate that the treatment with Trastuzumab of women with Her-2 positive breast cancer, improve overall survival and progression-free survival.

The objectives of this research are to describe the demographic variables, and to assess the response to trastuzumab as adjuvant therapy as well as overall survival.

METHODOLOGY

medical records of 1010 women in the "Hospital Gral. Solón Espinosa Ayala" were reviewed during 2010 and 2015 with the diagnosis of breast cancer, of which those women treated with adjuvant as last reference date December 2018 was selected.

The cases were identified through the National Registry of Tumors; of those women older than 18 years, and confirmed diagnosis of early breast cancer with HER-2 overexpression determined by immunohistochemistry or dual amplification by SISH when necessary.

A general descriptive analysis of the group of selected patients, overall survival, the survival estimate was performed using the Kaplan Meier method and the survival functions were compared using the Long Rank test.

The information obtained from the digital medical records was analyzed using the statistical package SPSS.

RESULTS

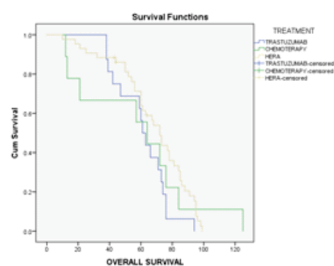
Adjuvant therapy was performed in 68 patients with stages I (21 / 30.9%), II (28 / 41.2%) and III (19 / 27.9%), of which 31 patients under 50 years old and 37 patients over 50 years old; 9 patients were treated with chemotherapy alone, 43 patients were treated with chemotherapy and then trastuzumab according to HERA trial, 16 patients were treated with adjuvant trastuzumab as initial treatment with scheme (TCH) while nine of these patients were treated with trastuzumab only, data described in Table 1

Variable		N	%
Age	< 50	31	45,6
	> 50	37	54,4
		68	100
laterality	Right	32	47,1
	Left	36	52,9
		68	100
Clinical Stage	I	21	30.9
	II	28	41.2
	III	19	27.9
	Total	68	100
Pathology	DUCTAL	66	97.1
	LOBULAR	1	1.5
	PAPILAR	1	1.5
	Total	68	100
histological grade	1	10	14.7
	2	47	69.1
	3	11	16.2
		68	100
Race	LATINOAMERICAN	55	80.9
	INDIGENOUS	11	16.2
	AFRO ECUADOR	2	2.9
	Total	68	100
Treatment	*TCH/H	16	23.5
	**QT	9	13.2
	QT+H	43	63.2
	Total	68	100
immunophenoty pe	HER2+	28	41.2
	HR***/HER2+	40	58.8
		68	100

* TCH (Docetaxel/Carboplatin/Trastuzumab) ** chemotherapy, ***HR (hormonal receptor)

Regarding survival, it was observed that in terms of survival, the patients who received adjuvant chemotherapy only had a survival of 58.2 months HR 12.4 IC 95% (33.7-82.7 months); for adjuvant trastuzumab (TCH or H) they present a survival of 61.03 months HR 4.12 IC 95% (52.9-69.14 months), for patients who received chemotherapy and subsequently Trastuzumab 68.2 months HR 3.58 IC 95% (59.4-70.9 months), although a difference in important months can be seen in relation to chemotherapy alone vs trastuzumab did not present a statistically significant difference. Data reported in Figure 1.

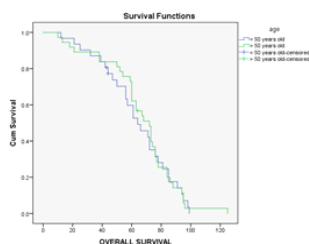
Figure 1.



Log Rank 3.66; p=0.160

With respect to age in terms of survival, a statistically significant difference is not represented, reporting for children under 50 years 63.7 months vs 66.3 months, as reported in Figure 2.

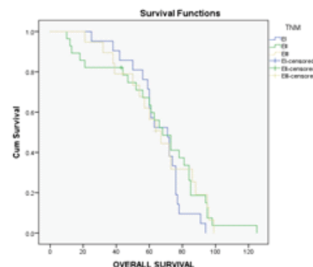
Figure 2



Log Rank: 0.095 p = 0.75

To conclude regarding survival in relation to clinical stage there is no statistically significant difference reported; I: 65.2 months II: 64.8 months, III: 65.7 months as reported in figure 3.

Figure 3



Log Rank: 1.6 p = 0.44

DISCUSSION

Since FDA approved trastuzumab in the adjuvant setting in 2006, several trials have studied the benefit of adding trastuzumab to chemotherapy in the neoadjuvant and adjuvant setting.

The first studies with Trastuzumab NSABP B-31 and NCCTG N9831 showed an increase in the disease-free period from 75.2% to 84%, whereas in the Breast Cancer International Research Group 006 trial (BCIRG-006) (5-10) Trastuzumab was evaluated in conjunction with docetaxel and carboplatin, drugs with which he had previously shown to have synergy, demonstrating in the same way increased effectiveness and with the HERA trial at one year showed equal figures, in our institution we can appreciate a time of disease-free survival of 5.6 years by adding trastuzumab vs 4.8 years by not using this antibody, so we have the first institutional data in which our results resemble those presented to the 4 large adjuvant studies with trastuzumab.

Regarding demographic analysis, the group of indigenous or Afro-descendant patients has a lower expression, data similar to those reported in previous studies in our institution. (3, 11)

In conclusion Trastuzumab is our institution shows clinical advantages and statistics so it should continue to be used in this group of patients, although there were 9 stage I patients treated only with trastuzumab and perhaps not associated with the benefit of a Taxan, However, let's take into account the benefit to adding this monoclonal antibody.

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