



GASTRIC CANCER IN INDIGENOUS AND LATINO AMERICAN PEOPLE OF THE ECUADORIAN ANDES

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ABSTRACT

OBJECTIVE: To determine a histopathological relationship between indigenous and Latino American people of the Ecuadorian Andes.

METHODS: A retrospective and descriptive analysis of patients diagnosed with gastric adenocarcinoma or gastroesophageal junction who received adjuvant chemo radiation therapy during the years 2011 to 2015.

RESULTS: 197 individuals were included in the analysis, 115 men (58.4%) and 82 women (41.6%); with ages between 18 and 89 years, distributed in clinical stages IB to IIIC.

With respect to the ethnic group, the indigenous people of the Ecuadorian Andes have a higher proportion of diffuse adenocarcinoma (40.6%), Latino American (34.5%) Latino American with a indigenous parent. (27.9%).

CONCLUSION: Diffuse adenocarcinoma of indigenous peoples in the Ecuadorian Andes would be related perhaps genetic component, possibly due to the fact that this group is related to people from the same community.

KEYWORDS : Gastric, cancer, indigenous, Latinoamerican, Ecuador

INTRODUCTION

In Ecuador, according to the National Tumor Registry 2014, gastric cancer ranks second in incidence in men and fourth in women. (1), it should be noted that for Montero et al, there is an important geographic variation in mortality rates due to gastric cancer among the Ecuadorian provinces, when performing a spatial analysis it indicates how the presence of groups of high occurrence of gastric cancer are reflected in the whole Cordillera of the Ecuadorian Andes, which perhaps it shows a greater relation of gastric cancer with respect to height. (2)

By the year 1965, Lauren performed a pathological determination of gastric cancer, dividing it into adenocarcinoma of the intestinal and diffuse type, which until now continues to be well accepted due to its ease, in which the diffuse type has a worse prognosis; it was observed that the type of diffuse adenocarcinoma was seen in younger people, while the intestinal type was preceded by chronic gastritis and metaplasia; It is true that at the present time a molecular classification is available in view of the fact that a surgical specimen can be seen in both intestinal and diffuse components, determining as chromosomal instability, somatic mutation, Epstein Bar infection and DNA methylation. (3-12)

The objective of this research is to provide a histopathological relationship in relation to the group of indigenous people of the Ecuadorian Andes in relation to the group of Latino American of this nation.

METHODS

Data from electronic medical records were collected from 01/27/2011 to 11/10/2015 of those patients with a confirmed diagnosis of gastric cancer, clinical stage IB to IIIC, older than 18 years.

Patients were stratified according to ethnicity as Latino American, indigenous, Latino American with a parent declared as indigenous, Latino American with a parent declared as Caucasian or Afro descendants, for identification the ethnic group was declared by identity card and history record, when in doubt, we contacted the patient by telephone. A descriptive analysis was carried out with the collected variables and a statistical analysis with the SPSS and EXCEL program, the statistical analysis was performed by χ^2

RESULTS

A sample of 197 individuals was obtained, of which 115 were men (58.4%) and 82 women (41.6%); with ages between 18 and 89 years, distributed in clinical stages IB to IIIC according to the AJCC seventh edition, likewise the histopathological

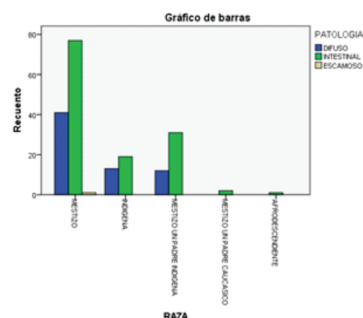
type was determined by the Lauren classification; the racial type was classified as shown in Table 1.

| Variable | | n | % |
|----------------------------|-----------------|-----|------|
| SEX | Man | 115 | 58,4 |
| | Woman | 82 | 41,6 |
| | TOTAL | 197 | 100 |
| Age | >60 years | 118 | 59,9 |
| | <60 years | 79 | 40,1 |
| | TOTAL | 197 | 100 |
| Stage | IB | 18 | 9,1 |
| | IIA | 32 | 16,2 |
| | IIB | 29 | 14,7 |
| | IIIA | 24 | 12,2 |
| | IIIB | 53 | 26,9 |
| | IIIC | 41 | 20,8 |
| | TOTAL | 197 | 100 |
| Ethnic group | Latino | 119 | 60,4 |
| | Indigenous | 32 | 16,2 |
| | Latino 1 | 43 | 21,8 |
| | Latino 2 | 2 | 1 |
| | Afrodescendents | 1 | 0,5 |
| | Total | 197 | 100 |
| PATHOLOGY | Diffuse | 66 | 33,5 |
| | intestinal | 130 | 66 |
| | Scamous | 1 | 0,5 |
| DIFFUSE ADENOCAR CINOMA | Latino | 41 | 62,1 |
| | Indigenous | 13 | 19,7 |
| | Latino 1 | 12 | 18,2 |
| | Latino 2 | 0 | 0 |
| | Afrodescendents | 0 | 0 |
| | Total | 66 | 100 |
| INTESTINAL ADENOCAR CINOMA | Latino | 77 | 59,2 |
| | Indigenous | 19 | 14,6 |
| | Latino 1 | 31 | 23,8 |
| | Latino 2 | 2 | 1,5 |
| | Afrodescendents | 1 | 0,8 |
| | Total | 130 | 100 |

Latino 1 = Latino America with indigenous parents

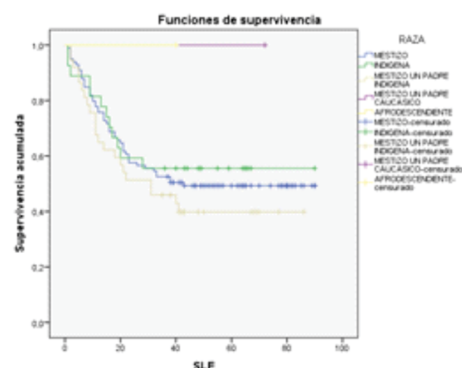
Latino 2 = Latino America with Caucasian parents

It was thus possible to determine that the indigenous ethnic group presents a 40.6% incidence of diffuse adenocarcinoma and 59.4% of intestinal adenocarcinoma having a difference of 18.8%, while the Latinoamerican group has a 34.5% incidence of diffuse adenocarcinoma and 64.7% of intestinal adenocarcinoma having a difference of 29.9%, so it is striking the fact of the presence of a high frequency of diffuse adenocarcinoma in the indigenous group; One of the causes of this relationship could be due to unions between indigenous people of the same community, which would denote genetic problems of this type, as well as their agricultural work and exposure to chemicals without proper care. These differences are represented in Table 1 and in Figure 1.



Raza= race, Indígena = Indigenous, Mestizo= Latino American, Padre = Parents

According to the racial group, there is no statistical difference in survival with a $p = 0.57$. However, it is striking the fact that the indigenous group lives longer than the Latinoamerican group and that Latinoamerican group of an indigenous ethnic parents. shows in Figure 2.



CONCLUSION

Regarding the ethnic group of patients from the Ecuadorian Andes, it should be taken into account that indigenous patients have a high probability of presenting diffuse adenocarcinoma in the histopathological diagnosis, but in the same way they have better survival times, we do not have data from other investigations in this field so these would be the first data regarding histopathological variety according to racial group

The main limitations of this study and its weaknesses mark the fact that it is a retrospective study, as well as lack of acceptance by a patient to determine their origin or ethnicity by race.

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