Letter to the Editor

The Absence of Death by Breast Cancer Among Indigenous Women Living in Mato Grosso, Brazil 2000: Protection or Under Notification

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Introduction

According to me World Health Organization, cancer is presently the second cause of disease death among humans. The disease is described in Egyptian papyrus dated from 1600 BC; it is present in reports of the Mesopotamia, Ancient Greece and the Roman Empire. Its incidence is increasing and is universalIy associated with me longevity of the population, with a special expression among women who have registered a gain in longer years of lífe than men. These data vindicate the primacy of the female breast cancer in the whole epidemiological studies of the disease incidence. When the presence of cancer is evaluated among a certain population, the first inquiry that comes to the researcher is the number of individuals exposed and their average age. For a direct reason, the incidence is high when the population in study possesses high life expectancy. Being cancer included in me group of defined diseases as chronic degenerative, current of organic degenerations for a long period of time and associated to the individual wear and tear and certain external factors. Also included in this group disease are me cardiovascular, diabetes, renal inadequacy, and lung emphysema, among others. In this group of diseases breast cancer is me one that possesses me most remote registry among the ancient population little numerous and with low expectancy life. In 1862, Edwin Smith, in Tebas, Egypt found references on the disease in a papyrus dated of 1600 BC. The mammary proceeding reports are abundant in medical records, in all times, as in the middle ages, renaissance, and present times.

Breast Cancer Epidemiology

According to the World Health Organization there were 1,050,346 new cases of breast cancer worldwide in the year 2000, with a brute rate of incidence of 34.94 new cases for each 100,000 inhabitants with 372,969 deaths and a mortality rate of 12.41 deaths per 100,000 inhabitants. In Brazil, the year 2000, according to the estimation of the Health Ministry, female breast cancer was the second largest neoplasia incident, after the skin cancer, with 28,340 new cases (33.58 new cases per 100,000 inhabitants). The mortality due to the disease caused 8,245 deaths, with rate of 9.78 deaths per 100,000 inhabitants.

Still in the year 2000, according to the Health Ministry, in Mato Grosso 160 new cases of female breast cancer occurred (13.50 new cases per 10,000 inhabitants) and 40 deaths with a rate of 3.77 deaths per 100,000 inhabitants (Table 1).

Table 1. Estimate of incidence, mortality and brute rates of female breast cancer in the world, Brazil and in the state of Mato Grosso, 2000.

Breast Cancer	New cases		Deaths	
	No. of cases	Brute rate	No. of deaths	Brute rate
World	1.050,346	34.94	362,969	12.41
Brazil	28,340	33.58	8,245	9.78
Mato Grosso	160	13.50	40	3.33

Source: World Health Organization, 2000 and Health Ministry of Brazil, 2000.

According to the report of the worldwide Health in 1998, from the World Health Organization, *it is* necessary an emphasis on women's health, which will later reflect on their children who will become the adults of tomorrow. Compared to the year 1955, there was an increment all over the world on the life expectancy of the human being, from 48 to 68 years mainly due to the decrease of the infecto-parasitical. This fact favors an increase of non-contagious diseases such as cardiopathics, cancer, diabetes, mental disorders among others, mainly *in* developed countries. Yet according to this report the cause of coronariopathics deaths in developed countries are in decline to the contrary of the deaths caused by cancer which maintain a growth in spite of the prevention programs and the progresses reached in new researches and treatments, only a third of the detected cases could be cured. Breast, prostate and colon cancer have being emerging *in* several countries where *it* was hardly known 20 or 30 years ago, breast cancer *is* the most common disease among women *in* all countries (WHO, 1998).

The brazilian Health Ministry report on the estimates of the country's cancer mortality *in* 2000, is based on the data from the information System on Mortality (SIM), created *in* 1995, with an effective registry *in* municipal districts where the presence of the Health Ministry for obtaining data is outstanding. The data on the incidence was obtained from the Base Populational on Cancer Registry (RCBP) present only in 5 of the 5,000 municipalities of the country. The method used to get to the published data was proposed by Black et all (1977), which allows to obtain the rate of cancer incidence in a certain area, starting from the mortality data and the RCBP of others similar. In spite of the similarity of the data published, with the actual data, *it is* far from the brute rate of new cases and deaths of breast cancer of the world and in Brazil , to the ones of Mato Grosso.

The state of Mato Grosso *is* located in the Midwest of Brazil, with a territorial extension of 903,386 km2, a population of 2,502,260, with regional social indicators in general above the national average, revealing a hope of life from birth to the age of 66.0 for men and 72.7 for the women; infant mortality of 26.1 per one thousand born alive (IBGE 2000). It is a mainly an agricultural state even though it possesses an urbanization rate of 79% and a herd of cattle of 14,438,135 (Agricultural Census, 1996), it is the largest national producer of soy and leader in this oleaginous production technology, it also produces 49% of the cotton in the country (CONAB, 2000). These given data enables the population of the State of Mato Grosso to the exposure of chronic degenerative diseases like other populations submitted to analyzes under this epidemiological aspect.

The Health of Indigenous Populations of Mato Grosso

Approximately 26,101 Indians of several ethic groups live in the State of Mato Grosso, which a great majority of the culture is still preserved, this represents a surprising population growth of 2.9% per year, above the national average of 1.4 % per year (Jornal Paulista, 2000) due to the improvement of the health conditions. In this aspect certain indigenous areas of the State are privileged possessing for some time an effective health assistance, with reliable records of the injuries occurred. Particularly the Xingu National Park, which *is* located in northeast of the State of Mato Grosso, where approximately 3,725 Indians of 14 ethnic groups live on 2.6 million hectares of land. In Xingu since 1965, the Preventive Medical Institute of the Paulista Medicine School at the Federal University of São Paulo, maintain a program of medical assistance for the Indians of the area (Jornal Paulista, 2000). During this period the program promoted a survey on the Indians Health conditions, registering the population individually on standard forms, assuring their vaccinations and medical assistance, which resulted in a downfall on the infant mortality from 109.1 deaths per l,000 born alive in 1971 to 31.5 deaths/l,000 in 1997. In general the mortality in this same period fell from 15.3 deaths to 4.10 deaths per 1,000 inhabitants (Jornal da Paulista, 1998).

Another area that deserves prominence in registering health injuries is the Indigenous Reserve of Sangradouro, located in me municipality of Primavera do Leste, 270Km east of the Capital, where exists since 1906, installed next to the Indigenous reserve, a Salesian Mission (Catholic Church), with a medical ambulatory structured for small services with a reliable registry of the epidemiological events. In this reserve, the predominant ethnic group are the Xavante, with approximately 1000 Indians, with a brute birth rate as high as 57.7% (Souza, 1999). However the access to this health unit is available to all the Xavantes from the state who are installed around Sangradouro, with a total population of 9,658 Indians, constituted in the most numerous and preserved ethnic group, with the less degree of miscegenation, according to the FUNAI (2001) records.

The improvement of the quality of life of these people is evaluated by the population growth, described in the data of 1969, according to Giacara e Heide (1972), when 2,160 Xavantes lived in the area, for the current data, without migratory movement occurrence. Leite (1998) describes that in this reserve when evaluating 546 individuals from 0 to 90 years of age 71. 7 percent of the adult population presented some overweight. In August of 1999, the Federal government transferred the responsibilities of the Indigenous health from the National Indian Foundation (FUNAI) the National Health Foundation (FUNASA) of the Health Ministry, creating in Mato Grosso four special Indigenous sanitary districts (DISEI). These units by the year 2001, should elaborate a complete gathering of the health situation of all the Indigenous people of the State with morbidity and mortality. The mortality data of 2000, is already concluded even though they have not been published yet they are available in each of the DISEI offices (Table 2).

Table 2. Indigenous mortality 2000 in Mato Grosso, distributed by the Special Indigenous Sanitary Districts (DISEI)

DISEI	Mortality by cancer	Mortality by breast cancer	Mortality by other diseases
Canarama	02	00	11
Colider	01	00	14
Cuiaba	03	00	45
Xavante	06	00	130

Data: DISEI-FUNASA/MS,2000

Female Breast Cancer in Indigenous Population of Mato Grosso

In my eighteen years of medical work in me field of oncology in the State of Mato Grosso, attending in public health ambulatories where the indigenous population is triad and receive special treatment, I observed me presence of all types of cancer in this ethnic group. Up to 5 years ago, existed only one unit of cancer treatment in the whole State with all the information centralized in a single hospital. The disease is evident in females, males of all the age groups of me population however I never observed breast cancer, motivating a data search for 7 years that justified the event. For the elaboration of this article we contacted all the DISEIS coordinators of Mato Grosso, a large number of doctors, nurses, anthropologists that participated in the health Indigenous movement for more than 20 years, and it was unanimous the information that the breast cancer observation doesn't exist among the resident Indians of me State. The Indigenous population presents a proportionality as for the gender similar to the non Indians, that is 50 % for each sex. The Indians of the State adopt the Iroques crossbreeding model, where each ethnic group determines the way if patrilineal or matrilineal (Maybury-Lewis, 1984), considering relatives not allowed to marry the paternal or maternal descendents of the family. This guides into a crossbreeding of a single sense with a consistent determination for the ethnic preservation. An interesting view observed in all the non mixed Indian races resident in the State, is the absolute presence of "O", Rh positive blood type.

Salzano (1961), in the II Sao Paulo Intellectual Meeting, which took place from the 21st to 27th of august of this year, on a discourse on the origin of the American man, compared tipagens of the Asian population (data from the Russians, Asians, Japanese, Chinese, Koreans), Melanesian, Indonesian and from the Oceanic with the Indians from the Amazon and the Brazilian Indians, founding, in the lately, 100% with type "O" and Rh factor positive. In the bibliographical research accomplished for this article was not found a discussion that would move forward this interesting observation because the presence of a single blood type in the whole population is universally unique. Vieira Filho (2000) in his action report he describes the savings of the insulin genotype defined by the geneticist James Neel, present in Brazilian Indigenous population, that it would be promoting an epidemic Diabetes Mellitus type 2 among the Xavantes, in particularly from Sangradouro. Other genetics consolidations must coexist with this data, that could orient researches on the beginning of the carcinogense, the base of its initiation or suppression.

Discussion

The absence of breast cancer registry in determined ethnical population is constituted by itself, a motive for inquiry, which initially extends to sub-notification and the low life expectancy of this group. This can be factors of the observation bias, even though they have been insistently debated in this preliminary article. The building of immediate logical associations is enough for rationality, but they are insufficient for the solid scientific explanation. In this grouping with more than 26,000 individuals, the degenerative pathologies such as Diabetes and arterial hypertension are observed for more than 30 years, besides several types of cancer. Maintaining registries on the improvement of the quality and years of life, without the breast cancer observation. It is an event that cannot be disregarded.

The protecting factors of the mammary carcinogens like the precocious gestation, multiparity and breast feeding are present among these women, associated to the risk factors absence, like the use of hormones, which can justify the non registry of the disease. Epidemiological studies can be developed with this data, free from the present impurity in others which are similar. The strong ethnic consolidation of this group which is characterized by the unique blood type and the presence of genes which favors Diabetes type 2, can suggest the presence of suppressive genes or non mutate to the development of breast cancer. It is necessary, hereafter, a more profound study on these peculiars aspects regarding the female Indians of the State of Mato Grosso. The intention of this article is to stimulate the scientific world to establish projects on more consistent studies to determine the factors that are promoting this occurrence, that is, sub-notification or protection for the disease.

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