Male Breast Cancer in Mexico: Experience of a reference breast cancer center in Northeastern Mexico.

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Abstract

Male breast cancer (MBC) is an infrequent diagnosis and often identified at advanced stages. This retrospective study aimed to describe the clinical experience of male patients treated at a reference center in Northeastern Mexico between 2015 and 2025.

A total of 11 patients were included. The median age of diagnosis was 56 years. Most patients presented with palpable masses, and all had pathologic report of ductal invasive carcinoma of no special type (NST). Hormone receptor positivity was universal with high estrogen receptor expression. BRCA2 mutations were frequent. Modifiable risk factors such as alcohol use and smoking were prevalent. These findings highlight the importance of early detection, standardized data collection, and genetic counseling for high-risk men.

Introduction

Male Breast Cancer (MBC) represents less than 1% of all breast cancer diagnoses worldwide. Because of its rarity, public awareness is limited, and diagnosis is often delayed until advanced stages, which negatively impacts outcomes. Epidemiological data on MBC in Latin America, particularly in Mexico, remains scarce. Understanding the clinical and pathological characteristics of male breast cancer in this population is crucial for improving diagnostic suspicion, guiding management, and informing prevention strategies. This study presents a ten-year institutional experience from a reference breast cancer center in Northeastern Mexico, describing the clinical features, risk factors, pathological profiles, and treatments received by male patients.

Methods and Materials

A retrospective study including all male patients diagnosed with MBC between 2015 and 2025 at a reference breast cancer center in Northeastern Mexico was performed. Data was obtained from electronic clinical records, and included demographic characteristics, clinical presentation (including TNM classification), histopathological findings, genetic testing results, treatment modalities, and risk factors **(table 1).** Data was compiled using a checklist developed after an extensive review of the literature. Descriptive statistics were used to summarize the information, and results were presented as frequencies and percentages

Table 1. Risk factor checklist

Risk Factor	Total	Percentage
Obesity	2	25%
Alcohol	6	75%
Smoking	5	63%
Advanced age	3	27%
Family history	3	38%
Pathogenic variants	4	36%
Exogenous hormone use	0	0%
Sedentarism	0	0%
Exposure radiation	0	0%
Gynecomastia	0	0%
Fractures >45 yo	0	0%
Cryptorchidie	0	0%
Klinefelter syndrome	0	0%

Results

Eleven patients were included; median age of diagnosis was 56 years. 80% of patients presented with a palpable breast mass, while 20% were diagnosed incidentally. Other presenting signs included erythema, peau d'orange, pain, lymphadenopathy, ulceration, and skin retraction. Reported risk factors are summarized in **Table 1.** All tumors were invasive ductal carcinoma of no special type and strongly estrogen receptor–positive (>90%), with variable progesterone receptor and HER2 expression. Tumor stage at diagnosis is summarized in **Chart 1.** Two patients presented with distant metastases. Genetic testing results are shown in **Table 2**. All patients underwent mastectomy; adjuvant treatment commonly included radiotherapy (n = 8) and tamoxifen (n = 9).

Chart 1. Tumor stage at diagnosis

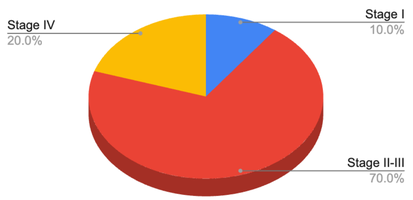


Table 2. Genetic findings

Gene	n	% of tested
BRCA1	1	17%
BRCA2	2	33%
PALB2	1	17%
Negative	2	33%

Discussion

The findings of this study are consistent with previous international reports, which describe invasive ductal carcinoma and hormone receptor positivity as the predominant feature of MBC. The high frequency of BRCA2 mutations observed underscores the importance of genetic counseling and testing for male patients, especially those with a family history of cancer. The prevalence of alcohol use and smoking as modifiable risk factors suggests potential targets for prevention. The advanced-stage disease, highlights persistent diagnostic delays and the need to increase awareness among both patients and healthcare professionals. Furthermore, inconsistent documentation of risk factors in clinical records limits data comparability and reflects the need for standardized data collection across institutions.

Conclusions

Male breast cancer remains an underrecognized and underreported disease that is frequently diagnosed at advanced stages. The consistent hormone receptor positivity and presence of hereditary cancer mutations emphasize the importance of incorporating genetic evaluation and targeted therapies into management strategies. Increasing awareness through public health campaigns, educating healthcare providers to include MBC in differential diagnoses, and encouraging early consultation among men with breast changes are essential steps to reduce diagnostic delays and improve outcomes. Finally, the development of national registries and standardized data collection tools will strengthen the understanding of MBC in Mexico and support evidence-based interventions.

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