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Management of Gynecomastia: Retrospective, Epidemiological, Clinical and Therapeutic Study about 16 Cases, Experience of the University Hospital Tangier-Tetouan -Al Hoceima

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Abstract **Original Research Article**

Gynecomastia is a benign glandular proliferation of the male breast, which can be unilateral or bilateral, acute or chronic. It can be a source of psychological discomfort, raise fears of breast cancer and sometimes be a sign of serious endocrine or systemic disease. In the case of symptomatic gynecomastia, medical treatment is likely to be ineffective and surgery is the ideal treatment. In general, surgery frequently consists of mastectomy preceded by liposuction. The aim of our study was to analysis the epidemiological, anthropometric and clinical aspects of gynecomastia in our structure. A comparative study of the different surgical techniques will also be included, in order to obtain the best possible result, especially in aesthetic aspects. This is a retrospective study of 16 patients treated for gynecomastia who underwent surgical treatment at the Department of Aesthetic Plastic Reconstructive and Burn Surgery, CHU Tanger-Tétouan-Al Hoceima between March 2021 and October 2023. The average age of our patients was 27 years. 56% had a history of pubertal gynecomastia, 12.5% had a history of drug use, 37.5% were overweight and 31.25% were obese. The reasons for consultation were aesthetic problems in the majority of cases (81%) and cancer phobia in 19%. 62.5% were classified as having predominantly glandular gynecomastia, with Simon's grade IIa (44%) being the most common. The hormonal check-up was normal in all our patients. Concerning surgical techniques, subcutaneous mastectomy preceded by liposuction was applied in the majority of patients 94%, and subcutaneous mastectomy alone was applied in only 1 patient. We didn't observe any post-operative complications in any of our patients, and most of them were satisfied with the aesthetic results. The combination of mastectomy and liposuction is indispensable, as almost all types of gynecomastia consist of glandular and fatty hypertrophy, so these two techniques have guaranteed fewer complications and more satisfied aesthetics results. Our gynecomastia correction technique has enabled us to minimize side effects and achieve a good aesthetic result.

Keywords: gynecomastia, mastectomy, liposuction, aesthetics.

INTRODUCTION

Gynecomastia is defined as a benign glandular proliferation in the male breast [1]. The condition may be unilateral or bilateral, acute or chronic [2]. It can be a source of psychologic or, less often, physical discomfort; can raise fears of breast cancer; and can occasionally be a sign of serious endocrine or systemic disease [3].

Physiologic gynecomastia has a trimodal age distribution, commonly occurring in neonates, pubertal boys, and elderly men [4]. In symptomatic gynecomastia, medical therapy will probably be ineffective, and surgery can be considered. Surgery could involve suction lipectomy or removal of glandular breast tissue through a peri-areolar incision [5].

The objective of our work is to study the sociodemographic, clinical aspects of gynecomastia in our structure. While conducting a preliminary comparative study different surgical technique in the light of the literature, in order to obtain the best result possible.

MATERIALS AND METHODS

This study was carried out retrospectively on 04 patients treated gynecomastia who underwent surgical treatment, in the department of Plastic, Reconstructive and Aesthetic Surgery, Center for Burned Patients, CHU Tangier-Tetouan-Al Hoceima between March 2023 and October 2023.

The study included patients referred to our department after a complete clinical and paraclinical assessment for aesthetic management of gynecomastia, we have excluded from this study, all patients presenting a syndromic condition, hormonal pathology or suspected neoplasia.

The data sheets were completed using patient files and operative reports, operative reports, which enabled us to determine: Epidemiological, clinical, paraclinical data, surgical techniques used, evolution and complications and final aesthetic results.

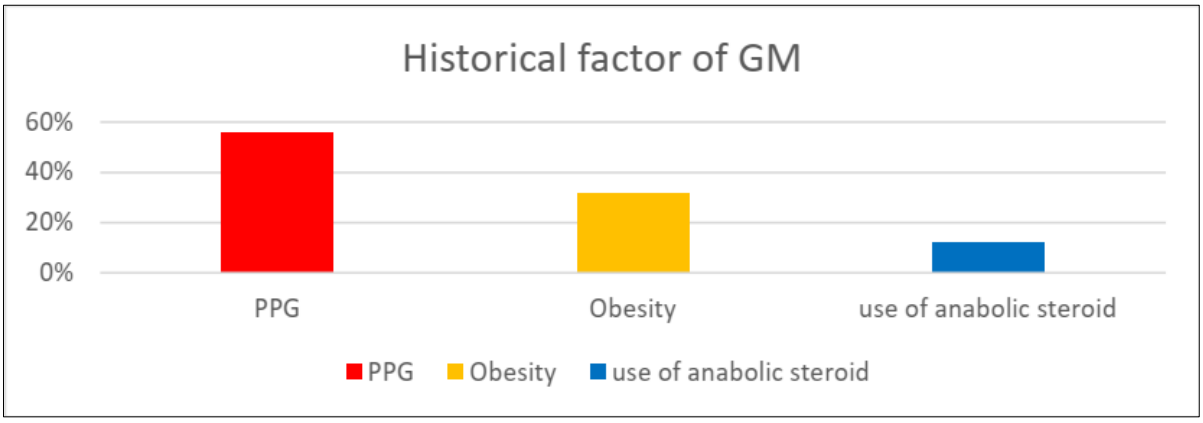
Our study ensures the anonymity of the participants and the confidentiality of the data collected.

RESULTS

We received 16 cases of gynecomastia during the year 2023.

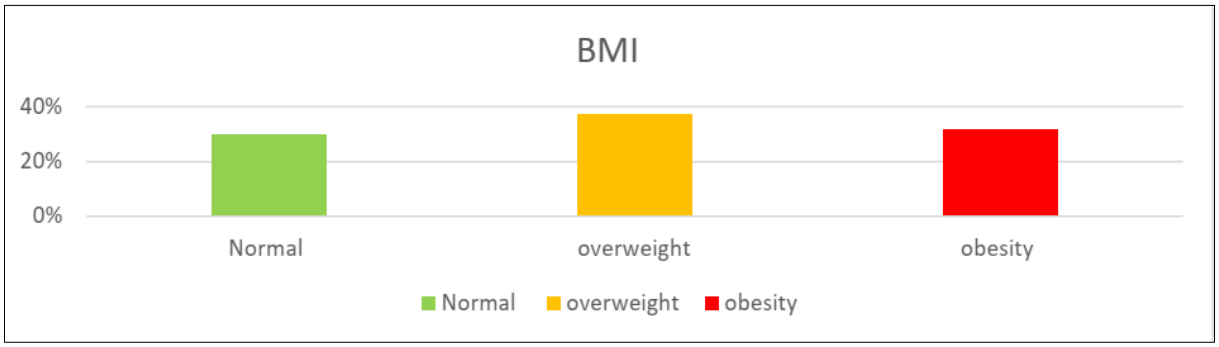
The average age of all patients was 27, with extremes ranging from 19 to 40 years.

Of the 16 cases received, 9 patients (56 %) had a persistent pubertal gynecomastia, 2 (12.5 %) was taking anabolic steroids, and 5 (31.5 %) were obese.



Graph 1: Distribution of historical factor of GM

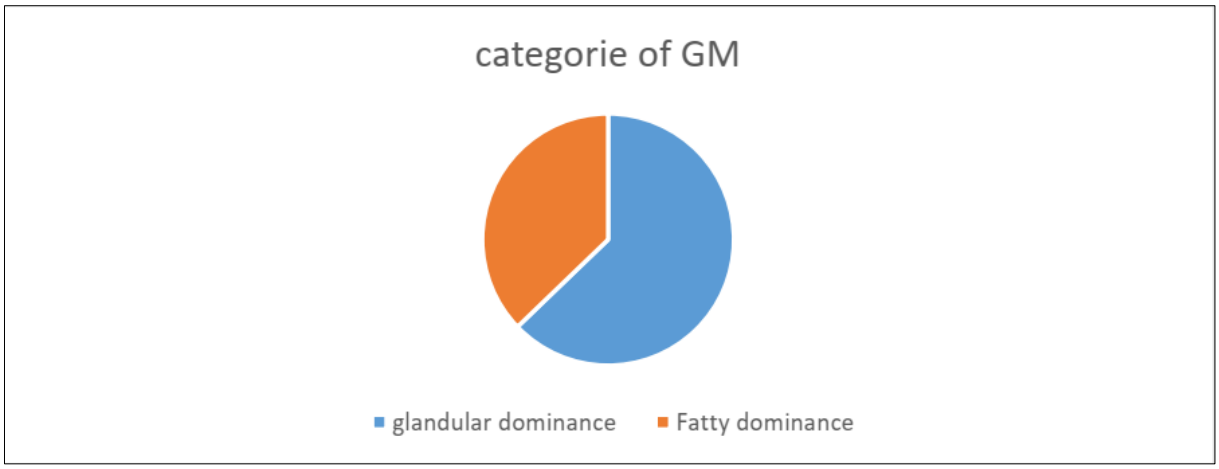
Obesity was observed in 31.25% of our patients, 37.5% overweight, and 31,25 % had a normal BMI.



Graph 2: Distribution by BMI

The most frequent reason for consultation in our series was aesthetic problems in 81% of cases, and a cancer fear in 19% of cases.

Gynecomastia was divided into 2 categories according to the predominance of constituents, the first category with predominantly glandular gynecomastia in patients or 62.5% and the second category with predominantly fatty gynecomastia in patients or the remaining 37.5%.



Graph 3: Distribution by category of predominance constituent

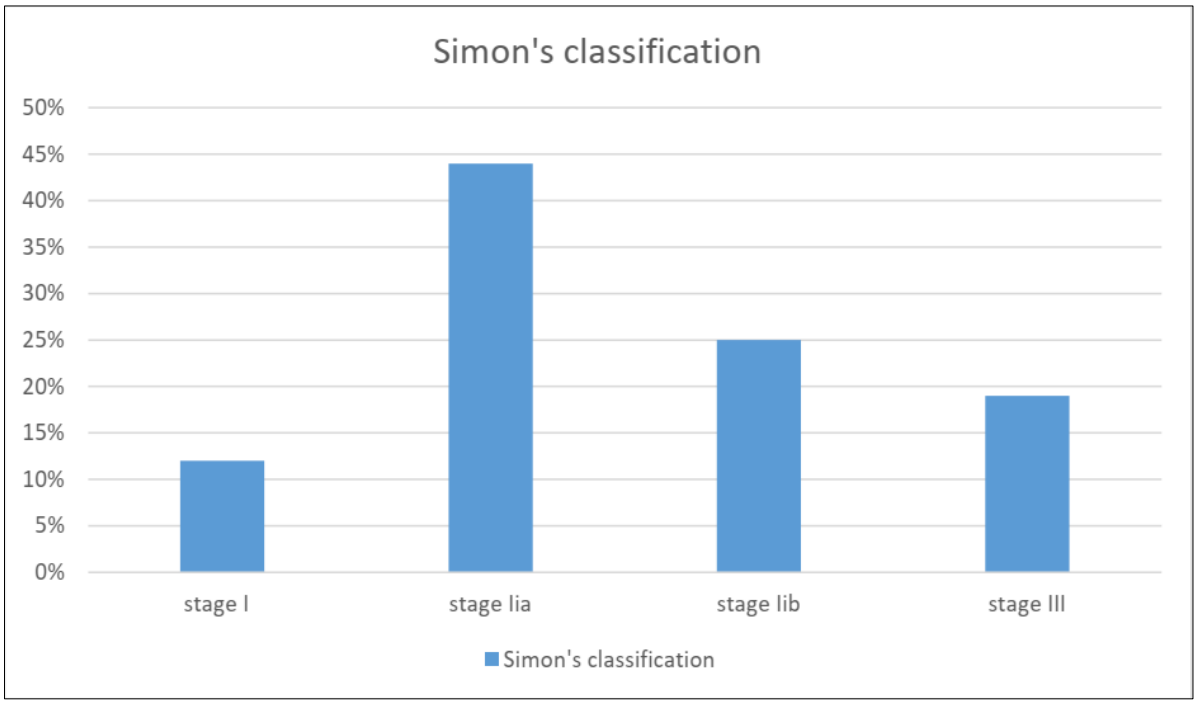
Minor sensitivity on palpation was observed in 1 patient reporting mammary pain.

No patient showed skin modifications, any suspicious-looking mass, nipple discharge, nipple retraction or adenopathy.

All patients had a complete somatic examination and were checked for other associated malformations. Somatic examinations of the testicles, neurological and other systems were normal, and no patient had an associated malformation

None of the patients showed signs of liver disease, thyroid dysfunction, adrenal disease, alcoholism, renal insufficiency or any other major medical problem.

In our series, the evolutionary grade of gynecomastia was classified according to Simon's classification. Stage IIa was the most prevalent in our patients, representing 44%, followed by stage IIb with 25%, Stage III was present in 19% of all patients



Graph 4: Distribution by Simon's classification

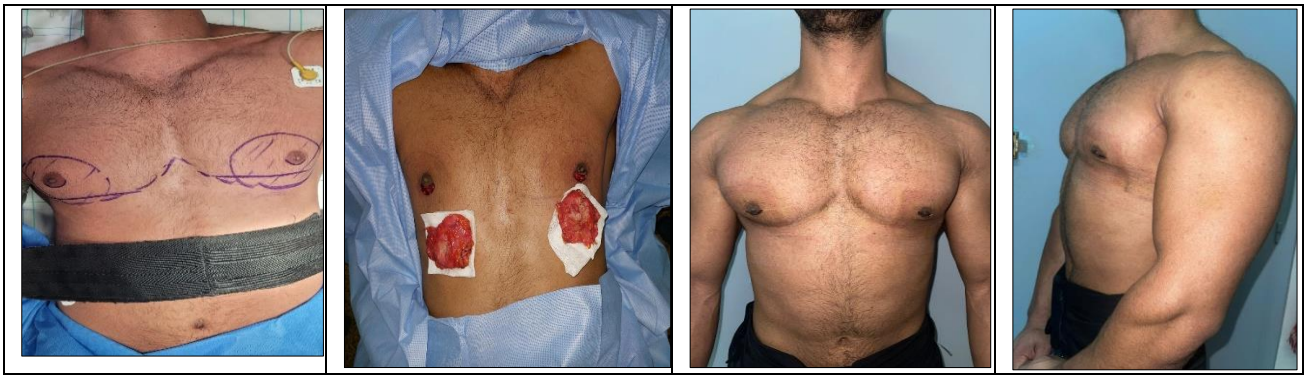


Figure 1: Preoperative photographs of gynecomastia, per-op and postoperative results after subcutaneous mastectomy (stage2a)

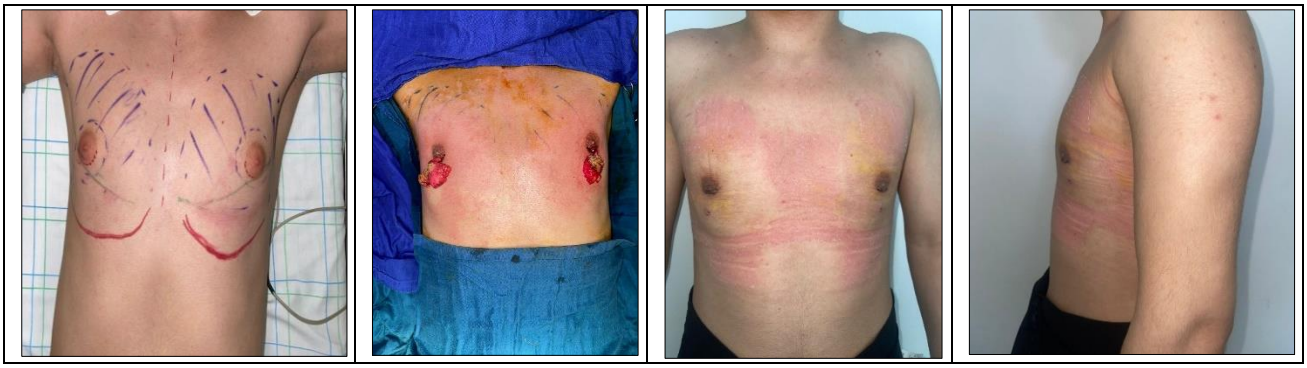


Figure 2: Preoperative photographs of GM, per-op and postoperative results after subcutaneous mastectomy and liposuction (stage1)

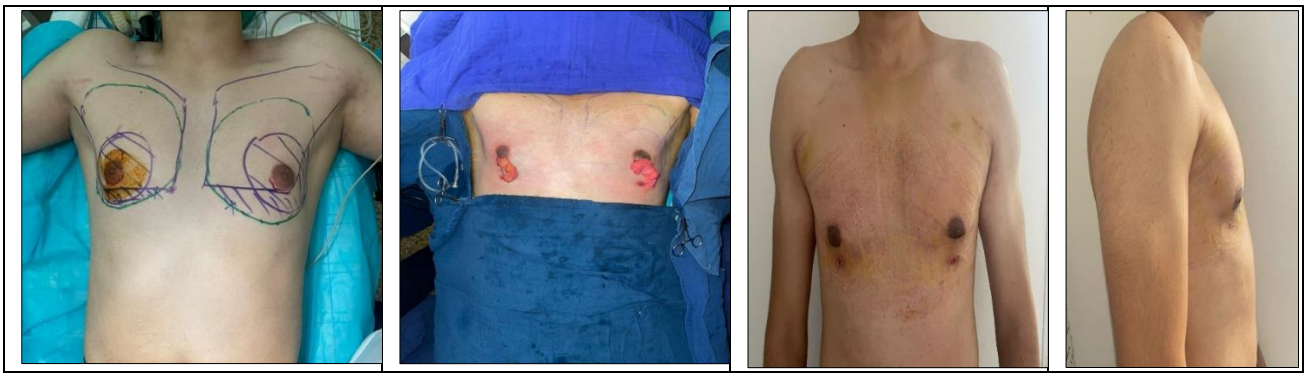


Figure 3: Preoperative photographs of GM, per-op and postoperative results after subcutaneous mastectomy and liposuction (stage 2a)

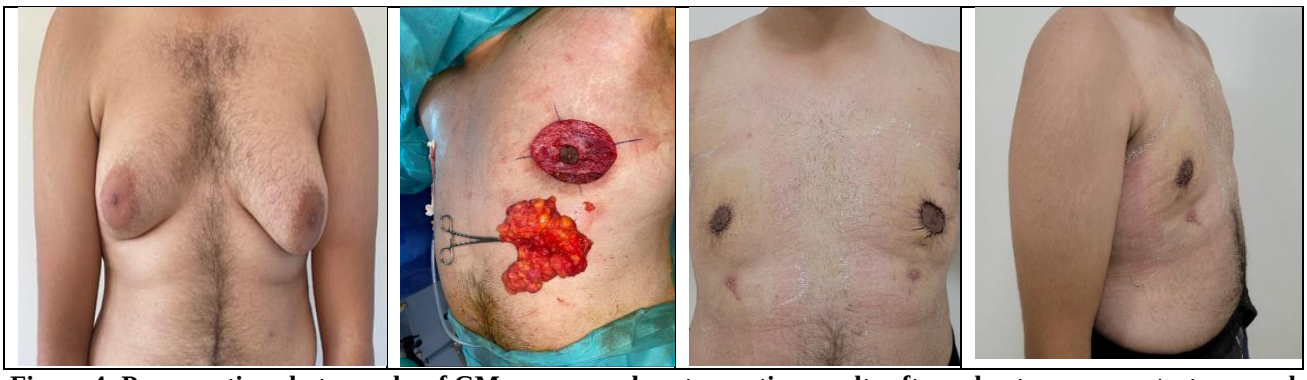


Figure 4: Preoperative photographs of GM, per-op and postoperative results after subcutaneous mastectomy and liposuction for a patient with stage 3 GM

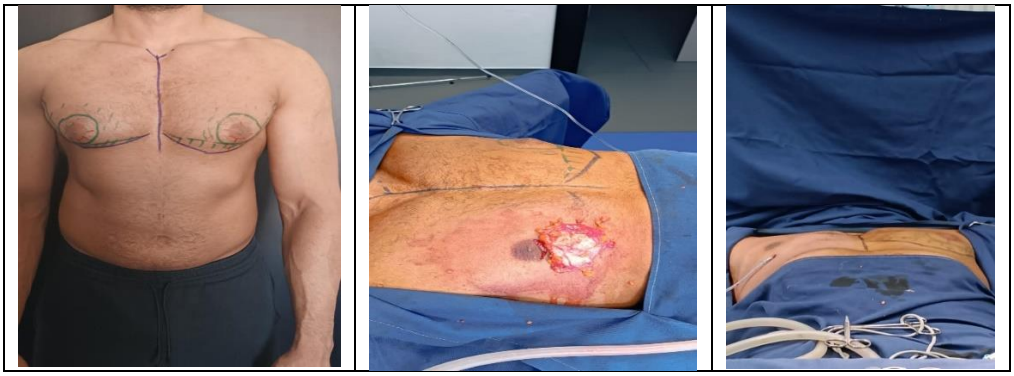


Figure 5: Preoperative photographs of GM, per-op and postoperative results after subcutaneous mastectomy and liposuction for a patient with stage 2a GM.

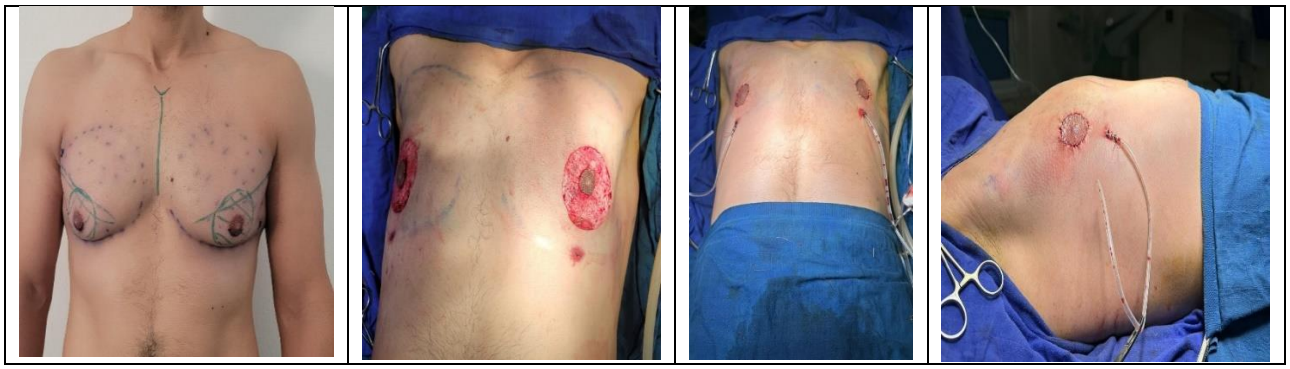


Figure 6: Preoperative photographs of gynecomastia, per-op and postoperative results after subcutaneous mastectomy (stage2a)

A standard biological check-up was established in all patients, the results were normal in all patients.

No patient was under medical treatment. A pre-anesthetic consultation is essential to define each patient's category and to anticipate any pre-operative problems.

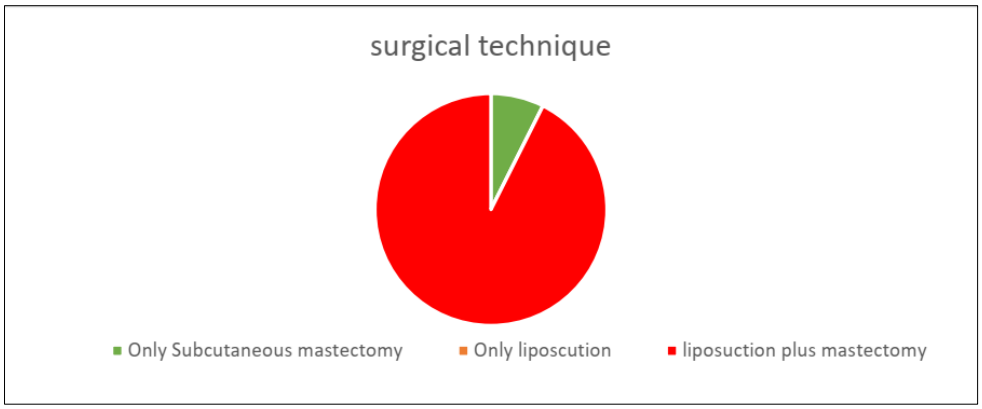
This obligatory and medicolegal check-up is always carried out, after the patient's agreement and informed consent in the preoperative consultation, in all our patients without exception (100%), before sending the patient to the operating room, either on the same day or the day before, and is performed in the standing, sitting and lying positions, from the front and profile and from three-quarters up.

All our patients were operated with general anesthesia and orotracheal intubation.

Surgical Technique

The technique of choice for our team at the present was mastectomy subcutaneous after liposuction.

94 % of our patients. After liposuction, a mastectomy was made by an inferior hemi-peri areolar incision, which allows us to perform a sort of enucleation of the mammary gland. Subcutaneous mastectomy has been the method of choice for 6 % of patients.



Graph 5: Distribution by surgical technique

All our patients received one week of antibiotic prophylaxis combined with analgesic treatment, and followed a customized contention protocol for at least four weeks, all resected pieces were sent for anatomopathological examination and were benign

In the series of operated patients, no one developed a post-op complication. The result was judged to be satisfying for all our patients, who were delighted with the resultant reconstruction of their breast contours, and were psychologically reassured.

DISCUSSION

In our series, the average age was 27, with extremes of 19 and 40 years,

In the Canadian study, Petty [6], observed an average age of 31 in a series of 227 patients. In Argentina, Costanzo *et al*., [7], observed an average age of 32 in a series of 237 patients. In Ireland, Yazici [8], found an average age of 24 in a retrospective study of 135 patients.

In our study, pubertal gynecomastia represented 56 % of patients' medical history, in Costanzo's [7], study in 2018, involving 237 cases, pubertal gynecomastia was present in the patient history in a 25% of cases. Similarly, in another study by petty [6], about 34% of patients presented pubertal gynecomastia.

In our study, 12.5 % of patients had a history of anabolic steroid use; in the Canadian study [6], 7% of patients were taking steroids; Costanzo [7], noted a frequency of 14%; in Ireland [8], steroid use in gynecomastia patients was found in 10% of patients.

Epidemiological studies [6-8], have clearly shown that the prevalence of gynecomastia is related to body weight, particularly the fat compartment, which is in line with the results of our study where gynecomastia was correlated with overweight.

In our series, the majority of patients consulted for aesthetic reasons. According to the literature [6-8], the functional signs that led the patient to consult might be aesthetic problems, mastodynia or a phobia of cancer.

The majority of subjects in our study had grade II GM according to Simon's classification, which is consistent with the results of several studies. In Arvind's [9], study, grade II was present in 75% of patients, and in Handschin's [10], study, grade II was present in 73% of patients. The frequency of grade II cases may be explained by the negative impact on psychosocial well-being, which begins to be significant at this stage.

In a significant number of patients, diagnostic tests are normal, which leads to a diagnosis of idiopathic gynecomastia. For Costanzo [7], 45% of gynecomastia was idiopathic, 13% due to the intake of anabolic steroid, 11% to hypogonadism, 8% due to pharmaceutical drug, 6% to hyperprolactinemia and 2% to hyperthyroidism. Petty's [6], study, the causes included idiopathic (47 percent), physiologic (34 percent), hypogonadism (10 percent), drug induced (7 percent), and liver failure (2 percent)

In our series, 94% of our patients submitted a liposuction plus mastectomy, and 6% endured a subcutaneous mastectomy only. In Fisher's [11], study, subcutaneous mastectomy was performed in 30% of patients, and the combined subcutaneous mastectomy and liposuction in 70%. Cigna's [12], study, open excision was performed in 17% of patients only, liposuction in 19%, liposuction plus open excision in 21% and liposuction plus arthroscopic shaving in 28%. In Chun-Chang Li's [13], study, mastectomy alone was performed on 27% of patients, liposuction alone on 11%, and mastectomy plus liposuction on 61%.

According to Fisher [11], 13.5% of patients developed long-term complications: 5% recurrence of gynecomastia, 5% nipple retraction and 3% hypertrophic scar formation. Long-term complications were more frequent in the combined mastectomy and liposuction group.

For Cigna [12], the most serious complication in patients undergoing excision and liposuction was seroma, with a frequency of 10%, followed by hematoma, with a frequency of 3%. In patients who underwent liposuction alone, hematoma and seroma were present in 2%, 2% successively, while in patients who underwent excision alone, hematoma was completely absent.

The Taiwanese study [13], the total complication rate was 12.1%. Complications were hematomas and seromas. Most complications occurred in patients with preoperative stage IIb and III gynecomastia.

CONCLUSION

Gynecomastia a benign proliferation, it is a common pathology who lead to aesthetic and psychological difficulties. Gynecomastia is physiologic at certain ages of life, but may be secondary to medications or diseases.

Surgical techniques for the correction of gynecomastia have evolved considerably. The surgical treatment of gynecomastia requires an individual approach, depending on the grade of male breast hypertrophy and the components of breast tissue.

The combination of mastectomy and liposuction is inevitable, as almost all types of gynecomastia consist of glandular hypertrophy and fatty, these two techniques have guaranteed less complications and a satisfaction of patients. Our technique for the

correction of gynecomastia allowed us to minimize side effects and a good aesthetic result.

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