

Results of My Reduction Mammoplasties in African Women in Kinshasa, Democratic Republic of Congo, from 2010 to 2025

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Abstract

In sub-Saharan Africa, there are very few publications on reduction mammoplasties. With this significant 15-year perspective, it seemed important to me to present the results of my reduction mammoplasties in African women, as well as the challenges faced in a country with limited resources. Over a 15-year period, from 2010 to 2025, I performed 92 bilateral reduction mammoplasties on 46 African patients in Kinshasa, Democratic Republic of Congo. The average age of the patients was 34.2 years, ranging from 17 to 60 years. The most common breastfeeding rate was 4, found in 11 patients (23.9%), and these 11 patients were aged between 30 and 49 years. The 92 mammoplasties performed were all reduction mammoplasties using a dermoglandular flap with a supeio-internal pedicle. In my series, the main complications were partial necrosis of the nipple-areola plate (2%), hematomas (6.2%), infectious complications (6.4%), scar dehiscence (6.8%), and hypertrophic and/or keloid scars (10.2%). The results were considered excellent (91.3%) from an aesthetic point of view. And, all my patients were satisfied with the results of their reduction mammoplasties, with a follow-up ranging from 12 months to 14 years. Despite my excellent results obtained with patient satisfaction, the two major challenges to overcome, in this country with limited resources and a high incidence of keloids, are patient poverty and the unpredictable occurrence of pathological scars (hypertrophic, keloid).

Keywords

Reduction Mammoplasties, African Women, Results, Democratic Republic

of Congo

1. Introduction

Reduction mammoplasty, more commonly known as reduction mammoplasty, is one of the most commonly performed aesthetic plastic surgery procedures worldwide [1]. This surgical procedure aims to reduce breast volume, and correct ptosis, and any asymmetry [1] [2]. It aims to achieve two breasts that are harmonious in themselves and in relation to the patient's morphology [2]. After this surgical procedure, both breasts are reduced, lifted, made symmetrical, and reshaped [3] [4].

Breast reduction surgery is very old. Pioneers, J. F. Dieffenbach [5] in 1848 in Germany, and Pousson [6] in 1897 in France, performed an inframammary incision allowing the removal of the lower two-thirds of the breast. Significant improvements appeared at the beginning of the 20th century [7]. Currently, several techniques exist for performing reduction mammoplasty. Techniques involving the superior pedicle have been published, such as the Weiner, Pitanguy, Saint Louis, and Lejour techniques [2] [8]-[10].

In sub-Saharan Africa, there are very few publications relating to reduction mammoplasty [1] [11] [12]. The preliminary results of my reduction mammoplasties in the Democratic Republic of Congo were published in 2012 [13].

With this significant 15-year perspective, from 2010 to 2025, it seemed important to me to present the results of my reduction mammoplasties in African women as well as the challenges to overcome in a country with limited resources.

2. Patients and Methods

2.1. Study Type

This is a retrospective study of reduction mammoplasties in African patients I operated on, from 2010 to 2025, in public and private hospitals (Cinquanteenaire Hospital, Kinshasa Medical Center, Kinshasa University Clinics, Bolingani Hospital Center) in Kinshasa, Democratic Republic of Congo.

2.2. Study Parameters

The aspects studied were: epidemiological (age, number of breastfeedings); clinical (complaints); therapeutic (type of procedure, resection weight, postoperative complications, aesthetic results, patient satisfaction).

2.3. Breast Reduction Technique Used

I performed a reduction mammoplasty using a dermoglandular flap with a superior-internal pedicle, allowing for better management of areolar vascularization. These techniques are illustrated in **Figure 1** (1A, 1B, 1C, 1D, 1E, 1F) and **Figure 2** (2A, 2B, 2C, 2D, 2E, 2F, 2G, 2K) for significant breast ptosis. I created the drawing

according to the Wise template. After making a skin incision according to the preoperative drawing and removing epidermal layers from the areola flap, the gland was detached from the pectoralis major in its central portion, approximately one hand width apart. The gland was then cut in a “boat keel” fashion, with its base located at the inframammary fold and its apex below the future areolar site. The remaining gland located at this location was attached to the pectoralis major with absorbable suture to bulge the upper pole of the breast. The glandular pillars were then sutured with absorbable suture. The areolar pedicle had to be thin enough to be easily folded and thus allow its ascension without creating venous compression. Skin closure was then performed using an inverted T-shape after low horizontal skin excision.

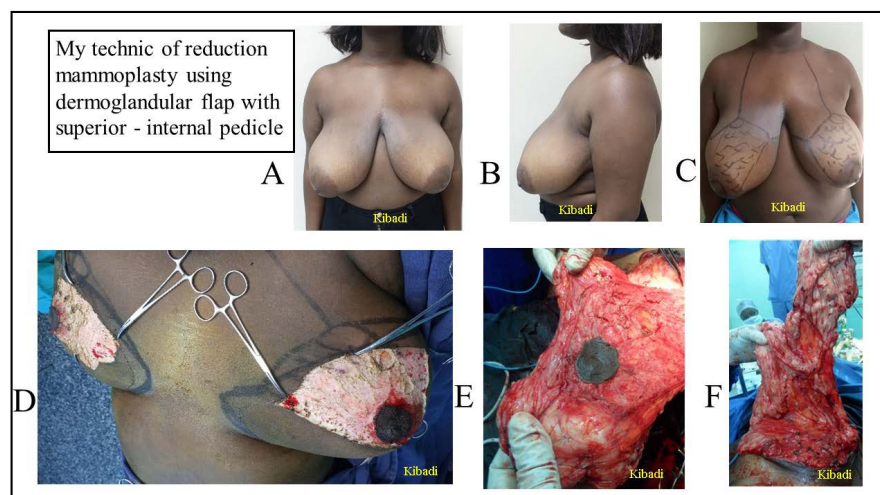


Figure 1. My technics of reduction mammoplasty using dermoglandular flap with superior - internal pedicle.

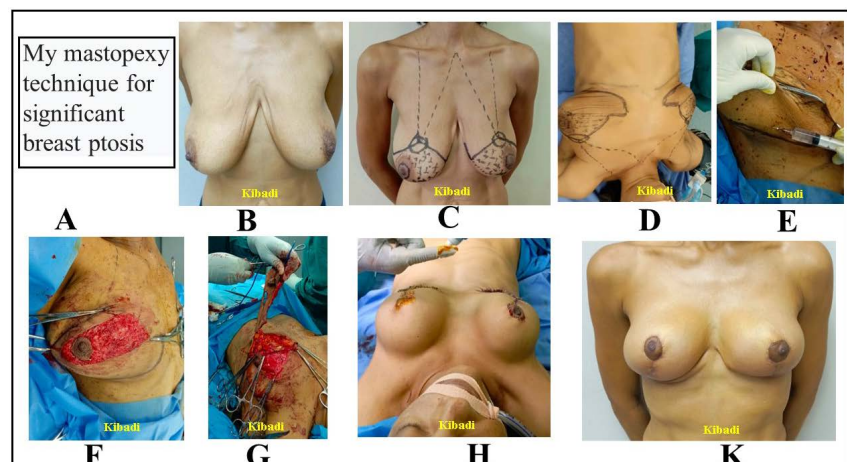


Figure 2. My mammoplasty technique for significant bilateral breast ptosis in a 46-year-old patient.

The surgical site was drained using a Delbet blade or a Redon drain, delivered

externally at the level of the horizontal incision. Removal of the Redon drain was indicated when drainage decreased significantly, particularly when the amount of fluid drained was zero per day for two consecutive days. A compression bandage was applied immediately after surgery and maintained for two weeks. It was then replaced by wearing a medical support bra for two months. Scar care was performed for at least six months.

2.4. Clinical Evaluation

In my series, a normal breast should have a volume between 200 and 350 cubic centimeters. When it was over 400 cubic centimeters, it was considered breast hypertrophy; it was considered moderate when the breast was 400 to 600 centimeters.

Cubic centimeters; fairly large from 600 to 800 cubic centimeters; large from 800 to 1000 cubic centimeters; and very large beyond 1000 cubic centimeters.

Regarding breast ptosis, the breast was considered normal if the areola and nipple were above the inframammary fold. Stage 1 breast ptosis (mild ptosis) was defined as the nipple drooping and approaching the top of the inframammary fold but remaining above it, and the lower part of the breast drooped below the fold; stage 2 breast ptosis (moderate ptosis) was defined as the areola passing below the inframammary fold and the rest of the breast drooped even lower than the nipple; and stage 3 breast ptosis (significant ptosis) was defined as the nipple was located at the lowest part of the breast and the areola was therefore “looking” downward.

2.5. Outcome Evaluation

Outcome evaluation was conducted at two levels (patient and surgeon) 12 months after surgery. The outcome evaluation elements were:

- Presence or absence of skin necrosis in the postoperative period
- Presence or absence of adhesion
- Scar quality (visible or invisible, thin or hypertrophic, keloid)
- Very marked breast symmetry or asymmetry (in shape or volume)
- Good or poor placement of areolas and nipples
- Good or poor placement of scars
- Areolas that were too large for the new breast size.

The results were rated as excellent (no comments), very good, good, or poor.

2.6. Patient Satisfaction

Patients were asked to rate the results of their mammoplasty in terms of: results: “very satisfactory” (“what I wanted and the surgeon did even more”); “satisfactory” (“the surgeon did what I wanted”); “not satisfied” (“I didn’t expect this result”).

2.6. Ethical Aspects

Data entry and analysis were performed using Word software. Informed consent was obtained from all patients before their inclusion in the study. For minors, parental consent was requested. Respect for human life was maintained through

confidentiality of the results. Anonymity was maintained, and the information collected was not used for any other purpose.

3. Results

Over a 15-year period, from 2010 to 2025, I performed 92 reduction mammoplasties (bilateral) on 46 African patients in Kinshasa, Democratic Republic of Congo.

3.1. General Characteristics of the Study Population

The general characteristics of my study population are summarized in **Table 1**.

The mean age of the patients was 34.2 years, with a range from 17 to 60 years. Among the 46 patients who underwent surgery, 3 patients were under 18 years of age (6.9%), 9 patients were between 18 and 29 years of age (19.95%), 29 patients were between 30 and 49 years of age (63%), and 5 patients were between 50 years of age and over (10.2%).

Regarding the patients' breastfeeding history, the most frequently observed number of breastfeeding sessions was 4, found in 11 patients (23.9%), and these 11 patients were all between 30 and 49 years of age.

Table 1. General characteristics of patients.

Age group (n = 46 patients)	Stage of breast ptosis	Number of breastfeedings (number of births)	Body mass index (normal, overweight, obese)
Patients aged < 18 years: 3 out of 46 patients (6%)	-Stage 3 ptosis: 3 out of 3 patients (100%)	Breastfeeding: none	-Obesity: 3 out of 3 patients (100%)
Patients aged 18 to 29 years: 9 out of 46 patients (19.5%)	Patients aged 18 to 29 years: 9 out of 46 patients (19.5%)	-One breastfeeding: 5 out of 9 (55.5%) -Two breastfeedings: 3 out of 9 patients (33.3%) -Three breastfeedings: 1 out of 9 patients (11.1%)	-Obesity: 9 out of 9 patients (100%)
Patients aged 30 to 49 years: 29 out of 46 patients (63%)	-Stage 2 ptosis: 2 patient out of 29 (6.8%) -Stage 3 ptosis: 27 out of 29 patients (93.1%)	-One breastfeeding: 2 out of 29 patients (6.8%) -Two breastfeedings: 4 out of 29 patients (14.7%) -Three breastfeedings: 9 out of 29 patients (31%) -Four breastfeedings: 11 out of 29 patients (37.9%)	-Normal: 9 out of 29 patients (31%) -Overweight: 12 out of 29 patients (41%) -Obesity: 8 out of 29 patients (27.5%)
Patients aged ≥ 50 years: 5 out of 46 patients (10.8%)	-Stage 3 ptosis: 5 patients (100%)	-Two breastfeedings: 1 in 5 patients (20%) -Three breastfeedings: 2 in 5 patients (40%) -Five breastfeedings: 2 in 5 patients (40%)	-Normal: 1 in 5 patients (20%) -Overweight: 3 in 5 patients (60%) -Obesity: 1 in 5 patients (20%)

3.2. Clinical Aspects

All my patients experienced aesthetic and psycho-emotional discomfort. Twenty-

one patients (45.6% of cases) complained of back pain. These patients were obese and suffered from mastodynia. All women who underwent reduction mammoplasty, those under 18 years of age and those at least 50 years of age, all had stage 3 breast ptosis. Breast asymmetry was observed in eleven patients (23.9 of my patients), and this asymmetry favored the left breast in 72.4% of cases.

Patients with gigantomastia are presented in **Figure 3**.

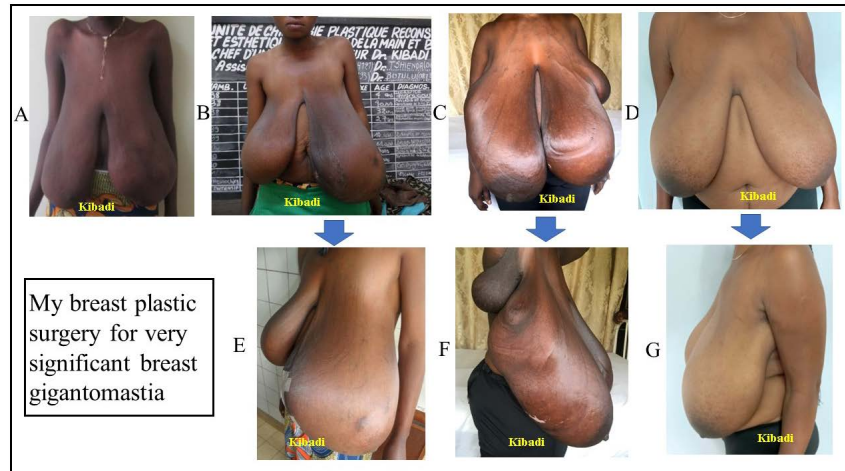


Figure 3. Patients with gigantomastia. A) Large gigantomastia in a 17-year-old patient, frontal view; B) Bilateral gigantomastia, more prominent on the left, in a 34-year-old woman, lateral view; C) Large gigantomastia in a 65-year-old patient, frontal view; D) Large gigantomastia in a 28-year-old patient, frontal view; E) Bilateral gigantomastia, more prominent on the left, in a 34-year-old woman, lateral view (same patient); F) Large gigantomastia in a 65-year-old patient, lateral view, with a large supernumerary right breast, lateral view (same patient); G) Large gigantomastia in a 28-year-old patient, lateral view (same patient).

3.3. Therapeutic Aspects

The ninety-two mammoplasties performed were all reduction mammoplasties with a superomedial pedicle to better manage areolar vascularization.

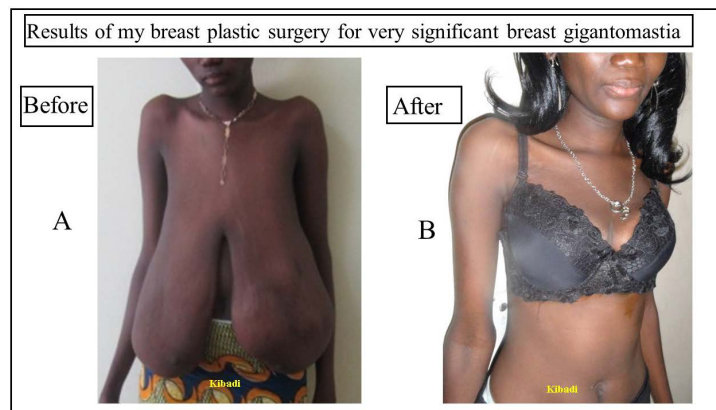


Figure 4. Results of a mammoplasty for very large gigantomastia in a 17-year-old patient. (A) Patient before surgery; (B) Patient after surgery.

The average excision weight per breast was 1.152 kg, with a range from 200 g to 5.8 kg. For cases of bilateral breast hypertrophy, the average difference in excision weight between the two breasts was 150.4 g. The anatomopathological study of 48 breasts (52.1%) revealed fibroadipose hyperplasia in all surgical specimens submitted to the laboratory.

The results of my gigantomastia mammoplasties are illustrated in **Figure 4** and **Figure 5**.

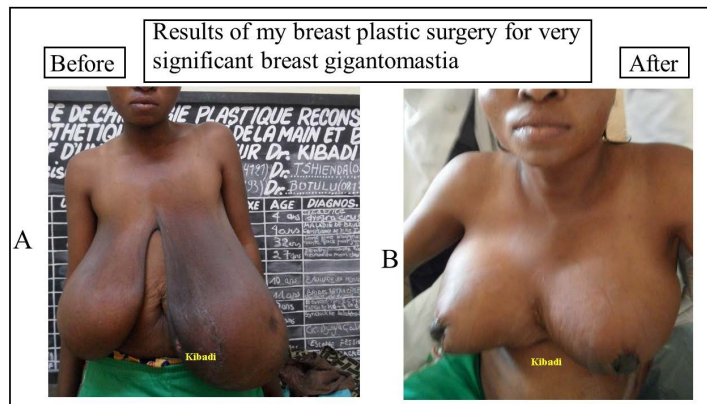


Figure 5. Results of reduction mammoplasty for a very large gigantoma in a 34-year-old patient. (A) Patient before surgery; (B) Patient after surgery.

3.4. Results of My Reduction Mammoplasties

I observed five main complications, in ascending order: partial necrosis of the nipple-areola plate (2%, $n = 92$), hematomas (6.2%, $n = 92$), infectious complications (6.4%, $n = 92$), scar detachment (6.8%, $n = 92$), hypertrophic pathological scars and/or keloids (10.2%, $n = 92$). After a 12-month follow-up, “excellent” functional and aesthetic results were observed in 42 of my patients (91.3%, $n = 46$), in terms of: skin (absence of adhesion), scar quality (invisible), breast symmetry (very pronounced), good placement of the areolas and nipples with volumes proportional to the new breast size.

I rated my results as “very good” in 4 of my patients (8.6%, $n = 46$) due to the development of hypertrophic scars and keloids.

3.5. Patient Satisfaction

All my patients were satisfied with the results of their reduction mammoplasties, regarding the aesthetic outcome obtained, with a follow-up ranging from 6 months to 14 years.

Indeed, 43 of my patients (93.4%, $n = 46$) rated them as “very satisfactory”; 3 of my patients (6.5%, $n = 46$) as “satisfactory.” The main complaint of these three patients with results rated as “satisfactory” was the presence of a pathological scar.

4. Illustration

I illustrate in **Figures 6-10** my results of my reduction mammoplasties.

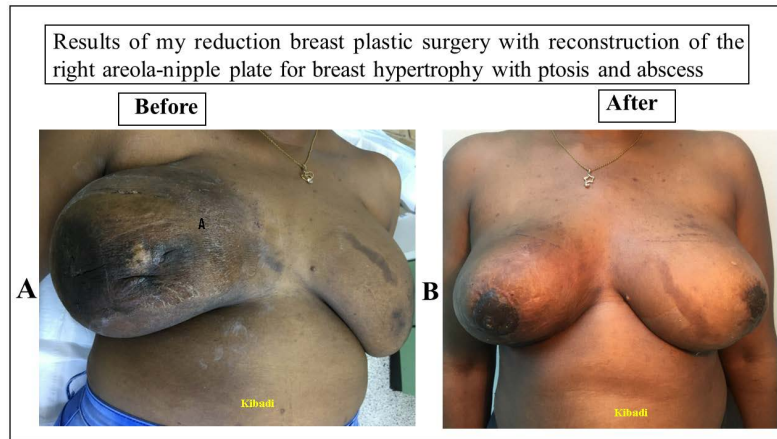


Figure 6. Results of reduction breast plastic surgery with reconstruction of the right areola-nipple plate for breast hypertrophy with ptosis (stage 3) and abscess. Symmetry of the left breast. (A) Both breasts before surgery; (B) Both breasts after surgery.

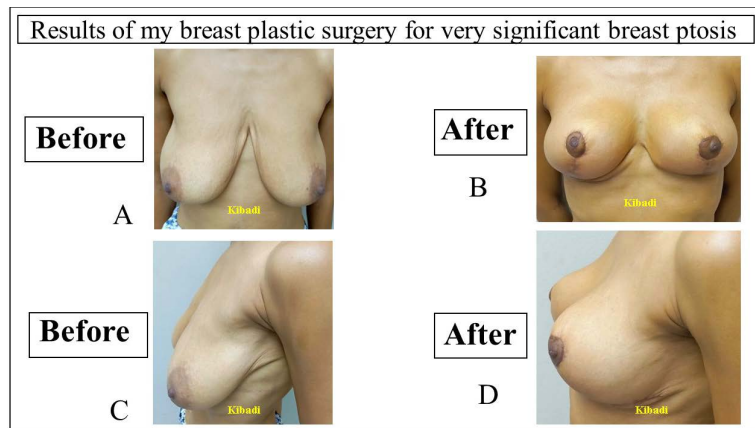


Figure 7. Results of reduction mammoplasty in a 46-year-old patient with significant breast ptosis (stage 3). (A) Patient before surgery with stage 3 breast ptosis, frontal view; (B) Patient after surgery, frontal view; (C) Patient before surgery, profile view; (D) Patient after surgery, profile view.

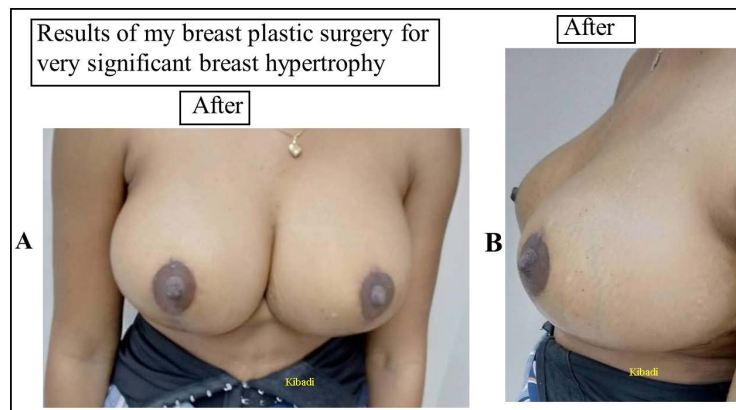


Figure 8. Results of reduction mammoplasty in a 36-year-old patient with significant breast hypertrophy and ptosis. (A) Results, frontal view; (B) Results, lateral view.

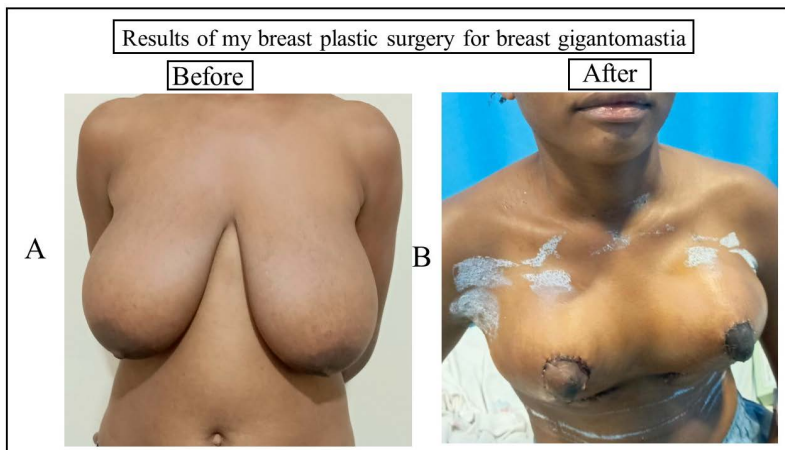


Figure 9. Results of reduction mammoplasty in a 22-year-old patient with breast gigantomastia and significant ptosis. (A) Patient before surgery; (B) Patient after surgery.

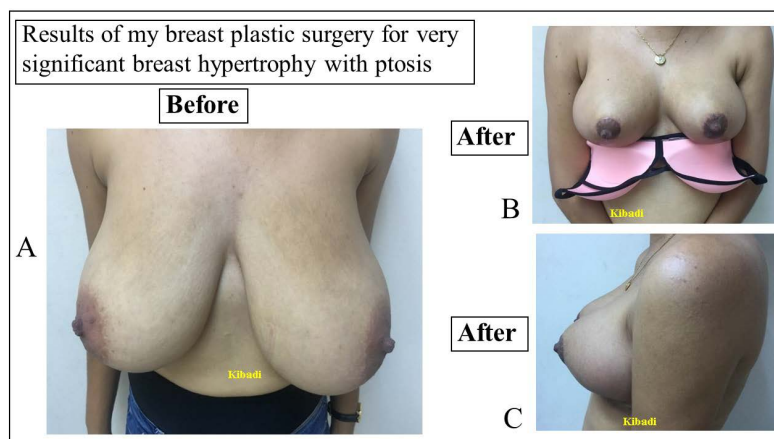


Figure 10. Results of reduction mammoplasty in a 37-year-old patient with significant stage 3 breast hypertrophy and ptosis. (A) Patient before surgery; (B) Results after surgery, frontal view; (C) Results after surgery, lateral view.

5. Discussion

5.1. General Patient Characteristics

In my series, the mean age of patients was 34.2 years, ranging from 17 to 60 years. The mean age of my patients is similar to that found by many authors: 35.6 years, ranging from 17 to 58 years for Sankale [11]; 33.2 years for Mojallal [14]; and 36 years for Loury [15].

In my series, the most observed breastfeeding frequency was 4, found in 11 patients (23.9% of my patients), and these 11 patients were aged between 30 and 49 years. The mean number of breastfeedings or children was significantly higher in my series than that of Sankale [11], with 2.4 children, and Loury [15], with 1.4 children. This higher frequency in my series is explained by a higher birth rate in the Democratic Republic of Congo. Indeed, multiparity is more pronounced among African women.

5.2. Clinical Aspects

In my series, all patients consulted for aesthetic and psycho-emotional discomfort. Twenty-one patients (45.6% of cases) complained of back pain. They were obese and suffered from mastodynia.

However, in Sankale's study in Senegal [11], also an African series, back pain was less frequent (17%). My back pain frequency of 45.6% is close to 50% for that of Malidor [16] in France. The symptomatology is roughly identical in both Africa and the West.

5.3. Reduction Mammoplasty Technique Used

In my series, the ninety-two mammoplasties performed were all reduction mammoplasties with a supero-internal pedicle, allowing for better management of areolar vascularization.

Superior pedicle mammoplasties are currently among the most widely used in Europe. The glandular skin resection is performed in the lower part of the breast. These techniques have the advantage of simplicity and speed. They also allow for easy transformation of the classic inverted T-shaped scar into a short inframammary scar or even a vertical one alone. The classic technique proposed by Pitanguy [17] [18] and later by Weiner therefore uses the Wise pattern [19].

5.4. Outcome Assessment

In my series, the five main complications were partial necrosis of the nipple-areola plate (2%), hematomas (6.2%), infectious complications (6.4%), scar dehiscence (6.8%), and hypertrophic and keloid scars (10.2%).

My infectious complications were 6.4%. In the literature, the postoperative complication rate of 9.5% was found by Sankale [11] in Africa, and in Western series, 16% by Loury [15] or 17.5% by Letertre [20].

In my series, I observed 6.2% of hematomas as postoperative complications. It would seem that hematoma is the main complication in European series. A meta-analysis by Daane [10] reported a variable frequency of hematoma from 0.3% to 10% depending on the series. Reducing the frequency of this hematoma complication could involve adapting the technique. Hence the interest of adrenaline serum infiltration before the procedure [11]. According to prospective double-blind studies, several authors, including Métaxotos [21], have demonstrated that adrenaline serum infiltration reduces the risk of intra- and post-operative bleeding.

In my series, I observed a very high rate of hypertrophic and keloid scars (10.2%). My rate of pathological scars was also higher than that in Sankale's study [10], which was 9.5%. My rate of hypertrophic and keloid scars is higher compared to European series. Indeed, Daane's meta-analysis [13], a European series, reported 3.3% hypertrophic scars.

It has been established that black skin is more prone to scarring. Keloid scars are endemic in the Democratic Republic of Congo, the country of this study. And,

the prevalence of keloids was estimated at 13.5% in one of my previous studies [22].

5.5. Results of My Reduction Mammoplasties and Patient Satisfaction

In my series, after a 12-month follow-up, “excellent” results (91.3%), from a functional and aesthetic perspective, were observed. And, all my patients were satisfied with the results of their reduction mammoplasties, regarding the aesthetic outcome obtained.

The results of reduction mammoplasties are immediate. Breast reduction is a procedure with a very high satisfaction rate among patients. However, a distinction must be made between short-term and long-term results.

5.6. Limitations of the Study

As in many fields of medicine, there is no absolute truth and there is no single, universal cosmetic surgical approach that can offer both a high degree of patient satisfaction and a maximum reduction in postoperative complications. However, constant technical advances, as well as critical analysis and the rigorous scientific literature must guide us in choosing the most appropriate techniques to apply in order to achieve excellent results from our reduction mammoplasties.

However, it seems difficult to ask about the satisfaction of my own patients, which would create a major bias in subjectivity. Nevertheless, there are numerous studies in the literature examining patient satisfaction following breast reduction, particularly through questionnaires such as the BREAST-Q [23].

6. Conclusion

I frequently perform reduction mammoplasties on African women. This aesthetic plastic surgery is beginning to occupy a significant place within my aesthetic plastic surgery activities in Kinshasa, Democratic Republic of Congo. Despite my excellent results, which met with patient satisfaction, the two major challenges to overcome in this resource-limited country with a high incidence of keloids are patient poverty and the unpredictable occurrence of pathological scars (hypertrophic, keloids).

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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