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Abdominoplasty, Liposuction and Brazilian Butt Lift (BBL) in Kinshasa in the Democratic Republic of Congo. My Experience in This Aesthetic Plastic Surgery with Black African Women in a Low-Income Country

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Abstract

Background: In low-income African countries, the demand and use of plastic surgery operations including abdominoplasty, liposuction and Brazilian butt lift (BBL) are increasing. The goal of this work is to present my experience and the challenges of this aesthetic plastic surgery among black African women. **Material and Methods:** A retrospective study was conducted about the abdominoplasties, liposuctions and Brazilian butt lift (BBL) which I operated in public and private hospitals at Kinshasa (Democratic Republic of Congo) in black African women. It covers a period of 13 years, going from December 1, 2010 to December 1, 2023. For this study, I had at least 6 months period (to Juin 1, 2024) to assess the occurrence of early and late postoperative complications. **Results:** I performed 84 abdominoplasties, 144 liposuctions and 23 Brazilian butt lifts (BBL). The average age at the time of abdominoplasty was 44 years with extremes ranging from 26 to 55 years and a concentration of cases (60.7%) in the age group of 40 to 49 years. The age group of 20 to 29 years old represented the lowest rate of requests for abdominoplasty (4.7%). Patients with a BMI of 30 to < 35 kg/m^2 were the majority (61.9%), followed by those between 25 to < 30 kg/m^2 (29.7%). 67.8% of patients were obese (BMI ≥ 30 kg/m^2). The average age at the time of liposuction was 41 years with extremes ranging from 21 years to 69 years; and more than half of cases (68%) in the age group between 30 and 49 years. As for Brazilian butt lift (BBL), the average age was 33 years with extremes ranging from 24 to 42 years and a concentration of patients (91.3%) between 20 and

39 years. The immediate postoperative complications of abdominoplasties observed were: seroma in 7% of cases, hematoma and partial infection of the surgical site in 5% of cases. Pathological scars (hypertrophic, keloid) after abdominoplasties were observed in 9% of cases. The most common complication of liposuction was contour deformity. I observed 16 patients (11.1%) with soft-tissue depressions or elevations, skin panniculus or folds. For Brazalian Butt Lift (BBL), complications like asymmetry for 2 patients (8.9%), contour irregularities for 2 patients (8.9%), and excessive fat removal for 6 patients (26%), had observed. I have not recorded any cases of death or pulmonary embolism. **Conclusion:** I perform aesthetic plastic surgery procedures in black African women with a high socioeconomic standard of living compared to the average of the general population. The renunciation of planned surgery is motivated by the impossibility of paying the cost of the operation as well as by popular and religious perceptions regarding cosmetic surgery. The results of these aesthetic plastic surgery procedures carried out are very satisfactory for them. The challenges to overcome are mainly threefold: the unforeseeable complications of these cosmetic plastic surgery procedures, popular and religious perceptions of cosmetic surgery as well as the poverty of the population.

Keywords

Abdominoplasty, Liposuction, Brazilian butt lift (BBL), Black African Women, Kinshasa, Democratic Republic of Congo

1. Introduction

The term "abdominoplasty or dermatolipectomy" is a set of surgical procedures aimed at improving the abdominal wall for aesthetic and/or functional purposes. It can concern the skin plane, the fatty plane and the musculoaponeurotic plane separately or jointly [1]-[3]. Liposuction, also called "liposculpture", is a cosmetic surgery operation allowing, in women, a remodeling of the silhouette (abdoment) by suction of stubborn and deep fatty deposits resistant to slimming diets [4]-[6]. As for the term "Brazilian Butt Lift" (BBL), it is a cosmetic surgery operation intended to increase the volume of the buttocks. This involves injecting fat cells taken from other areas [7]-[10].

They are among the most requested cosmetic surgery operations in the world by women. In Africa, in our low-income countries, the demand for abdominoplasty, liposuction or Brazilian butt lift (BBL) is increasing due to the increasing incidence of obesity, the influence of the media and social networks. Reparations for the after-effects of pregnancy and the consequences of aging also motivate these requests. Thus the use of these operations is increasing among these black African women.

There are very few published articles [11] [12] from black African countries in general, and from the Democratic Republic of Congo [13] in particular, on series

of cases operated on black African women. My first report published in 2015 [13] focused solely on abdominoplasties in obese women. To fill this gap, we report, for the very first time, all the results of abdominoplasties, liposuctions and Brazilian butt lifts (BBL) that I have performed on black African women. The aim of this work is not only to share my local experience, but also to present the challenges to overcome for these aesthetic plastic surgery operations in a low-income country.

2. Patients and Methods

I conducted a retrospective study about the abdominoplasties, liposuctions and Brazilian butt lift (BBL) which I operated in public and private hospitals at Kinshasa (Democratic Republic of Congo) in black African women. These operations were carried out by ourselves in public and private hospitals in Kinshasa (University Clinics of Kinshasa, Hôpital du Cinquantenaire, Centre Médical de Kinshasa—CMK, Centre Hospitalier Bolingani). It covers a period of 13 years, going from December 1, 2010 to December 1, 2023. For this study, I had at least 6 months period (to Juin 1, 2024) to assess the occurrence of early and late postoperative complications. The inclusion criteria were: Being female and black African - Having undergone an abdominoplasty, liposuction or Brazilian butt lift (BBL) - Have a complete file with all the parameters of interest - Give free consent for the study.

2.1. Abdominoplasty Technique

My abdominoplasty technique was that described for a low transverse abdominoplasty with transposition of the umbilicus [14] [15]. This procedure was carried out under general anesthesia, either in the supine position, if a first liposuction step was planned, or in a more classic position, legs semi-flexed. These two positions were often combined. The liposuction is first carried out flat, then the patient is placed in the desired position. The incision followed the suprapubic route (marking performed preoperatively while the patient was standing) which most often went from one iliac spine to the other. This incision involved the cutaneous plane, the adipose plane and stopped in contact with the aponeurosis. Throughout the procedure, hemostasis was rigorous. The separation was first carried out, most often at the level of the aponeurosis, over the entire subumbilical level. Arriving at the level of the umbilicus, it was freed from its skin attachments by a periumbilical incision. The umbilicus was cut circularly and remained attached to the aponeurotic plane. I often performed this umbilical dissection at the very beginning of the procedure. The umbilical canal surrounded by adipose tissue was carefully individualized down to the aponeurotic plane. The undermining was continued under the upper supraumbilical flap to the xiphoid and costal region.

This detachment was in fact carried out on demand until the moment when this upper flap could easily descend to reach the initial suprapubic incision. The

extent of the cutaneous-adipose resection, assessed before the operation, was actually defined during the operation. A landmark joined the median supra-umbilical and supra-pubic points. Existing lesions of the musculoaponeurotic plane (hypotony with wall distension, diastasis of the rectus muscles, umbilical or inguinal hernia, incisional hernia) were treated at this time of the operation. I placed at least two Redon type suction drains and finished by suturing the skin incisions with the creation of a compressive dressing.

2.2. Liposuction Technique

My liposuction technique was identical to that described in the literature [16]. The procedure usually took place under general anesthesia in the operating room. In certain situations, and if the quantity of fat to be removed was small, liposuction was performed under local anesthesia. The procedures for liposuction were the same, regardless of the area to be treated. The diameter of the micro cannulas for liposuction differed. I made short incisions of 2 to 4 mm in the areas to be aspirated. When possible, they were hidden in the natural folds of the skin, to obtain the most discreet scars possible or in hidden areas. Then, I infiltrated a mixture of normal saline solution and adrenaline to facilitate the procedure and reduce the risk of hematomas and postoperative bleeding. I then introduced cannulas with a blunt tip of different diameters through the incisions in order to suck out the fat. At the end of the procedure, I sutured the incisions with absorbable threads and finished with a dressing.

2.3. Brazilian Butt Lift (BBL) Technique

As for "Brezilian But Lifting" or BBL, the requests from our black African patients concerned buttocks that were too drooping, too flat, not curved enough, and which compromised the harmony of the entire silhouette. I performed them under general anesthesia. The buttock lipofilling procedure took place in several stages [17]-[19].

- Liposuction: I removed the fat from a part of the body (abdomen) using tiny incisions through which a fine cannula was introduced. It was often performed during an abdominoplasty with liposuction.
- Purification of the fat: I carried out a filtering or centrifugation process, to eliminate all impurities and retain only the useful fat cells.
- The reinjection of purified fat into the buttocks to increase its volume and shape: I used a cannula for even distribution over the entire buttock, for perfect remodeling. I inject the purified fat cells during a Brazilian butt lift, mainly on the top of the buttocks.

3. Results

3.1. General Characteristics of Operated Patients

The population of my study consisted solely of black African women from the Democratic Republic of Congo. It covers a period of 13 years, going from De-

cember 1, 2010 to December 1, 2023. For this study, I had at least 6 months period (to Juin 1, 2024) to assess the occurrence of early and late postoperative complications. It covers a period of 13 years, going from December 1, 2010 to December 1, 2023. For this study, I had at least 6 months period (to Juin 1, 2024) to assess the occurrence of early and late postoperative complications. I performed 84 abdominoplasties, 144 lipoaspirations and 23 Brazilian butt lifts (BBL). I had an annual average of 7 abdominoplasties, 11 liposuctions, 2 Brazilian butt lifts (BBL). In my study, all operated women had a high socioeconomic level compared to the average of the general population. The distribution of operated patients by age group is shown in Table 1.

Table 1. Distribution of patients by age group and according to cosmetic surgery procedures

Age group	Abdominoplasties (n = 84)	Liposuctions (n = 144)	Brazilian butt lift (BBL) (n = 23)
20 - 29 years old	4 (4.7%)	10 (6.9%)	9 (39.1%)
30 - 39 years old	9 (10.7%)	28 (19.4%)	12 (52.2%)
40 - 49 years old	51 (60.7%)	70 (48.6%)	2 (8.7%)
50 - 59 years old	20 (23.8%)	25 (17.3%)	-
60 - 69 years old	-	11 (7.6%)	-

3.2. Abdominoplasty

The average age at the time of abdominoplasty was 44 years with extremes ranging from 26 to 55 years and a concentration of cases (60.7%) in the age group of 40 to 49 years. The age group of 20 to 29 years old represented the lowest rate of requests for abdominoplasty with 4 cases or 4.7%. Figure 1 illustrates my abdominoplasty technique in a non-obese patient.

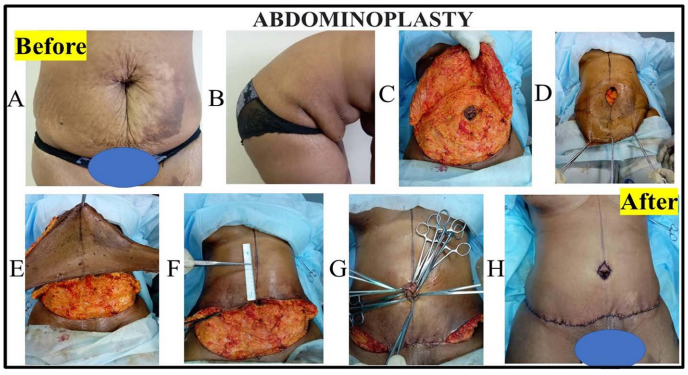

Figure 1. Abdominoplasty in a non-obese black African woman. (A) Non-obese black African patient withstretch marks on the belly (normal pigmentation of her belly, not infection); (B) Presence of an abdominal apron; (C) Cutaneo-adipose separation up to the xiphoid and costal region; (D) Easy descent of the skin-adipose detachment; (E) Cutaneo-adipose resection as assessed before surgery and defined during surgery; (F) Positioning the umbilicus on the midline halfway between the pubic symphysis and the xiphoid appendage; (G) Exteriorization of the umbilicus which has previously been freed from its skin attachments by a periumbilical incision; (H) Sutures of different incisions.

More than two thirds of abdominoplasty patients were obese (67.8%). The parity of my patients was on average 4 children with extremes of 0 - 7 children. A third of cases (36%) had a history of cesarean section. None of the patients had undergone prior abdominoplasty.

Among the 84 black African women who underwent abdominoplasty, the average body mass index was 33 kg/m^2, with extremes ranging from 24 to 36 kg/m^2. The majority of my patients were overweight. Table 2 presents the number of patients according to their body mass index.

Table 2. Body mass index (BMI) of black African women for abdominoplasty.

BMI (kg/m^2)	Frequency (n = 84)	Interpretation
Under 16.5	-	Undernutrition
16.5 to < 18.5	-	Thinness
18.5 to < 25	2 (2.3%)	Normal weight
25 to < 30	25 (29.7%)	Overweight
30 to < 35	52 (61.9%)	Moderate obesity
35 to < 40	5 (5.9%)	Severe obesity
≥40		Morbid or massive obesity

Figure 2 illustrates abdominoplasty in an obese black African patient.

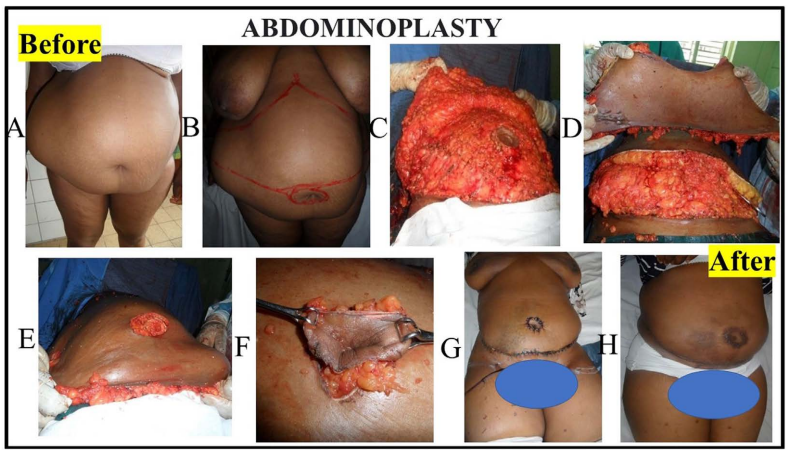

Figure 2. Abdominoplasty in an obese black African woman. (A) Obese black African woman with BMI ≥ 36 kg/m^2; (B) Preoperative drawing; (C) Cutaneo-adipose separation up to the xiphoid and costal region; (D) Cutaneo-adipose resection (evaluated before the operation and defined during the operation); (E) Ideal positioning of the umbilicus on the midline halfway between the pubic symphysis and the xiphoid appendage; (F) Exteriorization of the umbilicus having previously been freed from its skin attachments by a periumbilical incision; (G) Sutures of different incisions; (H) Scars after two years.

Patients with a BMI of 30 to < 35 kg/m^{2}were the majority (61.9%), followed by those between 25 to < 30 kg/m^2 (29.7%). But, 67.8% of my patients were obese with a BMI ≥ 30 kg/m^2.

Concerning abnormalities of the musculo-aponeurotic wall of the abdomen, diastasis was found in 58 patients, or 69% of cases. Twelve patients had a hernia of the white line of the abdomen, *i.e.* 14% of cases. Umbilical hernia was found in 5 patients (6%).

All patients were operated on under general anesthesia. I performed abdominoplasties alonein 76% of cases and abdominoplasties combined with liposuction in 24% of cases.

Repair of the musculoaponeurotic strap by rectus muscle plasty was carried out in 50 of 58 patients (87%). The other cases were repaired using the Paletot technique or by mesh. At least two Redon type suction drains were placed in all patients.

The immediate postoperative complications of abdominoplasties observed were: seroma in 7% of cases, hematoma and partial infection of the surgical site in 5% of cases. Pathological scars (hypertrophic, keloid) after abdominoplasties were observed in 9% of cases. We have not recorded any cases of death or pulmonary embolism.

3.3. Liposuction

The average age at the time of liposuction was 41 years with extremes ranging from 21 to 69 years, and more than half of cases (68%) in the population aged between 30 and 49 years. Figure 3 & Figure 4 illustrate cases of liposuction in black African women.

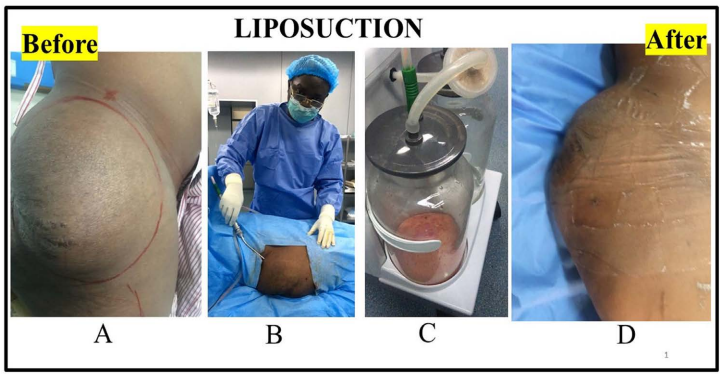

Figure 3. Liposuction to the right buttock. (A) Fat overload of the right buttock before liposuction; (B) Liposuction operation for excess fat in the right buttock; (C) Vacuumed grease rated at 950 ml; (D) Result after liposuction.

The distribution of liposuction by corrected areas is shown in Table 3.

Table 3. Distribution of liposuction by corrected areas and their average age.

Corrected areas	Frequency (n = 144)	Average ages
Belly	81 (56.2%)	44 (26 years to 55 years)
Lipomatosis	23 (15.9%)	46 (36 years to 69 years)

Continued

Thigh	21 (14.5%)	45 (36 years to 55 years)
Localized lipoma	9 (6.2%)	31 (26 years to 45 years)
Buttock	5 (3.4%)	38 (26 years to 57 years)
Hip	3 (2%)	37 (26 years to 58 years)
Horse breeches	2 (1.3%)	39 (28 years to 55 years)

We illustrate in Figure 4 the results of liposuction associated with cruroplasty of two thighs performed in a black African woman.

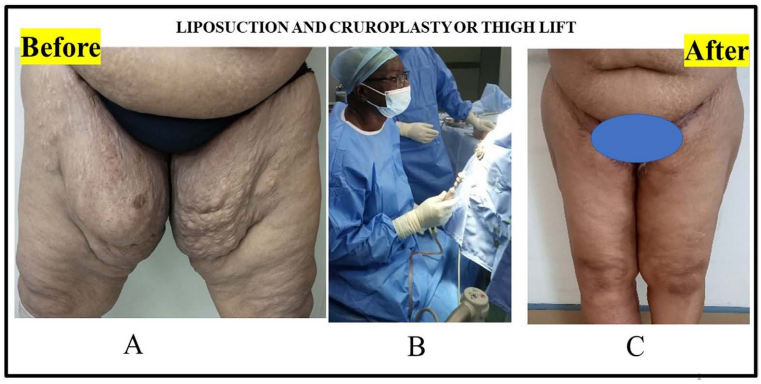

Figure 4. Cosmetic surgery for lipomatosis of both thighs. (A) Lipomatosis of both thighs; (B) Liposuction operation on two thighs followed by bilateral cruroplasty.

3.4 Result after an Eighteen Month Follow-Up

The quantity lipoaspirated in my patients varied from 10 ml (small localized lipoma) to 1000 ml (significant excess abdominal fat). The average amount of fat sucked from the belly was 720 ml.

The most common complication of liposuction was contour deformity. I observed 16 patients (11.1%) who patients had report soft-tissue depressions or elevations, skin panniculus, folds, or wrinkles. I have not recorded any cases of death or pulmonary embolism.

3.5. Brazilian Butt Lift (BBL)

As for Brazilian butt lift (BBL), the average age was 33 years with extremes ranging from 24 to 42 years, and a concentration of cases (91.3%) of patients aged between 20 to 39 years.

The amount of fat removed was not proportional to the amount of fat injected. These fat cells were purified to obtain healthy fat which was used for filling. I manage to simultaneously inject 200 to 350 ml of fat per buttock.

I illustrate in Figure 5 the case of a Brazilian butt lift (BBL) in a black African lady preceded by an abdominoplasty.

Patient satisfaction after liposuction was assessed in the following Table 4.

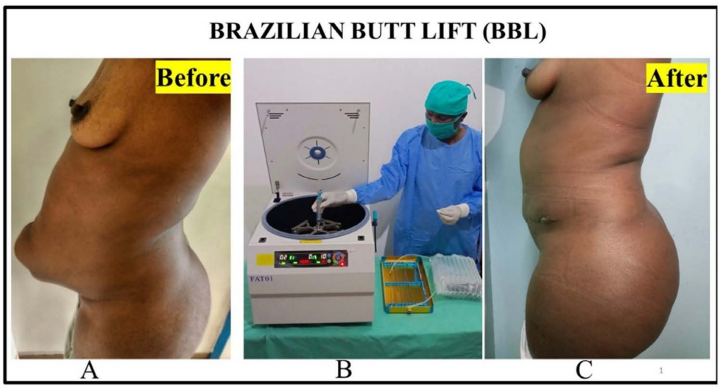

Figure 5. Brazilian butt lift (BBL) in Kinshasa in a black African lady. (A) Flat buttocks in a black African lady with abdominal ptosis and post cesarean eventration; (B) Purification by centrifugation of aspirated fat; (C) Excellent result of Brazilian butt lift (BBL) achieved.

Table 4. Patient satisfaction after Brazilian butt lift (BBL) by age group.

Age group	Brazilian butt lift (BBL) (n = 23)	Patient satisfaction rate
20 to 29 years old	9 (45%)	Very high
30 to 39 years old	12 (52.1%)	Very high
40 to 49 years old	2 (8.2%)	High

For Brazalian Butt Lift (BBL), complications like asymmetry for 2 patients (8.9%), contour irregularities for 2 patients (8.9%), and excessive fat removal for 6 patients (26%), had observed. I have not recorded any cases of death or pulmonary embolism.

The prices of my Brazilian butt lift (BBL) performed varied greatly, between 2000 to 6000 US dollars (all costs included). These prices varied depending on the quantity of fat to be injected, the establishment where the operation took place as well as the state of health of the patient (presence or absence of comorbidities).

4. Discussion

4.1. Abdominoplasty among Black African Women in a Low-Income Country

The first abdominoplasties were performed in Europe and the United States at the beginning of the 20th century. Already in 1890, Demars and Marx undertook extensive resection of fat in the abdominal wall, including the umbilical region. In the United States in 1899, Kelly used the term "abdominal lipectomy" [20]. However, despite all the advances, complications of abdominoplasty remain frequent, primarily seromas and necrosis [21].

In my series, the immediate postoperative complications of abdominoplasties observed were: seroma in 7% of cases, hematoma and partial infection of the surgical site in 5% of cases. Pathological scars (hypertrophic, keloid) after abdominoplasties were observed in 9% of cases. I have not recorded any cases of

death or pulmonary embolism.

Body composition changes with age, with a decrease in lean mass and an increase in fat mass. A study by Gallagher showed that for the same BMI of 23 kg/m^2, the percentage of fat mass of an 80-year-old man is on average 24% compared to 13% for a 20-year-old man [21]. For women, the corresponding percentages are 33% and 26%. Aging also affects the distribution of adipose tissue, so it is not surprising that intra-abdominal adipose tissue also increases with age [21]. This increase is observed in particular in women during menopause [22]. After the age of 40, women generally enter the pre-menopausal phase. The resulting gradual drop in progesterone production is normally accompanied by weight gain. Estrogen takes over, and it promotes water retention and stimulates the appetite. Cells begin to renew themselves more slowly. They therefore consume less energy, thus promoting the accumulation of fat in the abdominal area and water retention.

In my series, the average age at the time of abdominoplasty was 44 years with extremes ranging from 26 years to 55 years and a large proportion of cases (60.7%) in the age group of 40 to 59 years old. Patients aged 20 to 39 years old represented the lowest rate of abdominoplasty requests (4.7%). This is consistent with the results of the literature with an average age varying between 41 and 46 years, which highlights the role that advanced age plays in weight gain and abdominal lipodystrophy.

Several studies [23]-[25] suggest that obesity (BMI ≥ 30 kg/m^2) is linked to an increase in the rate of complications, mainly in the rate of seroma and wound healing disorders. This has also been proven in obese people (BMI > 30 kg/m^2). High BMI would present a significant threat to wound healing and an increased risk of any complications [26]. Furthermore, other studies suggest that high BMI does not affect complications. Murshid *et al.*, after examining 200 patients, 100 morbidly obese and 100 overweight with obesity, found that there is no difference in the rate of complications between the two categories [26].

In my study, patients with a BMI of 30 to < 35 kg/m^2 were the majority (61.9%), followed by those between 25 to < 30 kg/m^2 (29.7%). But, 67.8% of my patients were obese with a BMI ≥ 30 kg/m^2. Which is a little higher compared to other studies. In fact, I operated mainly on obese patients.

Diastasis of the rectus muscles is defined by a separation between the internal edge of each rectus muscle of at least 4 cm and can be accompanied by a true hernia or herniation of the linea alba. This anomaly often occurs after one or more pregnancies.

In my series, concerning abnormalities of the musculo-aponeurotic wall of the abdomen, diastasis was found in 58 patients, or 69% of cases. Twelve patients had a hernia of the white line of the abdomen, *i.e.* 14% of cases. Umbilical hernia was found in 5 patients (6%).

In my series, parity was on average 4 children, with extremes of 0 - 7 children. The nativity rate is high in the Democratic Republic of Congo. My results are similar to those of the Dakar (Senegal) study in abdominoplasties in the senega-

lens womens, aged 39 on average (range 21 - 60 years). Parity was on average 2.3 children, with extremes of 0 - 4 children [11]. On the other hand, in a study in England in 2008 of 123 patients of whom (97% women) "diastasis of the recti" was present in (11%) with 71% multiparous, 29% single [27].

The high number of pregnancies in my population could have favored the abdominal dysmorphia as well as the alterations of the abdominal musculo-aponeurotic strap observed.

The costs of these plastic surgery operations vary depending on the country, establishment and plastic surgeon [15]. According to the American Society of Plastic Surgery, the cost of abdominoplasty in the United States is approximately 6500 US dollars. The average cost of liposuction in the United States generally ranges between $3000 and $7000. The real costs of these plastic surgery operations in Africa in low-income countries are not yet well known. Indeed, the least developed countries are those whose per capita income is less than 900 US dollars per year. These countries are said to be low-income based on composite human development indicators (annual income, education, health and nutrition).

In my study, all operated women had a high socioeconomic level compared to the average of the general population. But the Democratic Republic of Congo remains a low-income country to this day. And these plastic surgery procedures remain financially inaccessible to the vast majority of the general population.

4.2. Liposuction among Black African Women in a Low-Income Country

In my series, I performed 144 liposuctions on black African patients aged 26 to 55 years with an average age of 41 years. The practice of liposuction is recent in my circles [13].

The first liposuction procedures were performed in the late 1970s [20]. In the 1960s, attention shifted to the use of abdominoplasty for body contouring. Two surgeons, Callia and Pitanguy, then developed procedures in which large undercuts improved the effectiveness of the technique [20]. Using a different approach, Illouz [6] became the first to use liposuction to modify the abdominal silhouette, which was a big step forward. In 1987, Cordoso de Castro reported his experience on 20 patients combining liposuction and dermolipectomy in order to limit the length of the scar [28].

4.3. Brazilian Butt Lift (BBL) among Black African Women in a Low-Income Country

In my series, as for Brazilian butt lift (BBL), the average age was 33 years with extremes ranging from 24 years to 42 years and a concentration of cases (91.3%) of patients aged between 20 to 39 years. It was therefore a young population. To eliminate all impurities and retain only the useful fat cells, I used the two processes of fat purification, namely the centrifugation or filtering process.

Several techniques are possible to reshape the buttocks: placement of buttock

implants and lipofilling [10] [17]-[19] [29]. This last technique, recent, is the least invasive while giving very good results. Indeed, it has the advantage of mixing two well-known processes for rebalancing the silhouette: liposuction and remodeling. This explains why this technique is offered to patients who have sufficient fat reserves. This is especially true since around 20% to 30% of the injected fat is absorbed by the body.

In my series, for Brazalian Butt Lift (BBL), complications like asymmetry for 2 patients (8.9%), contour irregularities for 2 patients (8.9%), and excessive fat removal for 6 patients (26%), had onserved. I have not recorded any cases of death or pulmonary embolism. These results were very encouraging for us, despite the small number of my study population. In the literature, numerous complications of Brazilian butt lift (BBL) have recently been reported [30]-[32].

In many countries, the costs of Brazilian Butt Lift (BBL) are reported to be high and variable [15] [31]. On average, the price of the Brazilian Butt Lift (BBL) would be between 8000 and 10,000 euros in the UK. BBL prices could exceed 12,000 euros depending on the experience of the surgeon and the qualifications of the establishment. This price could go well above 20,000 US dollars in the United States and 15,000 euros in the best clinics in Switzerland. The average cost of Brazilian Butt Lift (BBL) in Türkiye would be around 4500 Euros. In my series in Kinshasa in the Democratic Republic of Congo, the prices of Brazilian Butt Lift (BBL) varied greatly, from 2000 to 6000 US dollars (all costs included), depending on the quantity of fat to be injected, the establishment where the operation took place as well as the patient's state of health (presence or not of comorbidities).

In my series, these aesthetic plastic surgery procedures thus concerned black African women with a high socioeconomic standard of living compared to the average of the general population. The reason for foregoing planned surgical intervention was the inability to pay the cost of the operation. Popular and religious perceptions also constituted a significant obstacle to carrying out these cosmetic surgery procedures.

4.4. Challenges to Overcome for These Aesthetic Plastic Surgery Operations in a Low-Income Country

In my series, the results of these aesthetic plastic surgery procedures carried out are very satisfactory for patients. The challenges to overcome are mainly threefold: the unforeseeable complications of these cosmetic plastic surgery procedures, popular and religious perceptions of cosmetic surgery as well as the poverty of the population.

We observed a greater perception of pain and itching during the healing phase in some of my black African patients who had undergone abdominoplasty. In addition, the proliferative inflammatory phase seemed longer and more intense than in white skin. In the long term, healing disorders (hypertrophic scars, keloids) have been observed. Concerning post-operative scars, I have already reported in the past the benefits-risks of aesthetic plastic surgery on black skin

[33]. The impact of popular and religious perceptions on cosmetic surgery procedures in Kinshasa in the Democratic Republic of Congo remains significant and it often negatively impacts the women who desire them. Scheduled patients who renounced surgery argued "*we cannot correct what God created*". The poverty of the population contrasted with their desire to resort to cosmetic plastic surgery. Most of the applicants could not cope given their low financial income.

5. Conclusion

Aesthetic plastic surgery operations including abdominoplasty, liposuction and Brazilian butt lift (BBL) are carried out on black African women in Kinshasa in the Democratic Republic of Congo, a low-income African country. The results of these aesthetic plastic surgery procedures carried out are very satisfactory for them. The challenges to overcome are mainly threefold: the unforeseeable complications of these cosmetic plastic surgery procedures, popular and religious perceptions of cosmetic surgery as well as the poverty of the population.

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Conflict of Interest

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

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