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| RESEARCH ARTICLE

Inferior Bodylift in Moroccan Patients: Experience at the Mohamed V Military Training Hospital

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| ABSTRACT

Post-weight loss sequelae, whether following natural weight reduction or bariatric surgery, can significantly impact patients' quality of life on physical, aesthetic, and psychological levels. Lower bodylift surgery, first introduced by Gonzalez-Ulloa in 1961, has since become a key procedure for addressing these issues by comprehensively reshaping body contours. This is a retrospective descriptive study conducted between January 2020 and January 2025, including 20 female patients who underwent lower bodylift surgery following the technique described by Pascal and Le Louarn. All procedures were performed by the same surgeon in the Department of Plastic, Reconstructive and Burn Surgery at the Mohammed V Military Teaching Hospital in Rabat. Data collection included clinical, anthropometric, surgical, and postoperative outcome parameters. The mean age of the patients was 42 years. All had post-bariatric excess skin, with stable weight for at least six months prior to surgery. The mean BMI was 26.7 kg/m^2. A diffuse adipocutaneous excess was present in 80% of cases. Surgery was performed under general anesthesia in two stages, including systematic liposuction, rectus diastasis repair, and oval umbilical reconstruction. Average operative time was 7 hours and 20 minutes. Aesthetic outcomes were rated as satisfactory to very satisfactory in all cases, particularly regarding overall contour, scar placement, and umbilical appearance. No major complications were reported. In the context of rising global obesity rates and growing aesthetic demands, the lower bodylift has emerged as a safe and effective surgical solution. When performed under optimal conditions and tailored to individual patient characteristics, it provides durable body contour restoration and significantly enhances patients' quality of life.

| KEYWORDS

Lower bodylift, weight loss, surgery, quality of life.

| ARTICLE INFORMATION

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1. Introduction

Post-weight loss sequelae can have significant physical and psychological consequences. Excess skin, often combined with reduced elasticity and tissue laxity, leads to both functional and aesthetic discomfort, thereby negatively impacting patients' quality of life in their daily activities.

Managing these sequelae represents a real challenge for the surgeon, who must correct morphological changes by reshaping the body contour and addressing various forms of skin ptosis. It also constitutes a major commitment for the patient, who must maintain the results over the long term. Circular body contouring, more commonly known as the lower bodylift, was first introduced by Gonzalez-Ulloa in 1961. Since then, this procedure has gained increasing popularity worldwide. [1-3]

2. Materials and Methods:

This is a retrospective descriptive study conducted between January 2020 and January 2025. Twenty patients who underwent a lower bodylift using the Pascal and Le Louarn technique were included. All procedures were performed by the same surgeon in the Department of Plastic, Reconstructive and Burn Surgery at the Mohammed V Military Teaching Hospital in Rabat.

Data were collected using a standardized data collection form and included anamnesis, clinical and paraclinical parameters, therapeutic interventions, and postoperative outcomes.

3. Results

In our study, the mean age of the patients was 42 years, ranging from 24 to 70 years. The majority of cases (particularly between 24 and 43 years) fell within the young to middle-aged adult group. All included patients were female.

Regarding medical history, three patients had well-managed hypertension. No cases of diabetes or substance use (tobacco, alcohol, or other substances) were reported. Three patients were on oral contraceptives, all of which were discontinued at least one month prior to surgery.

From a surgical perspective, eleven patients had previously undergone bariatric surgery in the form of sleeve gastrectomy. Among them, one patient had also undergone surgery in 2007 for a left adrenal cortical tumor. Obstetric history included nine vaginal deliveries and six cesarean sections, including one twin pregnancy.

Obesity was the common underlying condition among all patients. The primary motivation for surgery was aesthetic in 95% of cases, while 5% reported functional discomfort. All patients had maintained stable weight for at least six months before the procedure. Additionally, five patients expressed a desire for pregnancy within the five years following the surgery.

3.1 Anthropometric Data

The mean patient weight was 71.5 kg, ranging from 55 kg to 100 kg. The average height was 163.6 cm (range: 155–176 cm). The mean Body Mass Index (BMI) was 26.7 kg/m^2, with values ranging from 20 to 33.5. According to the World Health Organization (WHO) classification **[4]**, six patients had a normal BMI, eleven were overweight, and three were classified as having class I obesity (BMI between 30 and 34.9).

3.2 Clinical Findings

A diffuse adipocutaneous skin excess was observed in 80% of the patients, while the remaining 20% also presented with a vertical skin surplus. On clinical examination, 60% of patients had stretch marks, primarily located on the flanks (n = 4), flanks and thighs (n = 3), flanks, thighs, and abdomen (n = 3), flanks and buttocks (n = 1), or limited to the buttocks (n = 2).

Previous abdominal scars were identified in 16 patients. Skin elasticity was deemed satisfactory in all participants. Abdominal examination revealed diastasis of the rectus abdominis muscles in 16 patients and an incisional hernia in one patient.

3.3 Preoperative Assessment

As part of the surgical preparation, a standard blood workup was systematically performed in all patients. The mean hemoglobin level was 13.2 g/dL, with no significant abnormalities detected. Fasting blood glucose levels were within normal limits in all participants, indicating no metabolic disorders.

Additionally, a preoperative abdominal CT scan was conducted in all cases to allow for a detailed evaluation of the abdominal wall. Radiological findings confirmed clinical observations, showing rectus diastasis in multiple patients and a single case of incisional hernia.

Finally, each patient underwent a pre-anesthetic consultation in accordance with institutional protocol, enabling comprehensive assessment of operative risk and optimal surgical planning.

3.4 Surgical Technique

All patients underwent surgery under general anesthesia using the technique described by Pascal and Le Louarn, performed in two successive operative stages: first in the prone position, then in the supine position. The average duration of the procedure was 7 hours and 20 minutes, ranging from 7 to 9 hours.

Liposuction was systematically performed during both stages using mechanical cannulas. Each procedure also included correction of rectus diastasis in combination with the lower bodylift. Umbilical reconstruction was performed using an oval technique. The patient with an incisional hernia underwent concurrent hernia repair.

Drainage was provided for all patients through the placement of four suction drains: two anterior and two posterior. The anterior drains were removed at 48 hours postoperatively, while the posterior drains were removed on postoperative day five. All patients were required to wear a compression garment continuously, 24 hours a day, for two months following surgery.

3.5 Postoperative Management

Postoperative pain was systematically assessed using the Visual Analog Scale (VAS). Reported scores ranged from 4 to 7 out of 10. Pain management involved the use of level 2 analgesics (codeine), and in some cases, level 3 analgesics (morphine), depending on the severity of the symptoms.

A compression garment was applied immediately at the end of surgery, on the operating table, prior to discharge from the surgical unit. It was prescribed for continuous use over a two-month period. The garment was well tolerated by 9 patients, while 11 reported significant discomfort, describing it as intolerable.

In addition, all patients received systematic thromboprophylaxis with low molecular weight heparin for 14 days, in accordance with current guidelines.

Notably, resumption of normal daily activity was only possible after 60 days for all patients, highlighting the substantial postoperative recovery period required. No postoperative antibiotics were prescribed, with prophylactic antibiotics administered preoperatively only.

3.6 Postoperative Complications

Anemia was the most frequent immediate complication in our series, requiring blood transfusion in 17 patients during the postoperative period. The second most common complication was wound dehiscence, which occurred in 14 patients. Additionally, seroma formation was diagnosed in 2 patients.

In the long term, all patients reported sensory disturbances. No other delayed complications were observed during follow-up.

3.7 Aesthetic Outcomes

The aesthetic results were generally positive in our series. Twelve patients rated the final outcome as "very satisfactory," while eight considered it "satisfactory."

Regarding scar positioning, 12 patients found it "very satisfactory," and the remaining 8 rated it as "satisfactory." Scar visibility was deemed "satisfactory" by 11 patients and "very satisfactory" by 7 patients; however, 2 patients expressed dissatisfaction with scar discretion. Concerning the appearance of the umbilicus, 12 patients were satisfied, and 8 rated it as "very satisfactory."

The long-term stability of the results was rated as "satisfactory" by 13 patients and "very satisfactory" by 7 patients.

We illustrate some cases from our series in the following figures **(Fig.1-6).**

Figure 1 – Patient with diffuse cutaneous and adipose tissue excess prior to lower body lift.

Figure 2 – Patient at 15 days post-op

Figure 3 - Patient presenting scar dehiscence on postoperative day 21

Figure 4 – Patient at 9 months post-op

Figure 5 - Patient with diffuse and vertical cutaneous-adipose excess prior to lower body lift.

Figure 5 – Patient at 15 days post-op

Figure 6 – Patient at 45 days post-op

4. Discussion

The lower bodylift is a surgical procedure aimed at correcting morphological sequelae resulting from massive weight loss. This procedure is part of a carefully structured care pathway, ranging from preoperative consultation to the recovery period, in order to ensure patient safety and optimize outcomes.

In our study, a systematic preoperative consultation was conducted to assess patient expectations, evaluate the feasibility of the procedure, and determine the most appropriate surgical approach. This stage includes not only a detailed clinical examination but also a psychiatric evaluation, which is crucial to identify and exclude patients with body dysmorphic disorder, thus contraindicating the procedure **[5-9]**. However, this psychiatric evaluation remains challenging to implement for Moroccan patients due to cultural and social specificities.

As with any surgical procedure, signing the informed consent and undergoing a pre-anesthetic consultation are essential, along with meticulous preparation starting from the first contact. This preparation involves several successive consultations and includes, notably, smoking cessation at least one month before the surgery, a measure aimed at significantly reducing the risk of skin necrosis. The prevention of thromboembolic risk is also systematic: compression stockings are worn from the time of admission to the operating room, complemented by pharmacological thromboprophylaxis. In our series, this was maintained for 15 days; the average duration in the literature is ten days **[10,11]**.

All twenty patients included in our study underwent a lower bodylift performed according to the technique described by Pascal and Le Louarn, which remains one of the references for lower body contouring surgery. Recognized for its simplicity of execution and high reproducibility, this surgical approach allows for both symmetrical and harmonious results, effectively correcting circumferential skin and fatty excesses **[12]**.

At the end of the procedure, closed suction drainage was systematically placed, with a total of four drains: two in the anterior position and two in the posterior, fixed at the ends of the lateral sutures. The use of closed suction drains remains a subject of debate in the literature. While some teams question their routine use, others emphasize their role in significantly reducing the incidence of seromas, especially when a dead space is created during dissection **[13,14]**.

In the postoperative period, in addition to thromboprophylaxis, it is recommended that the patient maintain a prolonged sitting or semi-sitting position from the recovery room and for at least 48 hours. This measure aims to reduce the tension exerted on the incision. Furthermore, early mobilization is also recommended. This postoperative approach aligns with the data in the literature, including the study by Beer, which highlights the benefits of these precautions, including the reduction in the incidence of seromas **[14-16]**.

Regarding the discharge of patients, in our series, the anterior drains were removed 48 hours after the procedure, which facilitated early mobilization. The posterior drains, on the other hand, were maintained until the 4th-5th postoperative day, resulting in an average hospital stay of 6 days. This duration was, however, adjusted based on the patient's general condition and the potential occurrence of postoperative complications. Compared to other series, our hospital stay remains relatively long: Hacquard reports an average of 4.4 days **[17]**, while Nemerofsky mentions a duration of 2.95 days **[18]**. Buchanan, for his part, suggests that, with rigorous and well-protocolized postoperative care, a lower bodylift can be considered as an outpatient procedure, with optimized recovery **[17,19]**.

Postoperative complications can be prevented, which helps reduce their incidence. To achieve this, beyond surgical competence, strict adherence to technical protocols and recommended precautions is essential, as emphasized by Pascal **[20]**.

In the short term, the most frequently observed complications include seromas, hematomas, infections, cutaneous-fatty necrosis, thromboembolic complications, and anemia. The occurrence of these complications can be significantly reduced through the rigorous application of recommendations from the literature, as well as adherence to preoperative preparation protocols **[21-40]**. Based on the experience in our department, the most frequently observed complications, consistent with the data in the literature, were anemia, wound dehiscence, and two cases of seroma. Management involved appropriate blood transfusions, iterative drainage of seromas, and delayed surgical correction of wound dehiscence. These interventions successfully addressed the complications without compromising either the aesthetic result or the overall outcome of the lower body lift.

In the long term, sensory disturbances constitute the main complaint reported by the patients.

In general, the patients in our series were largely satisfied with the aesthetic and morphological results, reporting a significant improvement in their quality of life and a regained sense of self-confidence. The lower body lift thus appears to be a key procedure to promote for restoring the physical and psychological well-being of patients with post-weight loss sequelae.

5. Conclusion

In the face of the global increase in obesity rates, the growing influence of social media, and the pursuit of bodily harmony, the lower body lift has become a reference surgical procedure to address these issues, despite the cultural and social specifics unique to each society. Its success relies on rigorous preoperative preparation, adherence to the different surgical stages, and adaptation to individual specificities. Thus, the lower body lift remains one of the most effective techniques for restoring the overall silhouette, while contributing to the physical and psychological well-being of patients.

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