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The current statistical reality in gluteoplasty procedures, the challenges facing innovation and safety, and the points of view of the infectious disease specialist and the plastic surgeon

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Abstract

Easy access to information has allowed the globalization of the concept of beauty, aimed at maintaining a youthful appearance. Hence, plastic surgery is increasingly required. In that sense, buttock augmentation with implants is one of the most requested aesthetic procedures in the world, mostly by women and young people, who seek to get closer to a social expectation, improve body contour and achieve a perfect figure. Throughout history, the gluteal region has been one of the most observed areas in both women and men, and has been taken as a representative icon of bodily beauty, which is why it represents an important aspect in the patient's self-perception. In recent years, there have been variations in the placement space for gluteal implants and in the design of the prosthesis. In this way, with the passage of time, there will be greater knowledge about the complications that may arise in the long term. In light of everything said above, it was decided to develop this study to analyze current statistics, challenges and perspectives from various experts.

Keywords: *Gluteosplasty; treatment variants; complications; risks; care.*

INTRODUCTION

Easy access to information has allowed the globalization of the concept of beauty, aimed at maintaining a youthful appearance (Manrique Pincay Rubén Bernardo, Suárez Rubén Leopoldo Manrique, Vallejo Flores Katuska María, Manrique Suárez et. al.(2018)); Hence, plastic surgery is increasingly required. In that sense, buttock augmentation with implants is one of the most requested aesthetic procedures in the world, mostly by women and young people, who seek to get closer to a social expectation, improve body contour and achieve a perfect figure.

Throughout history, the gluteal region has been one of the most observed areas in both women and men, and has been taken as a representative icon of bodily beauty, which is why it represents an important aspect in the patient's self-perception. In recent years, there have been variations in the placement space for gluteal implants and in the design of the prosthesis. Materials and surgical access routes have also changed to improve aesthetic results.(Dai Y, Chen Y, Hu Y, Zhang L (2023))

This technique began in 1961, when Farina performed the resection of trochanteric lipodystrophies. A vertical incision, with elevation and rotation of a lateral thigh flap was used to correct ptosis of the lower pole of the buttocks. Later, in 1973, Cocke and Buchuk presented the first successful gluteal augmentation work for aesthetic purposes, for which they used a round implant with a greater projection than the breast implant.

Later, in 1977, González Ulloa, a pioneer in the reconstruction of this area, presented a study related to the correction of hypoplastic glutes. Then, in 1991, he described his experience for a decade, where he used the

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subcutaneous space with a subgluteal incision and an oval silicone gel implant with a smooth surface.(Dai Y, Chen Y, Hu Y, Zhang L (2023))

Likewise, Robles, Tagliapietra and Grande, in 1984, detailed their experience in 9 cases treated with the submuscular gluteoplasty technique (Robles space), in which they made an incision in the subgluteal fold and used a round silicone gel implant and surface smooth.(Danilla E. Stefan, Quispe V. Diego, Erazo C. Cristian, Andrades C. Patricio, Schulz R. Rolando, Albornoz G. Claudia et al. (2019), González-Ulloa M.(1991))

For their part, Vergara and Marcos described the design of oval or almond-shaped gluteal implants, anatomical with a textured or smooth surface, made of cohesive silicone gel or solid elastomer and of soft consistency, through an incision in the intergluteal fold. . Finally, Vergara and Amezcua published their 15-year experience with intramuscular gluteal implants in 2003. Results, complications, surgical technique, types of implants, indications and rules to follow to obtain excellent results were addressed in the study (Danilla E. Stefan, Quispe V. Diego, Erazo C. Cristian, Andrades C. Patricio, Schulz R. Rolando, Albornoz G. Claudia et al. (2019), Vergara R, Amezcua H (2003)).

The augmentation of a body region with cohesive silicone gel implants is a controversial topic internationally, with opinions for and against the technique. In this way, with the passage of time, there will be greater knowledge about the complications that may arise in the long term; In fact, the first case of anaplastic giant cell lymphoma was already reported in a patient with gluteal implants (Jiménez-Avilés Alejandro (2023)). However, it is considered an effective surgical treatment option, the results of which depend on the correct selection of the patient and the experience of the responsible specialist.

In light of everything said above, it was decided to develop this study to analyze current statistics, challenges and perspectives from various experts.

Results

The concept of beauty is considered a set of specific and socially desirable qualities. In this sense, the contour of the buttocks is a very important feature when determining appearance. As a result, this obsession with meeting beauty standards leads many people to resort to plastic and aesthetic surgery in search of physical and emotional improvement, since feeling good generates a feeling of well-being and increases self-esteem (Shrestha B, Dunn L.(2020), Cao W, Sheng L. (2022)) .

In terms of gender, the predominance of women in the current series (general sample) is consistent with what has been documented in the literature (Isakson MH, Vasilakis V, Kortesis BG, Hunstad JP, Bharti G.(2020), Ramos da Silva CG, Guimarães FS, Aboudib JH, Morales PJ. (2023)) that women have a greater need for buttock augmentation surgery. Likewise, Latin America and the Caribbean have a culture of fighting for bodily perfection. However, to achieve this goal, individuals are often subjected to procedures that are not always performed by qualified specialists and that use substances that, although they improve the visual appearance of the buttock contour, do not ensure biocompatibility with the surrounding tissues.

Petit et al. (2022), observed in their study that the average age of women who requested buttock augmentation with submuscular implants was 38 years. In the current series this result is consistent, since the majority of patients were between 31 and 40 years old, which could be due to changes in the lifestyle of women in these age groups due to pregnancy, hormonal changes and sedentary lifestyle. . To name just a few factors that led to his physical transformation.

Other authors (Ren R, Zhao H.(2021)) state that dark-skinned patients are less likely to request buttock augmentation. In this regard, studies carried out on the Cuban population show that their average genetic composition is the following: among the Chilean population there are 73% of European ancestry, 26% of African ancestry and 1% of indigenous ancestry, of which 57.2% are European in origin, 38.7% are American and 2.5% are African, thus showing similarities in the thickness of the gluteus maximus. Similar results were obtained in the study, taking into account that people of European origin have smaller gluteal muscles. For the

same reason, the intramuscular bag should be kept no more than 2 cm thick from the gluteus maximus to avoid possible damage to the deeper located vascular and neural structures.(Escobar Vega H, Expósito Jalturin A, Tamayo Carbón AM, Lázaro Sanchez MA, Morales Novo J, Valdés Estrada MJ.(2021))

On the other hand, Cárdenas et al. (2020) satisfactory results in a study of three-dimensional combined gluteal myoplasty using liposuction, gluteal muscle implantation and fat grafting. The results were similar to this case study with significant improvements in buttock shape, size, projection, symmetry, high patient satisfaction, virtually invisible scars, and no complications. Normal results may be related to postoperative care, (inappropriate use of seat belts and timely exercise) that affect the final results.

It also emphasizes the importance of understanding the anatomy of the gluteal region in order to plan and prepare the intramuscular bag.

Buttock augmentation is a procedure with a defined learning curve and relatively easy to perform, with good results and few complications, as long as it is performed by a certified expert. Determining the area where the intramuscular pocket is created can reduce the risk of the muscular plane colliding with the adipose tissue or creating a pocket that is too large, facilitating a change in the original position of the gluteal prosthesis. By keeping the ligament bent, closure of the incision is easier and a perineal groove can be formed.(Trignano E, Tettamanzi M, Liperi C, Beatrici E, Serra PL, Trignano C, Rubino C.(2023))

Asserson et al (2019) in their study reported an overall complication rate of 12.4%, mainly in patients who received implants (31.4%), where asymmetry, capsular contracture, hematoma, infection, pain, seroma, enlargement of scars and wounds. distribution. Other authors (Petit F, Colli M, Badiali V, Ebaa S, Salval A(2022)) found that delayed healing and implant exposure predominated.

Some of the aforementioned authors (Cárdenas-Camarena L, Trujillo-Méndez R, Díaz-Barriga JC.(2020)) describe the use of buttock implants with an average volume of 300 cm3. This finding is consistent with the results obtained here and the projection of the gluteal region is also significantly improved by approx. 2 cm at maximum point; virtually unchanged over the course of a year, patients said they were satisfied with the results, which was also found in Cao and Sheng's study.

The International Society of Aesthetic Plastic Surgery (ISAPS) announced the results of its Annual Global Plastic/Aesthetic Surgery Survey on June 12, 2024, during the ISAPS World Congress in Cartagena. The total number of surgical procedures increased another 5.5%, with plastic surgeons performing more than 15.8 million procedures and an increase of 19.1 non-surgical procedures, according to the report.

In the last four years, the total increase has been 40%. Both surgical and non-surgical procedures have increased since the last survey (16.7% and 7.2% respectively), with non-surgical procedures showing a significant increase of 57.8% over the last five years. The report shows that the number of cosmetic surgeries has continued to increase in recent years, increasing by 33.3%. Buttock augmentation saw the largest increase with 820,762 operations, an increase of 56.8%. Overall, body and extremity surgeries increased by 25.3%.

Discussion

Like other types of major surgery, butt lift surgery carries risks of bleeding, infection, and adverse reactions to anesthesia. If you are having butt augmentation surgery at the same time as a butt lift, discuss side effects with your surgeon. Using your own fat can have serious side effects, including infection and even death. Butt lifts are not suitable for all patients.

Your healthcare provider may recommend not having a butt lift if:

• You have a serious chronic illness, such as heart disease or diabetes.

• You plan to lose a lot of weight.

• Your body mass index is greater than 32.

• You smoke.

• Your mental health is unstable.

Before butt lift surgery, patients should do the following:

• Stop smoking. Smoking reduces blood flow to the skin and can slow the healing process. Smoking also greatly increases the risk of complications. If you smoke, you should stop smoking before surgery and during recovery.

• Avoid taking certain medications. You should avoid blood thinners, aspirin, anti-inflammatory medications, and herbal remedies. They can increase bleeding.

• Maintain a stable weight. Ideally, you should maintain a stable weight for at least 6 to 12 months before butt lift surgery. Significant weight loss after surgery can affect the results.

• Provide support during recovery.

Make sure someone drives you home after surgery and stays with you while you recover. Buttock contouring techniques include augmentation hypoplasty, which can be achieved with implants (Vergara R, Amezcua H(2023)) or fat injections(Cárdenas-Camarena L, Lacouture AM, Tobar-Losada A.(1999)), and buttock lift with peripheral abdominoplasty or autologous augmentation lifts (. Mendieta CG.(2007), Rye RF.(2006)).

The increase in the frequency of performing this technique has also led to an increase in not only local but also systemic complications. According to various studies, the frequency of major complications (fat embolism, pulmonary thromboembolism) ranges between 7% and 10%, and minor complications (pulmonary edema, SIRS - systemic inflammatory response syndrome, intraalveolar hemorrhage) reaches 95%. Among the main complications, fat embolism stands out because it is directly related to a fatal outcome. It can be divided into microscopic fat embolism, MIFE (microscopic fat embolism) and macroscopic fat embolism, MAFE (macroscopic fat embolism), which, although they have the same etiology, have different pathophysiology and prognosis.

Minor complications were observed that resolved without the need for additional surgery. The above situation may be related to the fact that, when performing a slight detachment of the fascia of the gluteus maximus, combined with external compression of the perineal area with a sterile bandage, a seroma is formed with the subsequent formation of a dead space in this area, preserving the folded skin ligaments and thus reducing wound separation, acting as a strong and stationary base that anchors both edges of the wound.

Microscopic fat embolism (MIFE) consists of the passage of fat particles no larger than 40μm into the intravascular space, which are hydrolyzed by lipases present in the plasma, causing an increase in free fatty acids in the circulation. This produces tissue damage in alveolar cells, capillary endothelium and small vessels, leading to a systemic inflammatory response, intraalveolar hemorrhage and pulmonary edema.

The classic symptoms consist of altered state of consciousness, dyspnea and the appearance of axillary and/or subconjunctival petechiae. The signs found may be hypoxemia, pulmonary edema, tachycardia, fever and fatty particles present in the sputum, among others. Symptoms may appear 24 to 72 hours after surgery. With adequate and early treatment, mortality is around 10% of cases and rises to 30% in those with late initiation of treatment.

In 2015, Cárdenas et al. (1999) published a collaboration between Colombia and Mexico that documents a total of 21 deaths secondary to fat injections into the buttocks. 61.1% to 77.7% occurred intraoperatively after injection, and the remaining percentage occurred within 24 hours of surgery.

As a result of the autopsy, they were able to determine a direct correlation between the caliber of the blood vessels involved, the time of onset of symptoms and the risk of death. On January 31, 2018, the American Society of Plastic Surgeons (ASPS), the International Society of Aesthetic Plastic Surgery (ISAPS), and the American Society of Aesthetic Plastic Surgery (ASAPS) and the International Federation of Adipose and Therapeutic Sciences (IFATS) .

The International Society of Plastic and Reconstructive Surgeons (ISPRES) met to investigate the condition and issued a warning against the use of fat grafts in the buttock area. They determined that the mortality rate was 1:3,000, much higher than any other cosmetic surgery procedure. This working group concluded that fat applications to this area should never be injected intramuscularly, but only subcutaneously. They also mentioned that even though the injection is subcutaneous, it is easy to access the muscle plane during the fat injection.

Worldwide, performance of this procedure has increased, with 9,993 procedures reported in 2013 and 11,505 cases reported in the US in 2014 (Richter DF (2014)). Aguirre in Bogotá, Colombia, reported in Cirugía Plástica between 1997 and 2007 that fat embolism secondary to fat injection into the buttocks is the second cause of death in plastic surgery today.

In a study published by Lázaro Cárdenas, in 2015, autopsies of these patients in Colombia and Mexico found deaths related to buttock fat injections, recognized the severity of the problem, and recommended prevention strategies, including avoiding intramuscular fat injection. In the most recent census in 2017, Mofids et. Al. (2017) reported that 1 in 6,214 buttock fat injection patients died from fatal fat embolism and 1 in 1,931 buttock fat injection patients died from gluteal fat embolism. fatal fat and fatal fat embolism. A study by Jorge Paredes, chair of the Columbia California Department of Forensic Medicine, reported mortality rates between 1997 and 2015, showing that pulmonary thromboembolism and fat embolism were the leading causes of death among liposuction patients (Ibidem). Kant et al. A systematic review of the literature on patients receiving baline fat injection in 2016 found 19 articles involving 4,105 patients.

The average intramuscular and subcutaneous injection volume is 400 ml per buttock (24). Overall, 7% of minor complications were reported, including seromas, erythema, pain, and contour irregularities, but none of these complications were related to the injection plane. Major complications such as fat embolism, anemia, symptomatic volume depletion and septic shock occurred in 0.32%.

Cardenas et al. (1999), Immediate deaths were found to be associated with macroscopic fat embolism, as evidenced by vascular damage to the buttock (Cárdenas-Camarena L, Bayter JE, Aguirre-Serrano H, Cuenca-Pardo J.(2015)). When fat injection programs were examined, intramuscular injections had a higher complication rate, but this was not significant (Richter DF,(2014)) Here, the reduction in recommendations is the reason; However, multivariate analysis confirmed that, of all factors, only the location of the prosthesis (subglandular versus submuscular) and the bursa dissection technique (manual versus electrocautery) were associated with the presence of complications (Cárdenas-Camarena L, Bayter JE, Aguirre-Serrano H, Cuenca-Pardo J.(2015)).

While results of local complications after cosmetic breast augmentation surgery are reported. During a median follow-up of 3.8 years, 16.7% of patients experienced adverse events and 4.8% required reintervention.

The most common complications in the first 30 days were hematoma (1.1%) and infection (1.2%), the most common complications in the first 5 years were: tactile changes (8.7%) and asymmetry/displacement of the implant (5.2%). Significant capsular contracture occurred in 1.7% of patients, also within 5 years of surgery.

Complications that most frequently require reoperation to remove or replace the implant include breast asymmetry, implant migration, and capsular contracture. It was concluded that complications in women undergoing breast augmentation surgery were generally lower in the Danish population than in other studies, although complication rates increased with longer follow-up (Araco A, Gravante G, Araco F, Delogu D, Cervelli V, Walgenbach K(2007)) evaluate its specific incidence and associated factors.

Implant surface (textured versus smooth), filling material (saline versus silicone), implant location (subglandular versus subcectoral), and lumen type (single lumen versus double lumen) are considered important parameters for capsules. Results vary between studies, and inconsistent results may be due to differences in study design, sample size, and follow-up (Hvilsom GB, Hölmich LR, Henriksen TF, Lipworth L, McLaughlin JK, Friis S.(2009)). Kjolle et al. (2001) The relationship between the occurrence of capsular contracture and the characteristics of the implant was investigated. 754 women (1572 implants) participated in the study. In more than 90% of patients, the implant location is under the muscle. Regarding the implant surface, capsular

contracture occurred in 6.1% of textured implants and 9.2% of smooth implants. However, information between clinics is inconsistent.

Overall, a 7.9% incidence of capsular contracture was observed and double lumen implants were associated with a lower incidence of this complication (Ibidem).

A systematic review by Chin-Ho Wong et al. Compare the presence of capsular contracture in subglandular breast augmentation using textured and smooth implants. Six randomized controlled trials involving 235 patients were reviewed. Textured implants are associated with a lower rate of capsular contracture as assessed by the Baker scale (. Wong CH, Samuel M, Tan BK, Song C.(2006)).

Although this development has been achieved taking into account the recommendations of various recommendations published in the reviewed articles, it is recommended to take into account the following points:

- Fat grafts can only be injected subcutaneously.
- During surgery, in hip flexion, Kraske, jack or flexion position, as this facilitates superficial application.
- Use a needle with a diameter greater than 3 mm. The small diameter facilitates penetration into the muscular planes.
- Use a straight, rigid needle with a blunt tip.
- Keep moving the needle and avoid violent movements.
- Always palpate and know the position of the needle tip.
- Hold the needle parallel to the thigh and pointing upwards.
- Inject in the caudal direction of the skull, never from the entrance to the ischial fold or in the opposite direction.
- Avoid large injections. Consider multiple stages or a combination of implants.
- Avoid using the upper part of the lipoaspirate because it has a higher concentration of free fatty acids. - Perform ultrasound guidance if possible.
- The surgical team must be alert and know how to recognize the complications of fat embolism.
- Discuss with patients the risk of death and fully complete the informed consent form and discuss alternative procedures in advance.
- If fat embolism is suspected, the procedure should be performed quickly, medical assistance initiated, and the patient transferred to the intensive care unit with ECMO.

Surgical site infections (SSIs) are healthcare-associated infections (HAIs) caused by bacteria that enter through incisions during surgery. It occurs where the wound was after surgery, whether skin, tissue, organ, space or implanted material, and a combination of signs and symptoms that suggest infection. (Gaviria-Pinzón Jorge Andrés, Gutierrez-Quintero John, Galán-Suárez Ricardo M, Nieto-González Claudia P.(2023))

The Centers for Disease Control and Prevention (CDC) divides it into superficial space, deep space, and organ space. Risk factors may be external, such as: prolonged preoperative and postoperative hospitalization, unreasonable prescriptions of antimicrobial drugs, blood transfusions, prolonged operation time, emergency operations, open surgical techniques, such as patient-related factors, including comorbidities, age , etc. (Yunga Guamán MP(2018))

Because infections are so common in plastic surgery, regardless of the surgical site, the technique used, or the materials used, new strategies such as prophylactic antibiotics and even the use of multiple layers of antibiotics

on breast implants are needed to achieve this goal. . Reduce the frequency of infection during these procedures. (. Morales A, Villalba J, Loza S, Solano G, Medina M, Fierro L, et al.(2022))

Although there is sufficient evidence in the literature to determine which conditions require antibiotic treatment and which do not, there appears to be bias among technicians. A recent study (Mankowski P, Cherukupalli A, Slater K, Carr N.(2021)) analyzing 38 studies showed that only a minority of plastic surgeons use prophylactic antibiotic therapy based on empirical medical evidence.

In this line of thought, Gutiérrez, Morales and Valverde (Gutiérrez Moreno M, Morales Chaves R, Valverde Solano S.(2023)) suggest in their research that the use of prophylactic antibiotics be maintained after surgery, although it should be interrupted within 24 hours in both adult and pediatric patients. Likewise, in cosmetic surgery the administration of Cefazolin is recommended and for those patients who are allergic to β-lactams, it should be replaced by Clindamycin or vancomycin together with an aminoglycoside, aztreonam or fluoroquinolone. For pediatric patients, it should be replace with Vancomycin.

According to the bases of Ortega, Beltrán, Gaviria, Bayter, & Galán (2018), the prophylactic recommendations include: The use of first or second generation cephalosporins, in doses of 1 gram for patients less than 70 kg, and 2 grams In those with greater weight, and in patients allergic to beta-lactams, clindamycin 600-900 mg is recommended, administered 30-60 minutes before the incision, with booster dose every 35 hours until wound closure or in case of blood loss greater than 1500 ml.

Surgical technique and the skill of the surgeon are important in preventing infections after plastic surgery. The way the procedure is performed, from tissue manipulation to closing incisions, can influence the chance of getting an infection.

Doctors who follow strict sterile procedures, perform proper tissue manipulation, and use proper suturing techniques can decrease the chance of infection after surgery. Consequently, it is essential that plastic surgeons receive continuing training and education to ensure that the results are the best possible and to minimize the likelihood of infections.

Gluteoplasty surgery is one that is dedicated to changing the shape of the buttocks. The purpose of this surgery is to increase the size of the buttocks to provide firmness and add volume to the region, while improving the contour of the patient's figure.

It is true that this procedure can also be done through lipofilling or fat infiltration in the region. However, the effect of this procedure to increase buttocks with fat lasts less than the result of the surgical intervention and is less evident. Hence, gluteoplasty is generally a very satisfactory operation since it offers permanently firm and attractive buttocks.

The surgical process is carried out in an authorized operating room, where general anesthesia is administered to the patient to keep him or her under control and protocol at all times. In this way, during the intervention some small cuts are made in the lower part of the buttocks to insert silicone implants in that area.

In relation to the above, silicone implants are made of highly cohesive gel, completely approved and safe, because they are implants of the most recent technology.

The placement of the implants will be determined by the surgical technique that will be carried out, which can be:

- The most commonly performed surgery involves inserting the implant under the gluteus muscle.
- It is a mixed technique that combines the placement of the implant under the muscle fascia and on top of the real muscle.

Risks

There are several risks associated with a butt lift procedure, such as:

- Excess fluid under the skin (seroma). Drainage tubes placed after surgery can help reduce the chance of developing a seroma.

After the operation, it is also possible to remove the fluid using a needle and syringe.

• Improper healing of injuries. Occasionally, areas along the incision may heal inappropriately or begin to separate.

If you have difficulty healing wounds, you may be prescribed antibiotics.

• Wound marks. Cut marks from buttock augmentation surgery do not disappear. However, they are typically performed in areas that are not easily observable.

• Modifications in the perception of the skin. During the buttock lift, the relocation of tissues can impact the sensory nerves located on the surface. There is a chance that you may notice a decrease in sensitivity or a feeling of numbness.

Typically, the feeling of numbness decreases in the months following the intervention.

In these times, properly shaping the contour of women's hips and buttocks is crucial, which leads us to consider various surgical interventions, either individually or in combination, in order to achieve this goal.

The different procedures range from cruroplasty (Pitanguy I. Trochanteric Lipodystrophy (1964)), gluteal pexy, placement of implants to enlarge the buttocks (Robles J, Tagliaprieta J, Grandi M.(1984)), flanchoplasty (Regnault P, Baroudi R, de Silveira Carvalho CG.(1979)) to removal of tissue from the trochanter and gluteal fold (Gasparotti M.(1992)). Liposuction was an important technical advance in the treatment of the gluteal contour, and then the fat injection technique was introduced (Paredes J, Solano O, Sandoval C.(2015), Regnault P, Baroudi R, de Silveira Carvalho CG.(1979)). However, few studies, such as that of Grazer (Gasparotti M. (1992)), address hip and waist deformity without taking into account aesthetic projection. This writer introduced his categorization of hip abnormalities and how they are treated. However, there are elements that are not considered and that are extremely important to achieve a comprehensive result and not restricted to a single area.

Throughout this period of change, various writers have carried out research on gluteal anatomy, defining how it is possible to combine different surgical techniques to improve aesthetic results (Grazer FM, Klingbeil JR. (1980), Babuccu O, Gözil R, Ozmen S, Bahçelioglu M, Latifoglu O, Celebi MC. (2002)). We believe that it is important to consider the gluteal region and the nearby areas as an aesthetic set to be able to offer a complete and effective treatment. In this way, we will be able to guarantee that the surgical intervention produces an appearance that is more balanced with the rest of the anatomy. Therefore, our proposal consists of a categorization that is based mainly on the structure of the muscles and bones in the area, on the areas affected by deformities and on the amount of lipodystrophy that occurs.

The traditional and universal concept of the aesthetic hip shape is updated with it.

Materials and methods: a clinical examination is carried out.

After a buttock augmentation is performed, a surgical dressing may be placed over the incision. Commonly, one or two drainage tubes are inserted under the wound and near the incision in order to remove any excess blood or fluid.

The group of health professionals will assist the patient to move from the beginning of the recovery process from buttock lift surgery, with the aim of preventing the appearance of blood clots.

You may experience a moderate sensation of pain, which will be treated initially with a pain reliever administered intravenously. Drains may remain in place for several weeks after surgery.

It may be essential to continue taking an antibiotic after buttock lift surgery.

Likewise, a drug can be used to prevent the creation of blood clots after the operation.

After a few days, you start wearing a bra in the following weeks. This will prevent swelling and provide assistance while the wound heals.

Treatment for scars may include the use of a silicone sheet, scar ointment, and massage therapy.

Over time, the appearance of the scar will improve.

During the first few months after a butt lift, it is important to be cautious when performing movements and gradually increase your activity level. It is necessary for the patient to avoid positions that generate tension in the incision area in order to prevent possible reopening of the wound. Additionally, follow-up appointments with the surgeon who performed the procedure will be necessary.

Materials and Methods

The research followed a bibliographic documentary approach, using a review methodology, since bibliographic material was located that served as a basis for its development and compilation.

The research also focused on the systematic search and review of selected scientific-academic literature, available in databases. Among them are PubMed, MedlinePlus, Scopus, Virtual Health Library (VHL), SciELO, Medigraphic, Dialnet and ELSEVIER, Cochrane, among others. A random and consecutive search was performed in the aforementioned databases using the descriptors: "surgical infections", "Postoperative infections", "Site-specific infections" and "Factors that influence postoperative infections in plastic surgery".

The results obtained from this search were filtered based on the criteria of Spanish and English language, relevance and thematic correlation. Similarly, the publication date of the digital material was within the last few years, with the exception of some older data records whose relevance to the topic and concepts remains current.

This bibliographic material includes titles of scientific articles, trials, systematic reviews, protocols, books, undergraduate, postgraduate and doctoral theses, among other documents and information of scientific and academic interest.

CONCLUSION

It is important that doctors are open to evidence-based medicine, as it provides greater safety in clinical practice and reduces possible surgical risks, following established recommendations. The purpose of this study is to highlight several suggestions to consider in aesthetic plastic surgery procedures during the perioperative period when treating a patient in a personalized manner, highlighting and classifying their surgical risk and possible complications.

More randomized clinical trials are needed to obtain a higher level of evidence in this area. Likewise, it is important to consider the feedback given by patients, evaluating and reflecting on the results obtained in clinical care.

Diagnosis and treatment of the hip area, according to our classification, allows us to appropriately evaluate patients who are undergoing surgery to change their body shape.

Combined liposuction and gluteal lipoinjection allow for a complete treatment with results that are both immediate and long-lasting. The classification proposal we present is a valuable evaluation method in situations where it is present, avoiding procedures that result in large scars that will be reserved for only a small percentage of individuals.

The current concept of hip beauty focuses on the musculoskeletal shape and highlights a more sculptural appreciation compared to the traditional concept in which the hip looked square. With this innovative proposal we can examine the type of preoperative patients, both of Latin and Anglo-Saxon origin.

6. Patents

This section is not mandatory but may be added if there are patents resulting from the work reported in this manuscript.

Supplementary Materials: The following supporting information can be downloaded at: www.mdpi.com/xxx/s1, Figure S1: title; Table S1: title; Video S1: title.

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Abbreviations

The following abbreviations are used in this manuscript:

VHL	Virtual Health Library
ISAPS	International Society of Aesthetic Plastic Surgery
SIRS	systemic inflammatory response syndrome
MIFE	microscopic fat embolism
MAFE	macroscopic fat embolism
ASAPS	American Society of Aesthetic Plastic Surgery
IFATS	International Federation of Adipose and Therapeutic Sciences
CDC	Centers for Disease Control and Prevention

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