

Obesity and Plastic Surgery

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Abstract: Obesity is a real health problem around the world, in Morocco over 3,6 millions people are obese. Obesity causes a lot of diseases (diabetes, high blood pressure, hypercholesterolemia, ...) reason why much more obese people consult for a decrease of there weight by multiple methods (diet, physical exercise, medical treatment, surgery) leading them to a cutaneous excess which push them to consult a plastic surgeon. Our study concerns twelve patients obese which weight loss isn't significant with a BMI over 30 kg /m², the surgery was made for a medical reasons (knees pain, back pain) after consultations with dietitian and anesthesiologist.

Keywords: Obesity, Morocco, diabetes, hypercholesterolemia.

INTRODUCTION

Obesity is a real health problem around the world, in Morocco and according to the national survey of anthropometry in 2013, 10 million Moroccans are overweight while 3.6 million are obese in two-thirds of the cases they are female patients, these figures have almost doubled since 2001, according to OECD en 2015 in the United States 38,2% of the inhabitants are obese[1].

We are talking about obesity when the body mass index (BMI) is equal to or greater than 30kg / m² at this figure morbidity and mortality are very high, while it is overweight if BMI is between 25 and 29.9kg / m².

More and more patients consult for a decrease in their weight most often following health problems (diabetes, high blood pressure, hypercholesterolemia, gonalgia, lumbago, dyspnea, ...) For this there are several methods to know: diet, physical exercise, medical treatment (sibutramine, orlistat), surgery (gastric band, gastric bypass, slive ...) these different solutions can be used separately and / or in combination depending on the BMI and associated pathologies.

After losing weight, the patient is found with a cutaneous excess which pushes him to consult the plastic surgeon for a surgery of the silhouette, which finds its place only when the BMI is inferior or equal to 28kg / m², but in certain situations this surgery is performed even with a BMI > 28% in consultation with the dietitian and especially the anesthesiologist :severe pain with osteoporosis and significant risk of fractures, respiratory discomfort, sciatica, ...

The objective of our study is to demonstrate the feasibility of silhouette surgery in obese patients while respecting a margin of BMI.

MATERIALS AND METHODS

This is a retrospective study spread over 6 years involving 12 files of obese patients followed in the plastic surgery department at the Mohammed VI University Hospital Center of Marrakech, an exploitation file has been used to follow up and to collect the different medical informations.

RESULTS

Epidemiological data and interrogation

12 patients were operated at the plastic surgery department of Mohammed VI university hospital from January 2008 to January 2014, all females, the average age was estimated at 42.45 years (33 years-54 years), the BMI > 30kg / m² in all cases (32-39 kg / m²), weight varied between 78 and 130 kg, weight loss after diet and exercise was estimated at 17.63 kg (8 kg-60 kg) for an average of one year (10 months and 16 months).

The indication of the surgery was in front of severe knees pain in 63,63% of the cases associated to an important osteoporosis, low back pain in 36,4%, in 9% an important respiratory gene was at the origin of

the surgery with back pain following a large gigantomastia in an asthmatic patient and in 9% of cases the demand was aesthetic.

In our hospital bariatric surgery is not performed, only diet and physical activity with follow-up at the dietician are advised to patients.

gender/age (years)	weight (kg)	BMI(kg/m ²)	Reason for consultation	Weight loss	surgery
Female/33	80	32	Low back pain	14 kg	Abdominoplasty+ umbilicus repositioning
Female/ 42 ans	90	34	Low back pain + knees pain	20 kg	Abdominoplasty+ umbilicus repositioning
Female/ 46 ans (figure1)	93	33	Knees pain	16 kg	Abdominoplasty+ umbilicus repositioning
Female /48 ans	88	33	Knees pain	12 kg	Abdominoplasty+ umbilicus repositioning
Female/ 50	83	33,2	Low back pain + knees pain	12 kg	Abdominoplasty+ umbilicus repositioning + cruroplasty in a second surgery
Female/ 36	96 kg	33,5	Back pain+ severe asthma	8kg	Breast reductions (torreck technique)
Female/ 54 ans (figure2)	130 kg	39	inactivity + knees pain	60kg	Abdominoplasty without an umbilicus repositioning
Female/ 41	78	32	Knees pain	20kg	Abdominoplasty+ umbilicus repositioning
Female/38	89	32,5	Low back pain	13kg	Abdominoplasty+ umbilicus repositioning
Female/ 37	92	33,7	Aesthetic prejudice	9 kg	Brachioplasty
Female/ 42	87	32,6	Knees pain	10 kg	Abdominoplasty+ umbilicus repositioning
Female/52	89	34	Back pain	18kg	Breast reductions (torreck technique)+ Abdominoplasty+ umbilicus repositioning

The weight removed varies between 2 and 12 kg with an average of 5 kg. The abdominal dermolipectomies were performed according to the conventional technique of umbilicus detachment and repositioning of the umbilicus at about 11 cm from the birth of the pubic hair, except in a single case in which it was limited to a resection of the abdominal apron without repositioning of the umbilicus, without any notion of liposuction in all cases, suction drainage by two drains redon number 18 in all cases removed firsts day postoperative in 70% of cases.

Postoperative follow-up

In case of abdominoplasty the beds were broken at 45 ° with half flexion of both lower limbs.

The administration of low molecular weight heparin 6 hours after the end of the surgical procedure with perambulation of all the patients inevitably.

only one patient required hospitalization in the intensive care unit following a respiratory gene during one night, while the rest of the postoperative follow-ups were marked by the occurrence of lymphorrhea in 15% of the cases, in 7% cases secondary sutures were done, healing was complete after 13.9 days (10 to 45 days).

gender/age (years)	surgery	Postoperative complications	Evolution
Female/33	Abdominoplasty+ umbilicus repositioning	none	Healing in 10 days
Female/ 42	Abdominoplasty+ umbilicus repositioning	none	Healing in 10 days
Female/ 46	Abdominoplasty+ umbilicus repositioning	lymphorrhea	Secondary sutures, healing in 30 days
Female /48	Abdominoplasty+ umbilicus repositioning	none	Healing in 10 days
Female/ 50	Abdominoplasty+ umbilicus repositioning + cruroplasty in a second surgery	None	Healing in 10 days
Female/ 36	Breast reductions (torreck technique)	None	Healing in 10 days
Female/ 54	bdominoplasty without an umbilicus repositioning	Importante, lymphorrhea	Healing in 45 days
Female/ 41	Abdominoplasty+ umbilicus repositioning	none	Healing in 10 days
Female/38	Abdominoplasty+ umbilicus repositioning	None	Healing in 10 days
Female/ 37	Brachioplasty	none	Healing in 10 days
Female / 42	Abdominoplasty+ umbilicus repositioning	None	Healing in 10 days
Female/52	Breast reductions (torreck technique)+	None	Healing in 10 days

Abdominoplasty+ umbilicus repositioning		
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The first dressing was performed on day 5 of the surgical procedure. No infections episode, two antibiotics were prescribed based on amoxicillin-clavulanic acid 1G / 8h for 10 days + ciprofloxacin 500 mg / 12h for 10 days.

The evolution was marked by the improvement of the initial symptomatology at the origin of the request, whether back pain or gonalgia, however, weight gain was observed in 30% of patients who did not follow their diet, while two patients were lost to follow-up.



Fig-1a: abdominoplasty with umbilicus transposition (before surgery)



Fig-1b: umbilicus liberation and reperage of muscles



Fig-1c: excision of skin excess



Fig-1d: Immediate postoperative aspect



Fig-2a : abdominoplasty without Umbilicus transplantation (before surgery)



Fig-2b: after surgery

DISCUSSION

Obesity is a real global health problem, It is not a weakness or a vulnerability to food but it is a pathology occurring in genetically unavailable people ,its etiology is not only due to massive diets but also and according to the researches to the genetic factor which is an important factor in the morbid obesity which is defined by a BMI > 40kg / m² or > 35 kg / m² in

case associated defects (hypertension, diabetes, dyslipidemia, atherosclerosis, pulmonary dysfunction, etc.) [2] which is manifested by a malfunctioning of the basic metabolism manifested by an abnormal conversion of the calories ingested into fat, which makes the measures of hygiene of life such as the diet and the physical exercise certainly improving the morbidity but remaining insufficient [3].

Obesity is a chronic pathology it is a major risk factor that significantly increases morbidity and mortality may be responsible of multiple pathologies of cardiovascular system (hypertension, atherosclerosis, coronary artery disease); the pulmonary system (sleep apnea syndrome, asthma); the gastrointestinal tract (gastroesophageal reflux, esophageal cancer, abdominal hernia, urinary incontinence); the endocrine system (diabetes type II, disorder of the menstrual cycle, severe dysmenorrhea, abnormal quantity rules, infertility); the musculoskeletal system (osteoarthritis especially in the knee and hips, back and lower back pain, etc.), increasing the risk of cancer (endometrial cancer, cervical neck, ovarian cancer, breast cancer); on the cutaneous level (skin rash, irritations, ulcerations, ...); it is a pathology which weighs on the economic plan of the countries increasing the cost of the care by increasing the number of pathology which it induces in addition to the physical risk the psychological impact is very important because the obese is a person who feels a feeling of rejection on the social level and sometimes even on the medical level [3].

Plastic surgery intervenes in the treatment of obesity after patients weight loss with BMI <28kg / m², this weight loss is obtained by using various methods namely diets by taking the least calories and trying to reduce 800 to 1500 kcal / d thus allowing to lose 500 to 1000 grams per week this result is intensified by physical exercise that helps maintain the weight lost these two measures are only indicated in case of overweight (BMI between 25 and 29 kg / m²), in case of obesity with a BMI > or equal to 30 or > or equal to 27 with arterial hypertension, diabetes, dylipidemia it is the indication of the diet with physical activity with the use of drugs such as Sibutramine which ensures the suppression of the appetite it is a strictly contraindicated drug for hypertensives patients, cardiac patients, arrhythmia and a history of myocardial infarction , or Orlistat, which inhibits the secretion of lipase by the pancreas, thus blocking the absorption of 30% of the ingested fats, when the BMI is > 40 or > or equal to 35 with arterial hypertension, diabetes, dylipidemia, diet and physical activity are first started, in the case of failure we try the medicinal prescription otherwise the bariatric surgery finds its place [4]. The gastric band is one of the alternatives that surrounds the stomach with a silicone ring that delimits an upper pocket of about 15 cm³ inside the silicone band is a balloon connected to a small box that is implanted in the wall of the abdomen, the chinking of the stomach can be accentuated or reduced on demand, it is a technique that is increasingly neglected with recurrence and weight loss that is not significant compared to other surgical techniques, a second surgical technique which is vertical stapled gastroplasty which consists in vertically placing four rows of staples in order to reduce the gastric bag and a narrow evacuation channel is created which is

reinforced by an inextensible collar in Marlex *, Prolene * or Gortex * to avoid distension, then the gastric bypass or gastrointestinal short circuit which is a very common technique in the United States, it consists to completely close the stomach with staples leaving a pocket of about 10 to 20 ml at the top, then this pocket is treated with an intestinal loop in Y this surgery favors the "dumping syndrome" which consists of a feeling of severe discomfort, with paleness, sweating and palpitations ten minutes after the ingestion of sugars or fats, it is the most effective surgical technique for weight loss but these surgeries are not without risks per and post operative such as pulmonary embolism, pulmonary edema, pulmonary atelectasis, infection, deficiencies due to repeated vomiting and persisant, disgust for certain foods (meat), malnutrition, nervous disorders, anemia, a tendency to bulimia and dietary compulsions, depression and various psychiatric disorders that may lead to suicide [5,6].

In certain situations, as in the case of our series, we have been brought back to operated patients whose BMI exceeds recognized standards, following medical indications, and whose per and postoperative complications have been minimal.

CONCLUSION

The management of the obese is very delicate and not without danger, requiring close monitoring by encouraging and supporting the patient to allow him to maintain and continue his fight against his pathology.

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