COMPLEXE CHIRURGICAL
GRS MONTRÉAL

OCTOBER 2020

PHALLOPLASTY, RADIAL FOREARM FREE-FLAP (RFF) TECHNIQUE

INFORMATION BOOKLET

PART **A**

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GRS MONTRÉAL

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INFORMATION BOOKLET

PART A

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COMPLEXE CHIRURGICAL
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1 GENERAL INFORMATION

Thanks for choosing the Complexe chirurgical CMC for your surgical experience.

This booklet has been designed to support you from the beginning to the end of your surgical experience. It is divided into three parts:

PART A. This part provides you with information about your surgical procedure including its risks and possible complications.

PART B. This part will be sent to you attached to the email confirming your surgery date; it will give you information about your surgical procedure and how to prepare for it.

PART C. This part, which will be sent at the same time as Part B, contains important postoperative tips on hygiene, mobility, and pain relief. These recommendations will help you recover faster and facilitate your convalescence.

This booklet (which includes Parts A, B, and C) contains essential information for your preoperative care, your surgery, and your postoperative care. Please bring it with you on the day of your surgery.

The GRS Montreal team is always available to answer any questions and any additional information requests from you or any other health professionals involved in your surgical process. All our contact information can be found further along in this booklet.

1.1 COMPLEXE CHIRURGICAL CMC

THE COMPLEXE CHIRURGICAL CMC COMPRISES THREE ENTITIES:

- GRS Montréal
- Centre Métropolitain de Chirurgie (CMC)
- Maison de convalescence Asclépiade

The Complexe chirurgical CMC has more than 110 employees who are distributed across its three entities. The surgical team is composed of Dr. Pierre Brassard, Dr. Maud Bélanger, Dr. Chen Lee, Dr. Alex Laungani and Dr. Valérie Brousseau as well as their authorized representatives and delegates, their administrative staff, and their healthcare staff and their attendants. In addition, the Complexe chirurgical CMC team also includes other independent doctors and healthcare professionals who provide medical care and other types of care and health treatments within the Centre Métropolitain de Chirurgie, or in collaboration with the surgical team.

GRS MONTRÉAL

GRS Montréal is composed of three teams:

- **Administrative services,** which oversees the progress of your personal file and of the receipt of the documents until the day of your surgery;
- **Preoperative clinical nurses**, who assess your medical file in collaboration with the surgeon and the anesthesiologist; and
- **Postoperative clinical nurses,** who provide postoperative care and answer all questions following your surgery and your return home.

GRS Montréal also offers coordination services for your stay. Contact us to find out about your eligibility for the various options offered.

CENTRE MÉTROPOLITAIN DE CHIRURGIE

The Centre Métropolitain de Chirurgie, accredited with Exemplary Standing by Accreditation Canada (section 1.3), is the only private hospital centre in Quebec. All surgeries are performed at the CMC, which includes four operating rooms, one day surgery unit, and one hospitalization unit. Its priority is ensuring a high standard of healthcare and surgical services while meeting the highest standards of continuous health and safety services.

MAISON DE CONVALESCENCE ASCLÉPIADE

The Maison de convalescence Asclépiade is a postsurgical recovery centre for patients who underwent a genital surgery. This warm and nurturing environment helps our patients to focus on their postoperative care and recovery. Our patients are accompanied by competent staff from whom they learn how to perform their postoperative care and are taught the self-care procedures needed for their return home.

1.2 FOOD SERVICES

During your stay at the Complexe chirurgical CMC, you will be served three meals a day. They are prepared on site and are made from fresh, quality ingredients. You will have access to a variety of beverages (juice, tea, coffee, etc.) as well as fresh fruit at all times. Only serious food allergies will be taken into consideration and must be mentioned in advance in your preoperative questionnaire.

For example:

- nuts and peanuts
- shellfish
- gluten
- lactose intolerance
- etc.

If you are on a vegetarian or vegan diet, meals may be made available, but please let us know in advance.

Please note that it will not be possible for us to accommodate individual dietary preferences that are not related to a health problem. A common refrigerator is available to patients at Asclépiade for storing personal food.

1.3 WHAT IS ACCREDITATION CANADA?

Accreditation Canada is a not-for-profit organization that is dedicated to working with patients, policy makers, and the public to improve the quality of health and social services for all.

We work to bring the best of health care from around the world home, and vice versa. We work closely with health and social services organizations in Canada and abroad to develop a sustainable culture of improvement that betters safety and efficiency, working to save and improve lives.

From the standards we use to the frontline assessments we conduct and everything in between, patients and families are full partners in what we do.

Source : https://accreditation.ca/about/?acref=self

1.4 PHONE RESOURCES

BEFORE AND DURING YOUR VISIT TO THE COMPLEXE CHIRURGICAL CMC

GENERAL INFORMATION 514 288-2097

HOLIDAY INN LAVAL ..... 1 888 333-3140 (TOLL FREE)

ADMISSION OR CHANGE OF HEALTH STATUS THE DAY BEFORE YOUR SURGERY: ..... 514 332-7091 EXTENSION 232

DURING YOUR RECOVERY AT HOME

You may reach the Maison de convalescence Asclépiade for any questions about postoperative care or if your family doctor has any questions about your surgical procedures. Please note that there is a 24 to 48-hour response delay. For an emergency, please dial 911 or go to the Emergency Room of the hospital nearest you.

THE MAISON DE CONVALESCENCE ASCLÉPIADE 514 333-1572
ASCLEPIADE@CMCMONTREAL.COM

INFO-SANTÉ: QUÉBEC 811

EMERGENCY SERVICES IN YOUR AREA: CANADA 911

YOUR FAMILY DOCTOR ..... _____

YOUR PHARMACIST ..... _____

COMMUNITY HEALTH SERVICES IN YOUR AREA (QUEBEC: CLSC) ..... _____

COMMUNITY RESOURCES (QUÉBEC)

ACTION SANTÉ TRAVESTI(E)S ET TRANSSEXUEL(LE)S DU QUÉBEC (ASTT(E)Q) ..... WWW.ASTTEQ.ORG

AIDE AUX TRANS DU QC WWW.ATQ1980.ORG

HELP-LINE AND 24 HRS INTERVENTION ..... ECOUTE@ATQ1980.ORG
TOLL FREE: 855 909-9038 #1

FONDATION ÉMERGENCE ..... WWW.FONDATIONEMERGENCE.ORG

LGBT FAMILY COALITION ..... WWW.FAMILLELGBT.ORG

INTERLIGNE ENGLISH OR FRENCH ..... WWW.INTERLIGNE.CO

TOLL-FREE 24-HOUR PROFESSIONAL CRISIS LINE: 1 888 505-1010

1.5 DISCLAIMER

The information in this booklet (including Parts A, B, and C) must not be considered as medical advice. This information is provided for educational purposes. It is not a substitute for a consultation with a doctor, nurse, or other healthcare professional. If you have any questions about your personal medical situation, please consult your healthcare professional.

2

WHAT IS PHALLOPLASTY?

PHALLOPLASTY includes several surgical procedures that aim to construct male genitalia that looks as natural as possible. The surgery is divided into several steps that may vary from patient to patient.

Generally, they are the three following steps:

The first step is a surgical procedure that consists of creating a phallus from a skin flap from a specific region of the body which is predetermined with the surgeon and that will be grafted to the genital area.

The second step is to construct the urethra that will allow urination through the phallus in a standing position.

The third step is the insertion of testicular and erectile implants that will allow for penetrative sex.

3 MANDATORY PREREQUISITES FOR PHALLOPLASTY

HYSTERECTOMY

A hysterectomy with removal of the cervix must have been performed at least six months before the first step of phalloplasty.

There are two options:

- removal of the uterus only, also called “total hysterectomy”; and
- removal of the uterus, fallopian tubes, and ovaries, also called “total hysterectomy with salpingo-oophorectomy”.

The choice of either option is personal. During the hysterectomy, most of the vaginal cavity can be removed since only 2 cm will be used for phalloplasty. You can discuss these options with your attending physician and/or gynecologist to help you make an informed decision.

BODY MASS INDEX (BMI)

Before phalloplasty can be performed, it is important to know that you must have a healthy weight or a BMI not exceeding 30, without excessive fat accumulation in the abdominal area.

Being overweight and abdominal fat can compromise the connection of blood vessels during the procedure and lead to significant surgical complications. If the BMI is higher than 30, weight loss will be required.

Patients with a high BMI also have a decreased potential for healing and decreased satisfaction with surgical results. If this is your case, you will be able to discuss the various options during the meeting with the surgeon and the nurse.

MEETING WITH THE SURGEON

A **MANDATORY** meeting with the surgeon and a nurse from the preoperative clinic will take place in person at the Complexe chirurgical CMC prior to the first step of phalloplasty. During this meeting, you will receive all the information about phalloplasty and will be able to ask your questions.

Based on your history, your anatomy, and the Allen Test, the surgeon will determine the source of the skin flap that will be used to construct the phallus.

The Allen Test is used to determine if the blood vessels in the arm are healthy enough to allow adequate blood flow after Step 1, since part of the venous and arterial networks will be removed.

A number of factors influences the origin of the skin flap, such as previous injection drug use, surgery to the forearm or groin, removal of varicose veins in a leg, a diagnosis of arteritis or arteriopathy of the lower limbs, or peripheral vascular or arterial disease. You may also be asked to undergo additional tests.

During this same meeting, you will receive the necessary information on the possible options available to you if the skin of the forearm could not be used to construct the phallus.

HAIR REMOVAL

Permanent hair removal from the area of the donor arm that will be used for the construction of the penile urethra is a strict requirement to avoid possible complications. Permanent hair removal must be completed, and no hair must have grown for at least three months prior to the first step.

The area to be depilated will be determined during your first consultation with the surgeon. **It is important not to start hair removal before meeting your surgeon to avoid unnecessary sessions.**

Afterwards, you will need to meet with a hair removal technician in your region. Several techniques are used for permanent hair removal. Skin color, pigment, and hair thickness are factors that influence the hair removal technique used. The depilation technician will explain the different techniques available and which one will be the most appropriate for you.

The hair removal process is a long process and the related costs can be high. You must therefore plan the necessary time and budget.

TOBACCO AND CANNABIS

Smokers are not eligible for phalloplasty because of the very high risk of complications during and after surgery.

Nicotine has a direct and very harmful effect on the small blood vessels used and connected during certain stages of phalloplasty. These will tighten, causing a decrease in blood circulation and affecting the quality and timing of the healing process.

You must therefore have stopped smoking tobacco and all other related products at least six months before and after the phalloplasty.

This also applies to inhaled cannabis. If you have a medical prescription, you will have to discuss it during the meeting with the surgeon and the nurse.

4 THE DETAILED STEPS OF PHALLOPLASTY

THE FIRST STEP INVOLVES A SURGICAL PROCEDURE CONSISTING OF:

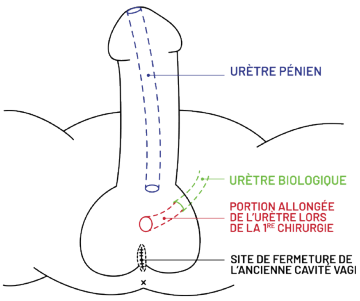
- the creation of a phallus from a skin flap and fatty tissue of the forearm involving the removal of blood vessels and nerves, which will be grafted to the genital area;
- the burial of the clitoris at the base of the phallus;
- the creation of the penile urethra within the phallus;
- the lengthening of the biological urethra;
- the creation of the glans;
- the creation of the scrotum;
- the closing of the vaginal cavity; and
- the removal of a layer of skin from the thigh to compensate for tissue loss on the donor arm.

THE SECOND STEP INVOLVES SURGERY TO CONSTRUCT THE URETHRA.

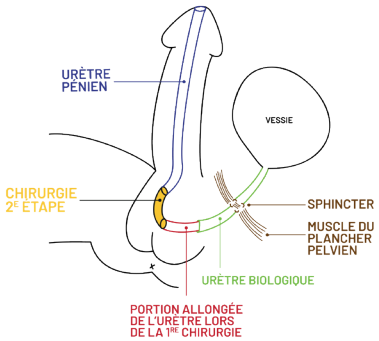
This procedure connects the penile urethra (located inside the phallus) to the biological urethra that was elongated in the first step. The connection of the urethra is made by creating a tube from the skin of the scrotum between the two openings.

Note that the anatomy of the phallus is composed of skin, fatty tissue, blood vessels and nerves. It does not contain any muscles or sphincter, which means that after Step 2 you may have to empty the urine temporarily or permanently manually from the portion of the phallus by applying pressure to the phallus.

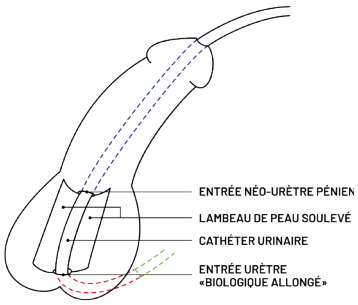
EXEMPLE DE DESSIN PHALLOPLASTIE
– 1ÈRE ÉTAPE –



VUE LATÉRALE PHALLOPLASTIE
– 2E ÉTAPE –

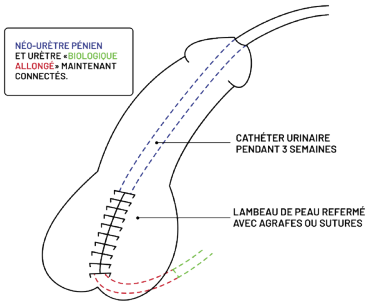


DESSIN EXEMPLE - CHIRURGIE 2E ÉTAPE
** Ligne pointillé signifie «à l'intérieur»*



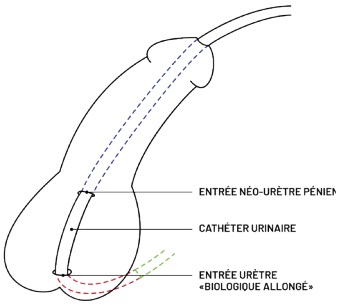
DESSIN EXEMPLE - CHIRURGIE 2E ÉTAPE

** Ligne pointillé signifie «à l'intérieur»*



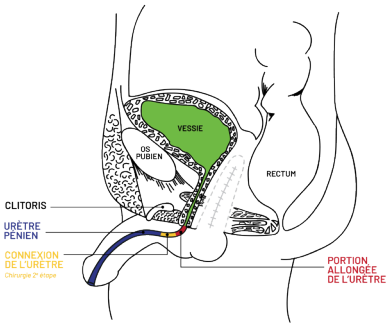
DESSIN EXEMPLE - CHIRURGIE 2E ÉTAPE

** Ligne pointillé signifie «à l'intérieur»*



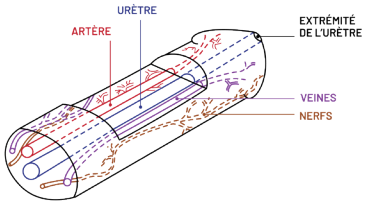
DESSIN EXEMPLE POST-PHALLOPLASTIE

– 2E ÉTAPE: CONNEXION URÈTRE –



DESSIN APPROXIMATIF - COMPOSITION DU PHALLUS

** Ligne pointillé signifie «à l'intérieur»*



A minimum waiting period of six months is necessary after the first procedure before planning the second step. Permanent hair removal from the area that will be used to construct the urethra is also required to avoid complications. Note that it is impossible to determine in advance which area will be depilated since it must be evaluated after Step 1 and thus it is at this time that you will receive information about hair removal.

THE THIRD STEP INVOLVES SURGERY TO INSERT THE ERECTILE IMPLANT AND TESTICULAR IMPLANTS.

This procedure will allow for the erection of the phallus and the possibility of penetrative sex.

You will have to wait a minimum of three to six months after the second step and have no urinary problems before planning the third step. If complications arise, they will have to be completely treated before the implants can be inserted.

*Depending on the surgeon's assessment, the second and third steps may be reversed.

Each patient will have to decide whether to undergo one, two, or all three steps of phalloplasty. This choice remains personal and must be made according to your needs, your expectations, and the impact on your daily life. A few factors may influence your choice, such as the desire to urinate while standing, the desire to have penetrative sex, etc.

The estimated time to complete the three stages of phalloplasty can vary from two to three years, including preparation and convalescence periods.

5 SURGICAL TECHNIQUE FOR PHALLOPLASTY – RFF (RADIAL FOREARM FREE-FLAP)

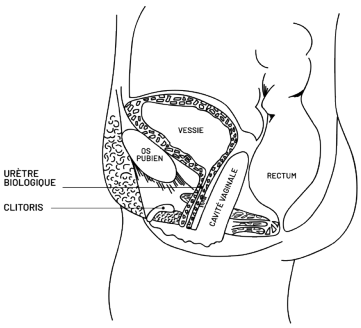
The surgical technique currently recommended by the GRS Montréal surgical team is phalloplasty by removing a free flap from the forearm.

Dr. Pierre Brassard's team has redefined the standards for phalloplasty by making improvements to its surgical technique, which has earned GRS Montréal the reputation of being a leader in the field of gender affirmation surgery.

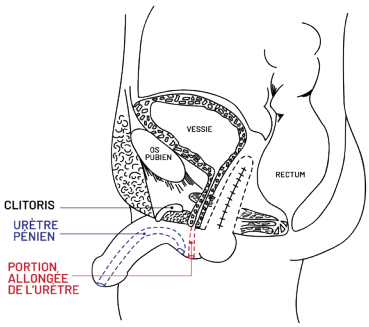
The surgical technique used mainly includes:

- removal of a flap of skin (skin, nerves, vein and artery) over the entire thickness of the forearm on the side predetermined with the surgeon to form the phallus, including the creation of the urethra in the form of a skin tube inside the phallus;
- removal of a skin flap of partial thickness (thin) from the lateral part of the thigh, which will then be grafted onto the donor forearm;
- creation of the glans;
- closure of the vaginal cavity;
- creation of the scrotum with the skin of the labia majora;
- lengthening of the biological urethra using your own tissues (labia minora, skin of the clitoral hood, 2 cm flap of the vaginal cavity) to be positioned in the middle of the scrotum;
- burial of the clitoris at the base of the phallus;
- positioning of the phallus in the center of the genital region; and
- connection of the vascular and nervous networks of the phallus with as many blood vessels as possible to allow good sensitivity and optimal blood circulation.

DESSIN ANATOMIE PRÉ-OPÉRATOIRE
– 1ÈRE ÉTAPE: PHALLOPLASTIE –



DESSIN EXEMPLE POST-PHALLOPLASTIE
– 1ÈRE ÉTAPE –



6 EXPECTED RESULTS

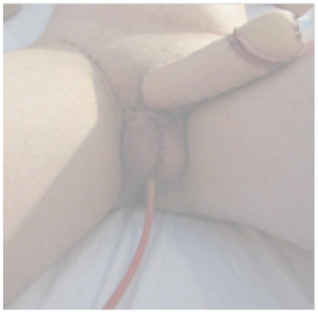
Due to multiple factors that are unique to each individual, results may vary from person to person. These results may vary according to the age, weight, quality, and elasticity of the skin at the donor site, the scarring process, lifestyle habits and the overall health of the patients, etc.

The radial forearm free-flap technique produces satisfactory esthetic and functional results.

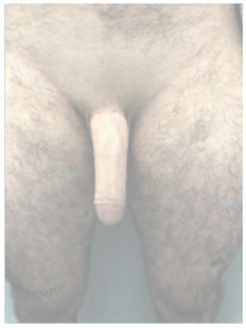
The expected results following the three steps of phalloplasty are:

- complete construction of external male genitalia including a phallus which will be proportional to the size of each individual, a glans, and a scrotum;
- construction of the urethra to allow urination via the phallus, in a standing position;
- possibility of penetrative sex; and
- erogenous zones with the possibility of sexual pleasure.

Nine days after surgery



One year following the third step of phalloplasty



STEP 1: CREATION OF THE PHALLUS WITH THE RADIAL FOREARM FREE-FLAP TECHNIQUE

AVERAGE LENGTH OF SURGERY	ANAESTHESIA	HOSPITALIZATION AT THE CMC	CONVALESCENCE AT ASCLÉPIADE	CONVALESCENCE AT HOME	RESUMING OF PHYSICAL AND SPORTS ACTIVITIES	LEAVE OF ABSENCE
6 to 8 hours	Regional and General	3 nights postsurgery	7 nights postsurgery	8 to 12 weeks on average	12 weeks	8 to 12 weeks

STEP 2: CONSTRUCTION OF THE URETHRA

AVERAGE LENGTH OF SURGERY	ANAESTHESIA	HOSPITALIZATION AT THE CMC	CONVALESCENCE AT ASCLÉPIADE	CONVALESCENCE AT HOME	RESUMING OF PHYSICAL AND SPORTS ACTIVITIES	LEAVE OF ABSENCE
1.5 hours	Regional or General	1 night postsurgery	none	3 weeks on average	4 weeks	6 weeks

STEP 3: INSERTION OF PENILE AND TESTICULAR IMPLANTS

AVERAGE LENGTH OF SURGERY	ANAESTHESIA	HOSPITALIZATION AT THE CMC	CONVALESCENCE AT ASCLÉPIADE	CONVALESCENCE AT HOME	RESUMING OF PHYSICAL AND SPORTS ACTIVITIES	LEAVE OF ABSENCE
3 hours	Regional or General	1 night postsurgery	none	3 weeks on average	12 weeks	8 weeks

7 ADDITIONAL INFORMATION ABOUT THE SURGICAL PROCEDURE

7.1 EATING HABITS

If your diet is vegetarian or vegan or if your body mass index is below the optimal values (18.5), your surgeon may prescribe additional blood tests. We also advise you to consult your treating physician or a nutritionist to ensure that your diet contains all the necessary elements. They will be able to establish a nutritional plan that will allow you to adopt a diet that promotes healing.

7.2 ANAESTHESIA

During the procedure, in addition to the surgical team, you will be under the care of a team composed of an anesthesiologist and an inhalation therapist. Different anesthetic (to numb and put you to sleep) and analgesic (to relieve pain) techniques may be used during surgery.

For the first step of phalloplasty, you will be under general anesthesia, which means that you will voluntarily be immersed in very deep sleep for the entire duration of the procedure. To better control the pain on waking, unless there are medical contraindications, regional anesthesia will be combined with general anesthesia to numb the lower part of your body. For the second and third steps, the anesthesiologist will determine which of the two methods, general or regional anesthesia, is the most appropriate.

7.3 URINARY CATHETER

A urinary catheter will be inserted into your bladder through your natural tract (urethra) during surgery. It will be used to empty your bladder and will be kept for a period of three weeks. During your stay, you will receive instructions related to the urinary catheter.

On your discharge, we will give you a prescription to have it removed by a healthcare professional in your region.

7.4 DRAINS

Drains will be installed during the procedure. These are tubes that prevent the accumulation of liquid under the skin. The nursing staff will be responsible for the care of the drains. These drains will be removed by our nursing staff a few days after surgery.

7.5 DRESSINGS

A cast splint will be placed on the donor arm during surgery to protect the skin graft. This splint will be removed four days after surgery and a dressing will be applied and reapplied every day until the wounds heal, which will take about three to four weeks. You will be taught how to redo the dressing yourself at home.

A dry bandage will be placed on the genital area. This bandage is necessary for the first few days after the operation and will be adapted as healing progresses.

An absorbent dressing, protected by a transparent bandage, will be placed at the donor site of the thigh during the procedure and will be removed a few days later. Another dressing on the thigh may be necessary until the wound has healed.

Dressing instructions will be given to you during your stay.

7.6 BRUISES AND EDEMA

The genitals contain many blood vessels. It is quite normal to develop bruises after a surgical procedure. The bruises will disappear in a few weeks.

Swelling is also a normal reaction of your body that you may observe in the genital area and hand of the donor arm. The swelling will gradually decrease over time and with the help of exercises which you will be taught during your stay at Asclépiade.

7.7 PAIN MANAGEMENT

It is normal to feel pain after a surgical procedure. In the postoperative period, it is important to provide effective pain relief to promote a quick recovery and for resuming your activities.

During your stay, team members will provide you with information on pain relief methods.

In addition, you will find tips to help you relieve your pain in Part C of this booklet.

7.8 DOPPLER

After surgery, the nursing staff will regularly validate the blood flow inside the phallus by using a Doppler. The Doppler is a specialized medical device that checks the blood flow of the small blood vessels under the skin. This test is not painful.

7.9 HEALING

Complete healing can take nine to twelve months following the first stage of phalloplasty.

Healing for Steps 2 and 3 can take between three and six months each.

7.10 SEXUAL HEALTH

The appearance of the genitals is not necessarily associated with sexual satisfaction or pleasure. Rather, they are related to a range of non-physiological factors. Even with optimal functional results and preservation of the clitoris, it is difficult to predict the orgasmic capacity that will be retained after phalloplasty. It is recommended to explore and massage the genital area to identify erogenous zones and stimulate the recovery of sensation.

7.11 PELVIC FLOOR

The pelvic floor is a group of muscles below the pelvis. These muscles support the urinary tract (bladder, urethra), the digestive tract, and control the orifices that hold urine and stool. They also have a role to play in the perception of sensations in the genitals.

After surgery, some people will have better sensitivity in the perineum. Others will have more difficulty perceiving certain sensations.

Some physiotherapists have developed expertise in perineal and pelvic rehabilitation. These specialists can teach you various techniques for stretching and relaxing the pelvic floor muscles. A series of personalized exercises can be offered to you in order to reduce genital pain, improve perineal sensitivity, improve your orgasmic abilities, and, thus, enhance your sexual satisfaction.

After surgery, perineal rehabilitation may be indicated for the treatment of urinary complications and improved sexual health.

7.12 REPRODUCTION AND FERTILITY

Phalloplasty is a gender affirmation surgery that will permanently and irreversibly alter your genitals. Your treating physician, healthcare professionals, and fertility preservation specialists can explore your options with you. We recommend that you have a discussion and reflection on this subject before proceeding with phalloplasty.

8 RISKS AND COMPLICATIONS

8.1 INFORMED CONSENT

The decision to undergo surgery must be made in an informed manner and after obtaining all the necessary information and all the answers to your questions. Complications may occur during the procedure but also in the weeks following. Certain complications are common to all surgical procedures and others are more specific to phalloplasty.

8.2 INFORMATION ABOUT RISKS AND COMPLICATIONS INVOLVED FOR PHALLOPLASTY

This section will provide you with the information you need to consent to the surgery freely and knowledgeably.

Any surgical procedure involves risks and may involve complications and side effects. Our surgical team and clinical staff are trained to minimize the risks associated with phalloplasty and to intervene according to proven and rigorous protocols in case of complications.

It is important for you to know and accept that although our experience shows a high rate of success and satisfaction, we cannot in any way guarantee the esthetic and functional results of this surgery. Although we take all available means and apply the highest professional standards, it is possible that the result of the operation may not be entirely satisfactory and that it may be necessary to resort to other procedures or treatments that may then be offered to you.

Your cooperation at all stages is essential. For instance, we expect you to inform us of any medical conditions or problems so that we can assess their possible impact on the surgery, anesthesia, or other care that may be required. It is essential that you read this section carefully and take the time to think about it.

If you feel a need for additional explanation about the content of this section, we invite you to discuss this with your surgeon during the consultation. Prepare a list of your questions.

8.3 BLOOD CLOTS AND PULMONARY EMBOLISM

These complications can occur with any type of surgery. They are relatively more common during pelvic surgery and for patients taking hormone supplements. To prevent the formation of a clot and to facilitate blood circulation after surgery, sequential pressure stockings will be fitted during surgery and kept on for 48 hours. These complications require treatment in the hospital with follow-up with a medical specialist.

8.4 BLEEDING

The risk of bleeding is associated with all surgeries, especially when they take place in the perineal and genital area. Bleeding requiring a transfusion of blood products is rare but can occur. To minimize the risk of bleeding, you should abstain from taking Aspirin (ASA), anti-inflammatory drugs, natural products, and alcohol 10 days before surgery.

8.5 HEMATOMAS AND SEROMAS

A hematoma is an accumulation of blood beneath the skin while a seroma is related to an accumulation of clear body fluid. In both cases, it may be a mild accumulation, but these complications can also result from a more serious accumulation that will require drainage to remove excess blood or fluid beneath the skin.

8.6 INFECTIONS

Infections are common and frequent risks in many surgical procedures. Infection occurs when tissues are affected by microorganisms such as bacteria and/or other pathogens. An infection is treated with antibiotics administered orally or intravenously.

You will receive antibiotic tablets as a preventive measure to reduce the risk of infection.

Local infection with accumulation of pus (abscess) requires drainage. An untreated infection could lead to partial or total necrosis (cell death) of the genitals.

8.7 ALLERGIES OR INTOLERANCE TO PRODUCTS/MATERIAL USED

In rare cases, an allergic reaction or sensitivity to soaps, ointments, adhesive tape, or stitches may occur during or after the surgical procedure. Generally, this complication is fairly easy to treat. Serious allergic reactions are extremely rare and may require hospitalization.

8.8 REOPENING (DEHISCENCE) OF WOUNDS AND/OR SLOW HEALING

The healing process is influenced by a series of factors: edema, infection, strain on wounds, deficient blood circulation, alcohol use, smoking, poor nutrition, etc. These factors can slow healing and cause the reopening of wounds that require a longer healing period. Generally, this does not affect the final appearance of the operated area.

8.9 INJURIES TO OTHER PARTS OF THE BODY

In rare cases, blood vessels, nerves, and muscles may be damaged during a surgical procedure.

8.10 TOBACCO

Smoking increases the risk of complications. Smokers have an increased risk of infectious, pulmonary, respiratory, and cardiovascular complications. Smoking can cause delayed healing of surgical wounds and increase the risk of losing part or the entire phallus.

8.11 LOSS OF SENSATION AND PAIN HYPERSENSITIVITY

Nerves are removed from the forearm and connected to nerves in the genital area to maintain sensation. The clitoris is preserved and buried at the base of the phallus to maintain orgasmic capacity. It is possible that some of the reconnection of the nerves may fail and that partial or total loss of sensation and/or numbness may result.

Following surgery, you may experience numbness due to swelling and stretching of the tissues. It is possible that part of the genital area will not regain sensitivity or, on the contrary, that some areas will remain hypersensitive and painful. This can affect the sexual response and alter the ability to experience pleasure. This situation should return to normal after a few months. However, numbness in some areas may persist and the sensation may not return completely.

8.12 ENLARGED AND THICK SCARS (KELOID)

The scarring process differs from person to person and scars may become larger and/or thicker on the arm, thigh, phallus, or genital area. Your own scarring history should be a good indication of what you can expect. If your scars are large and/or thick, they can be corrected with medications such as steroid injections and silicone dressings.

8.13 UNSATISFACTORY RESULTS AND/OR NEED FOR SCAR REVISION

The surgeon may propose secondary corrective surgery if they deem it necessary to restore physical integrity by correcting acquired deformities, and that are medically required.

Corrective surgeries performed for cosmetic purposes are at the patient's expense.

8.14 SKIN GRAFT AND COLOURATION OF THE DONOR SITE

In the first step, a skin flap of full thickness is taken from the forearm until the muscles and tendons are exposed, for the construction of the phallus. A thin layer of skin from the thigh is used to cover the loss of forearm tissue. It is possible during the scarring process that part of the graft or the entire graft may not adhere to the donor arm, leading to partial or complete exposure of the muscles or tendons. This requires immediate special medical attention.

Healing of the skin contour of the forearm may be irregular and very slow in some people. Abnormal and/or excessive scarring may also occur making the appearance of the forearm less esthetic. Some treatments or surgery are sometimes possible to improve the appearance of the healing.

The surgical site of the thigh may show intense redness at the beginning of the healing process and then, over time, take on a paler color. The redness of the scars will diminish when you resume your activities and may take up to a year to fade, but it can also remain permanently. The color of the forearm surgery site may also be affected by changes in temperature (cold or hot).

Itching may become chronic in the thigh or arm and skin sensitivity may be temporarily or permanently diminished.

The skin graft may not restore the normal functions of intact skin. Grafted skin is more fragile than normal skin.

Very rarely, chronic pain may develop because of skin grafting.

NON-COMPLIANCE WITH POSTOPERATIVE INSTRUCTIONS

It is very important that the forearm skin graft is not subjected to excessive force, swelling, abrasion, or improper movement until it has healed completely. The consequence could be the loss of the graft. Personal and professional activities must be adjusted accordingly.

8.15 PARTIAL OR TOTAL LOSS OF PHALLUS RELATED TO ISCHEMIA

Phallus grafting to the genital area requires the connection of multiple small blood vessels and nerves and is very fragile, especially in the first few days after surgery and requires specialized care.

Ischemia is a lack of blood flow that leads to tissue death (necrosis) due to lack of oxygen.

A clot can form inside a blood vessel in the phallus and block the blood supply to part of the phallus. This complication requires immediate surgery to remove the clot and can lead to necrosis.

Necrosis occurs when the blood supply to a tissue is cut off or obstructed for a period of time. Tissues with no blood supply do not survive and this can lead to partial or total loss of the phallus. If the tissue has suffered from a lack of blood supply, it is possible that part of the phallus may become detached and the rest of the healthy tissue will continue its healing process. Although very rare, if the blood flow has stopped completely inside the phallus for a long time, it is possible that the phallus may not survive, and total loss of the phallus may result.

8.16 RECTO-VAGINAL FISTULA, PERINEAL SINUS, AND PERITONITIS

A fistula is an abnormal connection between two spaces. It can occur following a phalloplasty and result in abnormal connection between the old vaginal cavity and the rectum. Surgery is then required to close the fistula.

A perineal sinus is a small path or pocket that forms after the vaginal cavity is closed where fluid can accumulate. Surgery is required to remove it.

Peritonitis can be caused by a perforation from the vaginal cul-de-sac to the peritoneal cavity that is undetected during surgery or in the following days. Surgery will be essential.

8.17 UROLOGICAL DISORDERS

Genital surgery can lead to complications in the urinary tract. A urinary catheter is required for a minimum of three weeks following surgery. The bladder may produce spasms in response to the catheter that can cause urine leakage. Normally, the spasms stop when the catheter is removed. On your discharge, you will receive a prescription for urinary spasms. Signs and symptoms of urinary tract infections should also be monitored. They will be detailed in Part C of this booklet.

When the urinary catheter is removed, the urinary stream may be irregular and off-center due to changes in the anatomy of the urethra. Difficulty controlling your urge to urinate, and involuntary leakage of urine may occur following surgery. The causes are different from person to person and should be discussed with your doctor. A fistula, stenosis, or diverticulum may also form in the portion of the urethra that was lengthened during surgery.

A urethral fistula is an abnormal connection between two spaces. It may be an opening in the skin at the scrotum or phallus through which urine can flow. It can heal by itself but may also require corrective surgery as indicated by the surgeon.

A urethral stricture is an abnormal narrowing of a portion of the urethra, which prevents urine from flowing with a normal flow, creating urinary difficulties such as urinary retention or sometimes incontinence. This requires medical care such as dilations or surgical procedure to remove the stenotic area.

A diverticulum is a cavity in the shape of a small “pouch” that can form in part of the urethral wall where urine can collect. Surgery is often needed to remove the diverticulum. A diverticulum may also form in the old vaginal cavity, which also requires surgery to remove it.

8.18 HYPERGRANULATION

There are several stages in the wound healing process, including granulation. Hypergranulation is an excess of granulation tissue that can slow down the healing process. When visible, this tissue is bright red, bud-like, granular in appearance and can bleed easily. This tissue can form on surgical wounds on the arm, on incisions in the genital area, and inside the urethra. Treatment with silver nitrate may be necessary depending on the location of the hypergranulation.

8.19 HAIR REGROWTH IN THE URETHRA

Hairiness is influenced by various factors including skin color and hormones. To avoid complications, permanent hair removal from the part of the arm that will be used for the construction of the inside of the urethra is mandatory. Despite permanent hair removal, it is possible that hair may grow back inside the urethra after a certain amount of time. This can cause urinary problems.

8.20 COMPARTMENT SYNDROME

Injuries to leg nerves or position-related muscles during surgery (stirrups) can lead to this complication. A compartment is a group of muscles. Severe swelling can cause increased pressure in the tissue around a muscle group and require urgent surgery to reduce the pressure on the leg muscles. This is a very rare complication, but it requires special medical attention in a specialized centre.

8.21 PERSISTENT EDEMA OR POOR CIRCULATION IN THE HAND

Because of the harvesting of large vessels from the donor forearm, swelling may persist in the donor arm hand or circulation may be disrupted, leading to cold intolerance, stiffness, or a feeling of a stiff hand. There may also be a decrease in hand strength.

8.22 PSYCHOSOCIAL SUPPORT

Gender affirmation surgeries generate multiple changes in the life of the patient. To successfully adapt to all these changes, it may be necessary to seek the help of healthcare professionals in addition to that of your loved ones.

You may sometimes experience feelings such as:

- discouragement with postoperative care;
- boredom or isolation during your recovery period;
- sadness over the negative reaction of certain people close to you;
- exhaustion due to pain and the urge to cease important care for your recovery;
- regrets or doubts about your decision to seek surgery;
- etc.

If this is the case do not hesitate to seek help from local resources for psychosocial or psychological support, or to contact a professional you trust.

9 INFORMED CONSENT

INFORMED CONSENT TO THE SURGICAL PROCEDURE

I have expressed to the Complexe chirurgical CMC and the doctors who practice there, the choice of undergoing genital surgery, namely phalloplasty.

Dr. _____ has agreed to perform this procedure and I have been given the opportunity to ask any questions I may have before signing this form.

NATURE OF THE PROPOSED SURGERY, PURPOSE, AND EXPECTED RESULTS

The surgery I am consenting to is a phalloplasty with forearm free-flap technique which consists of three steps and is intended to relieve my gender dysphoria.

I understand that the surgery will include:

- the closure of the vaginal cavity;
- the construction of the urethra, glans, and penis with a forearm flap; and
- construction of the scrotum with the skin of the labia majora.

In this way, a phallus will be created and may eventually allow the construction of the urethra and the placement of an erectile implant and testicular prostheses.

I understand that surgical results and the esthetic appearance of phalloplasty may vary from person to person. I understand that the parts that will make up my new male anatomy may be visibly and functionally different from the biological male genitalia.

ALTERNATIVES

I understand that other surgical techniques exist but that the technique chosen was chosen in an informed manner in collaboration with my surgeon from the Complexe chirurgical CMC and is the one described above.

POSSIBLE RISKS AND COMPLICATIONS

I acknowledge that all surgery carries risks and may result in complications and that by expressing my informed consent to surgery, I consent to the risks and complications that may result.

Before signing this consent, I have read Section 8 of Part A of this booklet entitled “Risks and Complications”.

It was explained to me that during surgery, unpredictable circumstances may arise that require a change in surgical approach, such as the use of tissue transplants other than those contemplated. I consent to any changes that may be required during surgery and for which I would not be able to give specific consent due to the effect of the anesthesia.

In addition to the foregoing, I fully understand the meaning and scope of the following statements, which are fundamentally related to the action to which I consent:

- This is a reconstruction of the visibly apparent genitalia so that after the procedure I will not have male genitalia that would allow me to have children;
- The procedure is irreversible. Once the vaginal cavity is closed, it will be impossible to reopen it in any way; and
- That I will have to undergo a lifetime of hormone treatment to maintain the secondary male sexual characteristics.

I freely assume, without any external constraint, the choice I make to consent to the surgical procedure and I confirm that neither the Complexe chirurgical CMC and its staff nor the physicians who practice there can guarantee me the esthetic and functional results of this procedure and that they have not made any representation to me of such a guarantee.

I certify that I have read this document (Phalloplasty - Information Booklet Part A), that I have received all the information necessary for my understanding, that I have asked my questions, that I have received answers to my satisfaction, and have had sufficient time to reflect before expressing my consent. By my signature, I certify that I voluntarily consent to the surgery.

Name *Signature*

Date

Witness *Signature*

Date

This consent will be signed upon admission to the Complexe chirurgical CMC

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