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Aesthetic Plastic Surgery

Augmentative Phalloplasty

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Abstract. Until 20 years ago, penis size (either nonerected or erected) was not mentioned, discussed, or defined even in serious books of human anatomy. The need of some men to enlarge and elongate their penile size is equivalent to the need of some women to ask for breast augmentation. The same method of transferring autologous fat into other parts of the body can be used in male patients for augmentative phalloplasty. The circumference of the penis increases 2 to 3 cm, and before of a heavier penis, the length increases 1 to 2 cm. If more lengthening is desired, subtotal dissection of the ligament fundiforme penis below the symphysis could be done, pull the corpus cavernosus out, and fix the tunica albuginea at the periost. At the root of the phallus, the skin can be elongated by V-Y-plasty, and the scrotal skin can be released by 1 or 2 Z-plasties. Combining both autologous fat transfer and ligament release allows for penis elongation of 3 to 5 cm. The authors have performed augentative phalloplasty on 88 patients since 1996. They have transplanted 40 to 68 ml of pure fat. Of the 88 patients, 57 underwent autologous fat transfer only, and 31 received additional ligament release. Penis length increased 1.5 to 4.8 cm (average, 2.42 cm), and circumference increased 1.4 to 4.0 cm (average, 2.65 cm). The initial penis lengths were 6.5 to 10.0 cm (average, 8.72 cm), and the circumference were 8.0 to 10.1 cm (average, 9.18 cm) not erected. This article details a simple operative procedure to enlarge the penis and simple postoperative bandages. Patients are advised to obstain from sexual activity for 5 weeks after the surgery. Two patients who disregarded this advice had an unsatisfactory result. In one patient too, much of the grafted fat had to be removed from the preputium. No other serious complications were observed.

Key words: Augmentative Phalloplasty—Penile size—Penis—Phallus

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A simple operative procedure can be used to enlarge the volume of the penis by autologous fat transfer. At the same time, the penis can be lengthened by release of the suspension ligament below the symphisis. The male problem of penil volume insufficiency is increasing, and this operative procedure is becoming more in demand every day. Penis enlargement refers to an increase of 2 to 5 cm in length and circumference, which is to equivalent to the female nipple being raised by the same amount (2–5 cm) during breast enlargement. The indication is exactly the same. A woman with undersized breasts like a man with an undersized penis, feels insecure and questions her own sexual value (Figs. 1–3).

Psychosocial-Sexual Aspects

Sexual fitness and even a man's reproductive capacity often are falsely, identified with the size of the penis. Men with small penises are insecure about their ability to satisfy their partners sexually, and their doubts can have irritating effects on their potency. An erection can be negatively influenced by the ''grey matter'' (cerebral cortex). In those cases, potency is psychologically inhibited, and an erection might not appear. The man feels uneasy because he has little substance to offer his partner during foreplay. It is the same insecurity some women feel in their intimite lives if they consider their breasts to be undersized. Apparently, some women even accuse their partners of having modest-sized genitals. It is the same maliciousness that drives some men to mock their partners' small breasts. If that is the case, breast/penis enlargement should not be the chosen solution. What should be considered, however, is a change of partners.

Changing cubicles in sport clubs, nudist beaches, saunas, or military inspections can turn into nightmares for men with penises that are small in the

Fig. 1. Small penis of a 190-cm-tall man.
Fig. 2. Enlargement by body fat transfer and elongation by ligament release below the pubic bone: 42 mm elongation and 40 mm increase in circumference, stable 1 year after the operation.
Fig. 3. Subpubic wound caused by an iron rod in early childhood that damaged the vascular system and consequently had negative effects on the growth of the penis.
Fig. 4. Tiki, Polynesian god of fertility, on the backside of the Cook-Island dollar coin. The glans hangs below his knee.

nonerect state. It is partly for this reason that men feel relieved after penis enlargement surgery. Finally, they can undress and shower freely without turning toward the wall.

Countless books have been written about the uneasiness of men at urinals. The subject offers great inspiration for caricaturists and comedians. Penis size is therefore also of social relevance. Marc Abecassis [1] from Paris, the most experienced expert in Europe (who has performed 1,500 penis enlargement operations), said with outstanding clarity: ''One centimetre in a man's penis correlates to one kilometre in his head.'' Aref EI Saweiji [6] has made the following observation: ''A discussion about penis enlargement among men usually gives everyone a good laugh'' (Fig. 4).

Aspects from Art History

The oldest archaeological discovery that displays a phallic amulet is originally from Dolni Vestonice in the Czech province of Moravia. It belongs to the Gravette culture and dates back to 30,000 B.C. In ancient India, several images of the god Shiva exist which show him with an elongated penis, wound around the Shiva statue. Until today, Shiva-Lingam is worshipped and receives sacrificial offerings. Another archeological find from Odžak (Serbia) displays a female figure with an overdimensional pelvis belt. Looking at it from below, the statuette resembles a male penis with scrotum. The find is 7,000 years old. Kama Sutra, the ancient Indian sexual education, displays female and male sexual organs on images (or on reliefs) ''in action.''

Ancient Greek art comprises numerous male sculptures (e.g., Herkules), which are displayed with modest, resting penises. Yet statues of ithyphallic form also exist, which display overdimensional penises of Satyr and Hermes. Roman sculptures usually are modest, except for some almost caricature examples of large penises from Pompeji. The renaissance and the succeeding epochs are dominated by a factual modest style. The latest images subordinate the size of the penis to the semiotic intention of the artwork.

In 1866, the French painter Gustav Courbet, for example, painted a prone female nude with a densely haired pubic region. It was titled ''Origin of the World.'' In 1989, Miray Orlan depicted the same poseal, though hers was of a man, his penis half erect. She gave it the compelling title'' Origin of the war.'' There are reasons to believe that testosterone may in fact be partly responsible for our world's wars.

A lot of relevant data can be found in Alain Daniélon's [4] book *The Phallus*. The book's subtitle is ''Metaphor of life, Source of Joy — Symbols and Rites in History and Art.''

Reykjavik, Iceland, has a Phallological Museum. In the course of 25 years, Sigurdur Hjartarson has collected 99 penises of various mammals, which are on display. The biggest exhibit is the penis of a sperm whale, which is 3 m long and weighs 20 kg. Human exhibits are still missing. However, one man in Iceland (age, 83 years) and a German (age, 41 years) have stated in their last wills that after their deaths their genitals will be given to the museum.

Anatomy, Physiology, and Size of the Penis

The anatomy of the male penis consists of skin, arteries and veins, nerves, urethra, spongiosus, and cavernous openings that fill up with blood during an erection, which stops the venous flow from draining off. The glans and shaft harden as a result of the accumulated venous blood, which is regulated synaptically via the medulla spinalis by the autonomous nervous system of the bottom of the pelvis. The neuropsychologist M. Pantović called this a ''spinal orgasm'' because the brain is, in fact, barely involved (Fig 5 and 6).

The size of the penis is not the crucial factor in causing a female orgasm. More than 90% of all nerve endings are at the clitoris and 1 cm below the introitus vagina region. In fact, men need a larger penis mainly for themselves, to compensate for their lack of self-confindence, not for their partners, just as women usually want larger breasts, not their partners. In both cases, the decision to undergo aesthetic surgery is based on a lack of self-confidence.

Most books on anatomy do not mention penis length. In the 1960s, the two revolutionary sexologists Masters and Johnson completely abandoned the question of size in their studies. According to the Dutch sex therapist Bo Coolsaet [3], the average length of an erect penis is between 12 and 18 cm. According to the American institute for sexology, Alfred C. Kinsey, the average penis length is 7.5 cm (nonerect) and 14.5 cm (erect). Richard Casey, editor of the Canadian *Journal for Sexuality and Reproductive Medicine* and urologist, by this statement: offered relief ''In fact, the length of an erect penis is more likely to measure 13 than 15 cm'' (Figs. 7 and 8).

All kinds of variations are possible. A penis that measures 5 cm is fully capable of its physiologic and reproductive function. The most impressive erection was shown during a Discovery Channel documentary. It measured 35 cm. The same documentary also mentioned a survey conducted in Quebec, Canada, about sexual fantasies. According to the survey, 34% of the male participants were dreaming about having an enormous penis, and 29% of the female participants were dreaming about sexual intercourse with a man who has an enormous penis. Moreover, a majority of the female participants said they would like to have a relationship with a man who has a large penis.

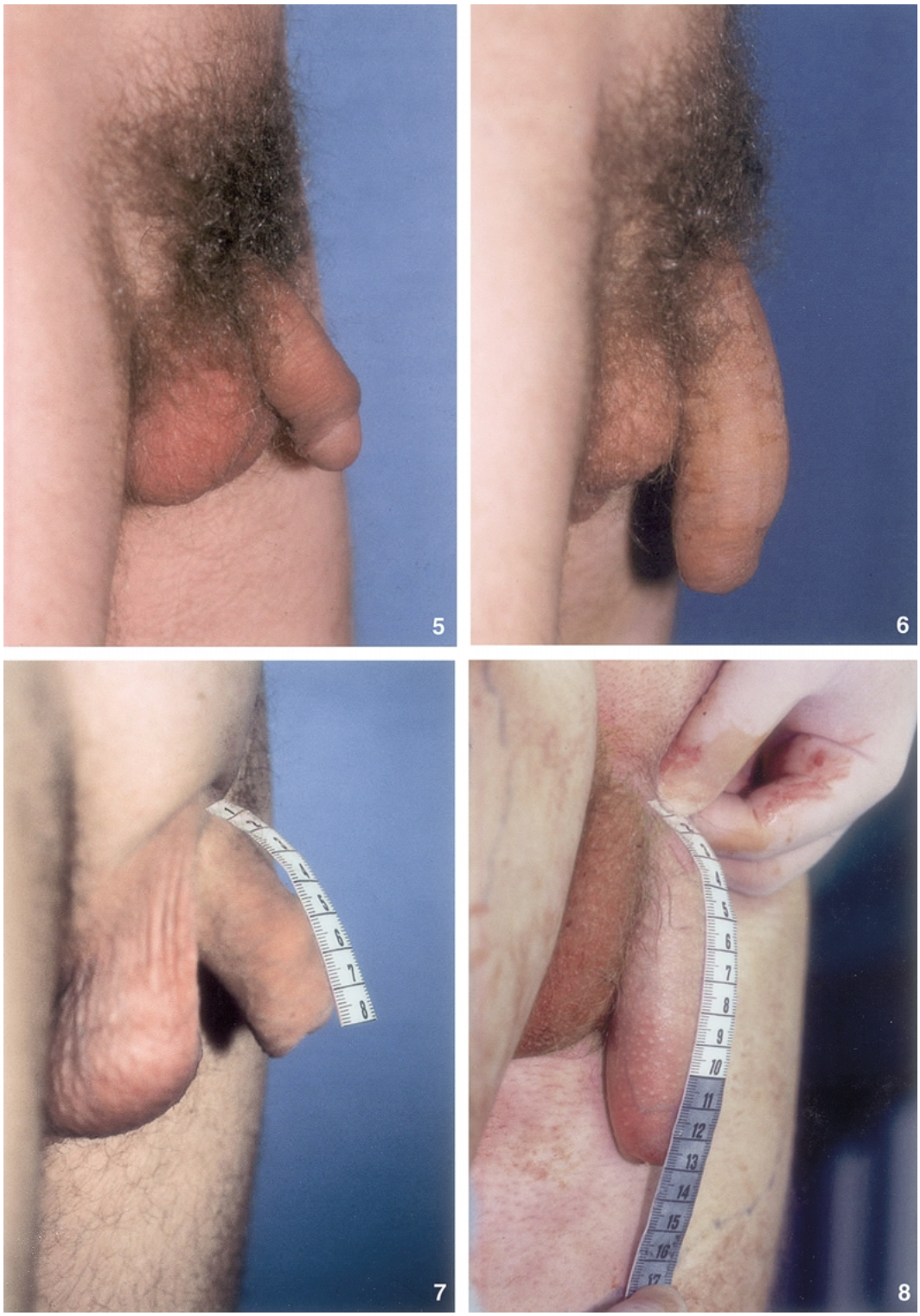

Fig. 5. Presurgical side view of the penis.
Fig. 6. One year later, the length of the penis remains increased by 36 mm, the circumference still is increased by 26 mm.
Fig. 7. Before surgery, the penis was 8 cm.
Fig. 8. Immediately after surgery, the length of the penis was increased to 13 cm.

There also are female differences in terms of penis size, but precise scientific studies about this subject apparently do not exist.

Anesthesia

Outpatients undergo a presurgery inspection by their general practitioner. The inspection should focus on a partial blood count, electrolytes, coagulation, electrocardiogram, and possibly lung x-rays in case of anamnese. Before more complex surgeries, patients should undergo a more comprehènsive laboratory analysis.

In our clinic, we use general anesthesias or analgesic techniques (dozing). We prefer the latter in cases of penis enlargement with the pastient's own fat transfer.

All patients receive presurgery medication: benzodiazepin with short-term effectiveness, for example, Dormicum (midazolam) 2 to 3 mg administered intravenously (IV). Analgesic anesthesia (dozing) is induced by piritramide (Dipidolor) 7.5 to 15 mg IV. In addition, 5.0 to 7.5 mg of midazolam (Dormicum) IV may be administered and, if necessary, 0.5 mg of atropin. The doze is prolonged with propofol (propofol–Lipuro 1%) at a dosage of 1.5 to 4.5 mg/kg/BW/h, which translates into approximately 100 to 350 mg/h. The patient also receives tumescence–anesthesia with lidocain 0.05% to 0.25%, if necessary, combined with adrenalin. A nasal probe provides the patient with oxygen at 2 to 3 l/min.

General anesthesics should be used in cases of deep and painful surgeries, or if a patient rejects local anesthesics or local anesthesics are insufficient. The cutting of the penis ligament at the shaft usually is performed with the patient under general anesthesia.

After presurgery medication, anesthesia is induced with 0.1 to 0.2 mg of fentanyl and 150 to 250 mg of propofol. In our experience, protection of the respiratory tract with a larynx mask has proved successful. To maintain the anesthesia, patients receive sevoflurane 1.5 to 2.0 vol%, or propofol via a perfusor. Additionally, we give our patients remifentanil, which has the effect of ''fast-track anesthesia.''

To prevent postsurgery nausea or vomiting, we prophylactically give patients who show signs of anamnese (Apfel) 12.5 mg IV Anemet at the end of the anesthesia. This improves the postsurgery condition significantly.

If necessary, postsurgery pain therapy can be administered during the final phase of the surgery. Infusions of metamizol (Novalgin) up to 2.5 mg are recommended. After surgery, ibuprofen has so far offered the best results in terms of stomach friendliness while keeping effectiveness high. Most patients leave the clinic on the day of surgery, late afternoon or early evening, accompanied by a friend or a relative [7].

Operative Technique

Preparations

Before surgery (prior to arrivial at the clinic), the patient must shower his body with a mixture of Betaisodona solution and body shampoo. Befdore penis elongation surgery, patients also must shave their pubic hair. In the operating room, the patient receives a second washing with concentrated Betaisodona solution.

Penis augmentation combined with penis elongation is always conducted with the patient under general anesthesia. Penis augmentation with autologous body fat transfer may be conducted using intravenous sedation (''twilight anesthesia'') combined with a penis root block, which causes an intrasurgical erection.

Penis Elongation

By subtotal cutting of the ligament fundiforme penis below the symphysis, the penis can be elongated (Fig. 9). Only the side strands of the ligament should remain to ensure stability of the penis during an erection. The bony root of the ligament is located 4 to 5 cm below the skin (Fig. 10). The bend of penis's erectile tissue hangs across the ligament, creating an almost sharp angle between the horizontal part within the pelvis and the external vertically hanging part of the erectile tissue. After release of the ligament, this angle can be opened and turned into an obtuse angle by pulling the glans out. The extracorporal part of the penis can thus be elongated by 1 to 2 cm.

To achieve elongation without tension, both leaves (fascia penis superficialis and profunda) should be enclosed with two nonabsorbable sutures up to the tunica albuginea and fixed to the symphysis' periost (Fig. 11). The two stitchings need to be sewn alongside the shaft to prevent parts of the vascular system and the nervus dorsales penis, which run almost laterally (Fig. 12), from falsely being covered by the stitchings (Figs. 11–14).

To elongate the penis skin, or rather the body covering (mantle) of the soft parts, an access path is cut above the penis root shaped like an upside down V. Later, it will be sewn up in an upside down- Y shape. The result is a classic ''V-Y Plasty.'' The length of the third Y-leg marks the increase skin, which is decisive for the elongation of the penis. To achieve an absolutely precise line of the intersection without bleeding, the incisions are made by means of high-frequency (4.0 MHz) radiosurgery. In most cases two turkey-throat-like webbings bulge at the penoscrotal transition. They can be erased by simple Z-plasties to allow for skin elongation on the scrotal side of the penis. Within the creases of the scrotal skin, these Z-scars will later be invisible. Even the Y-scar above the

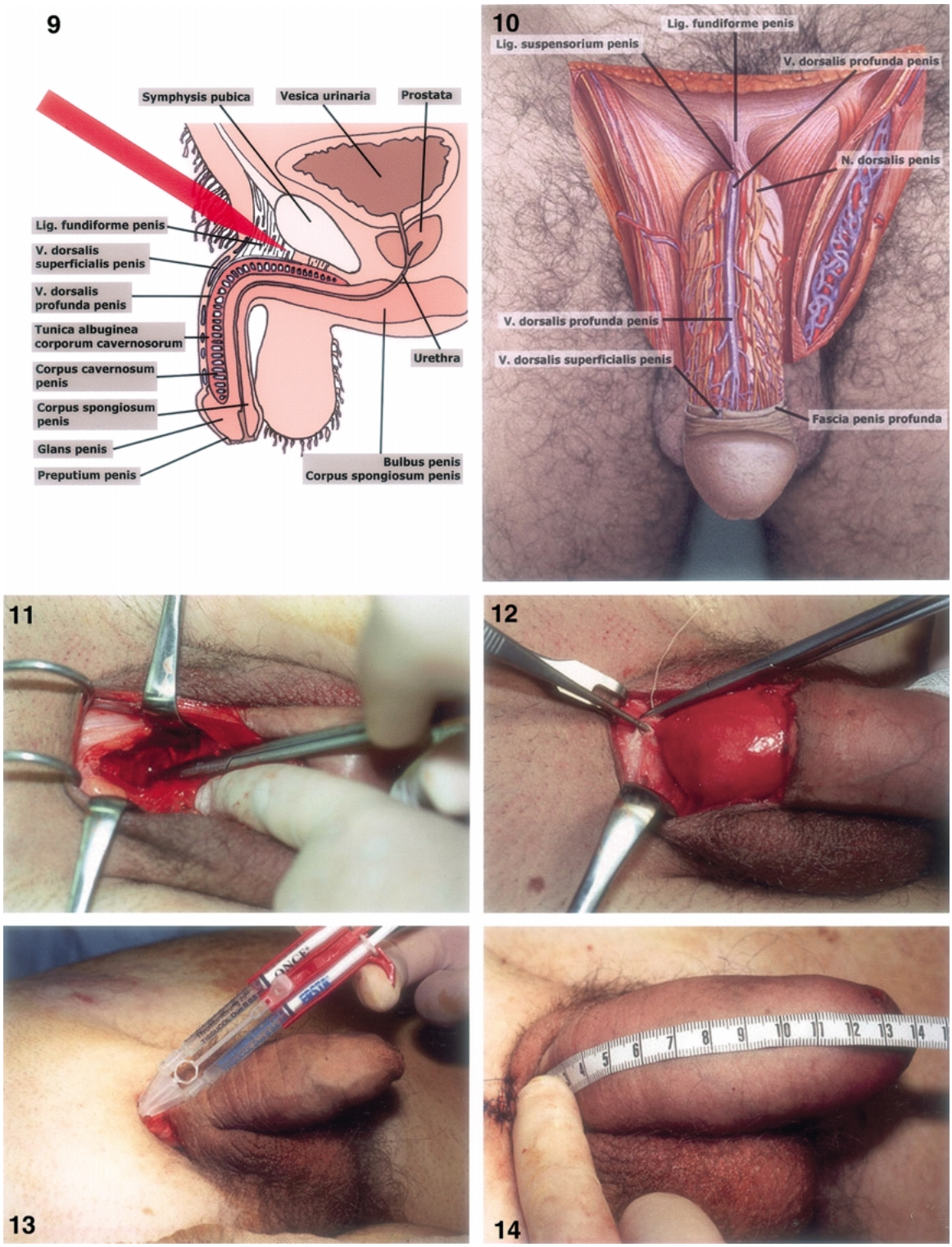

Fig. 9. Anatomic graphic, sideways view, with simulated partial cutting of the ligament fundiforme penis.
Fig. 10. Anatomy of the penis. Body fat is placed between the two facia leaves. Topography of the nervous and the vascular system is important.
Fig. 11. Subtotal release of the ligament fundiforme penis below the symphysis.
Fig. 12. Lateral fixation of both fascia leaves of the penis including tunica albuglnea of the symphysis' periost with 4-0 nonabsorbable suture.
Fig. 13. Fibrin glue prevents seeping bleeding and spelling for the most part.
Fig. 14. Intrasurgical elongation of about 5 cm using both methods.

penis root will be completely masked once pubic hair has grown back (Figs. 15–17).

Whereas Z-plasties are finished off with absorbable suture (Figs. 18–22), the Y-scar is completed layer by layer. We recommend obtuse ligament release to avoid irritating bleeding. In a very few cases, hemostatic measures or vascular glue were applied. Monofilament 4-0 nylon suture is used to close the Y-skin seams and should remain in place for 2 weeks to prevent rare wound dehiscence.

Penis Augmentation

The new method of filling the penis shaft with autologous fat developed on the basis of auto-fat-grafting (Figs. 23 and 24) by José Guerrerosantos and further developed by Sydney Coleman [2] makes it possible to enlarge the erectile tissues of the human body with lasting effects. Autologous lipografts, transplanted by our surgeons' own hands, maintain 60% to 80% of their size for years.

Our first penis enlargement surgery was conducted with 56-ml fractions of purified body fat tissue. The original increase from 8.2 to 11.2 cm after 6 months decreased to 10.6 after 1 year and remained stable after 7 years. The increased length of 2 cm, attributable merely to body fat transfer, remained continuously stable (Figs. 25 and 26).

Penis augmentation by increasing the circumference weighs down the penis, which itself can provide a 2- to 3-cm increase in penis length. We usually recommend that patients undergo penis elongation by ligament release below the symphysis at the same time, but because this involves a greater financial investment, only about 30% of all patients agree to this procedure.

After the washing, with the patient lying on his back, we create two incisions 2 to 3 mm long into each groin at the inner side of the upper thigh, and instill 200 to 250 ml of physiologic solution containing adrenalin (1:800,000) and 0.02 Xylocain (50 ml Xylocain 1% per 1 l of solution). The solution takes effect in about 50 min, and only then can the body fat be extracted. Ligament release can be performed during this process (Figs. 27–31).

Body fat can be harvested with a multiperforated cannula (radius, 2.5 mm) by means of a 10-ml syringe with a Luer lock fitting. The cannula is inserted in to the fat deposits of the inner thighs, and the piston is pulled out up to the stop to produce a vacuum within the syringe. The piston then is anchored using the four long fingers without the thumb. Longitudinal movements, back and forth, draw the yellowish-white fat into the syringe. Approximately 30 to 35 movements usually are necessary. Sometimes, toward the end of the harvest, injured vascular tissue gives the contents of the syringe a slightly red color. About 30 to 60 ml of fat can be extracted from the inner side of one upper thigh. If more fat is needed, it can be sucked from the front of the upper thigh or from the side of the upper thigh, from the inner side of the knee or from the lower belly.

The 10-ml syringes need to be kept vertically in a sterile stand for 10 min to precipate the contents. A fraction of oil develops on top, and a fraction of serum develops at the bottom. In between will be pure fat. The syringes are put into the centrifuge without the pistons and centrifuged for 3 min at 3,000 turns.

The syringes are removed from the centrifuge. The oil fraction then is dabbed off from above, the serum fraction released through the lower luer opening, the piston once again inserted into the syringe, the air squeezed out, and the Luer opening closed. It is important that fat exposure to air be reduced to an absolute mininum.

From the 10-ml syringes, the fat is transferred to 2-ml cc syringes with a sterile connecting piece. The smaller syringes are plugged shut, and then are ready for transplantation (Figs 32–35).

The inner preputium creases are held and slightly stretched with two forceps. Four 1-mm incisions are made with a 12 blade scalpel or with radiosurgery. If we imagine the frenulum preputii on a clock face at 6 a.m., these incisions are placed in the 11 a.m., 1 p.m., 5 p.m., and 7 a.m positions. The fat in the 2-ml syringes is injected through Coleman's Kobra cannulas between the fascia penis superficial is and the profunda, pushing further up to the penis root. Body fat is injected as the cannula is withdrawn longitudinally, in a slightly diagonal direction. It is important to inject the fat evenly (Figs. 36–37).

For each incision, five to eight 2-ml syringes of pure fat are injected. With this method and according to individual demand, we have transplanted 40 to 68 ml of autologous body fat. When the injections are complete, the penis needs to be moved between two hands and carefully "kneaded." The incisions do not need stitching' and they leave no visible scars. In the beginning, we used complicated methods of bandaging. Currently, bandaging can be reduced to longitudinal suture strips. Only the Y-wound is covered and bandaged with gauze strips. Patients must abstain from sex (including masturbation) for 5 weeks. Occasional erections during sleep can be reduced with cool gel cushions [11] (Figs. 38 and 39).

Range of Patients

Since 1997, we have performed penis enlargement surgery for 88 patients. Our youngest patient was 24 years old, and the age of the oldest patient was 54 years. The average age was 33.8 years. A total of 60 patients have undergone penis enlargement with autologous body fat transfer, and 28 have chosen to undergo the additional penis elongation with ligament release below the symphysis. Within 6 months after the operation, 31 patients have undergone

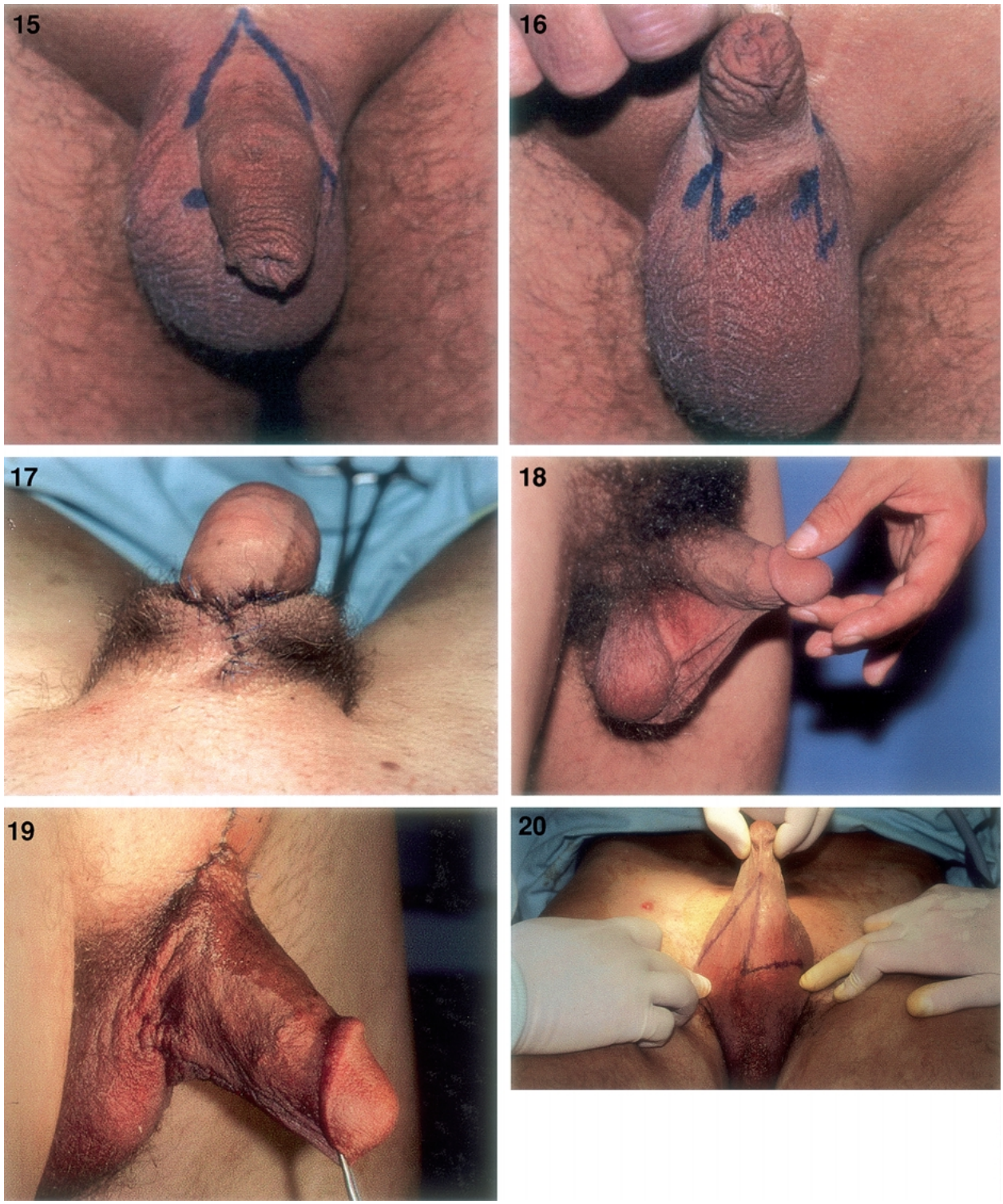

Fig. 15. Upside down V-incision to prepare for skin enhancement with a V-Y plasty.
Fig. 16. Penoscrotal skin enhancement with two Z-plasties.
Fig. 17. Y-shaped wound covering.
Fig. 18. Penoscrotal adhesion.
Fig. 19. Release through simple Z-plasty.
Fig. 20. Drawing of Z-plasty.

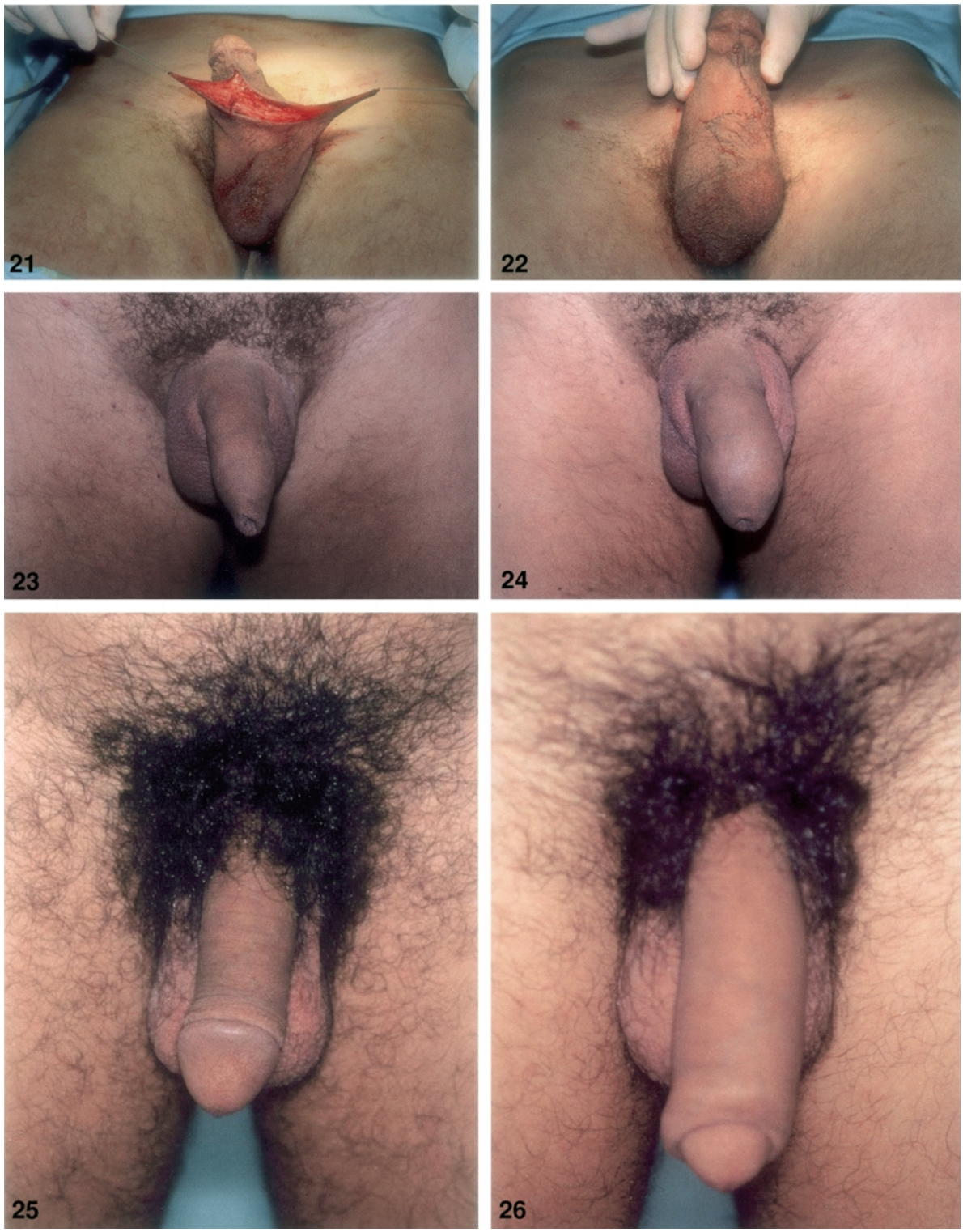

Fig. 21. Triangles of Z-plasty divided.
Fig. 22. Z-plasty sutured.
Fig. 23. Before autologous fat transfer.
Fig. 24. Penis 1 week after fat transfer.
Fig. 25. Our first case, a penis considered too small.
Fig. 26. Enlargement after transfer of 52 ml of purified fat cells. Elongation and increase in circumference of 2 cm each was continuously stable after 7 years.

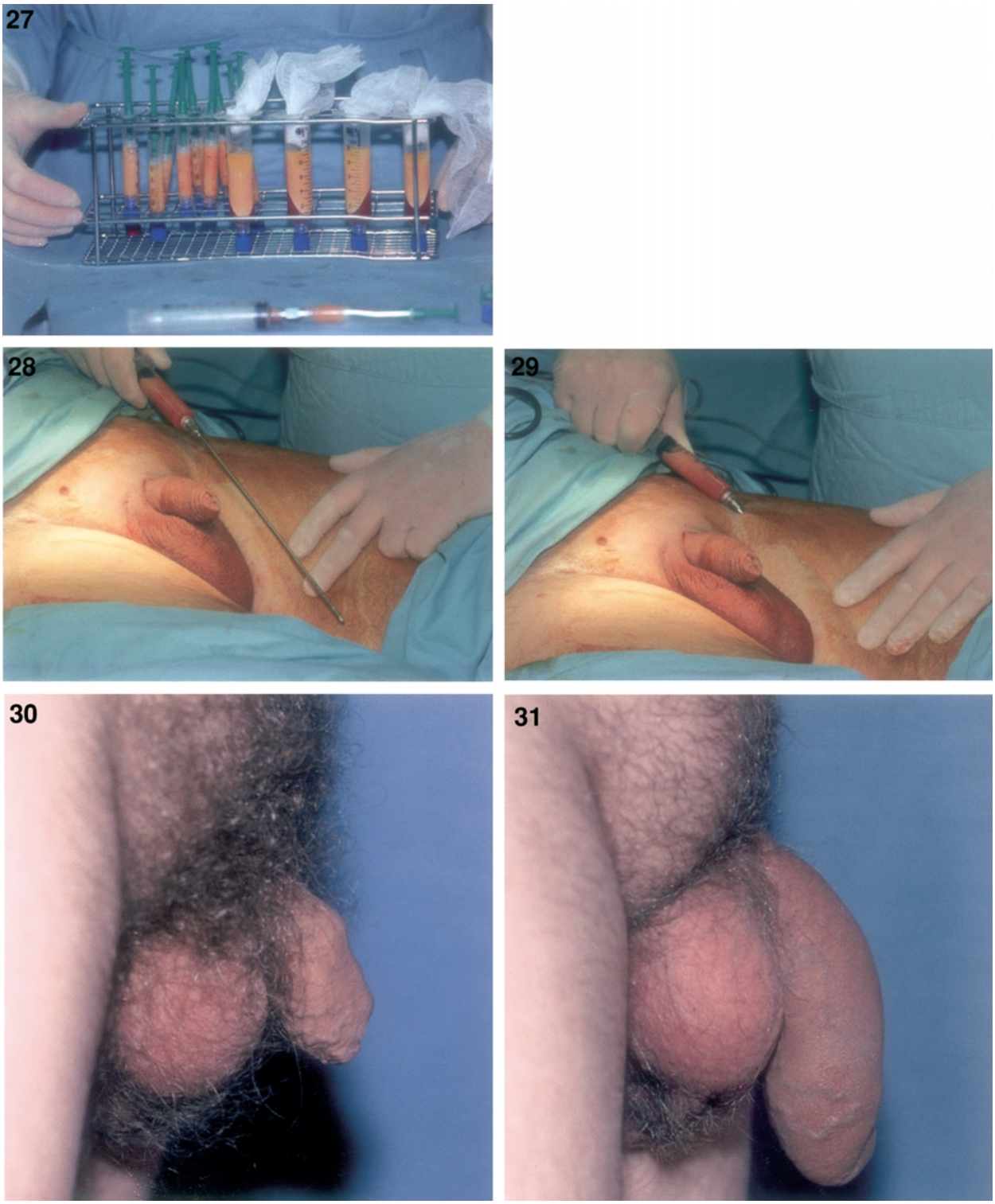

Fig. 27. Fractions of fat are centrifuged, purged of oil and serum, filled into 2-ml syringes, and ready for transplantation.
Fig. 28. View of the region from which fat is to be extracted.
Fig. 29. Demonstration of extraction technique with pulled out piston of a 10-ml syringe.
Fig. 30. Preoperative view of penis.
Fig. 31. Penis 3 months after the surgery.

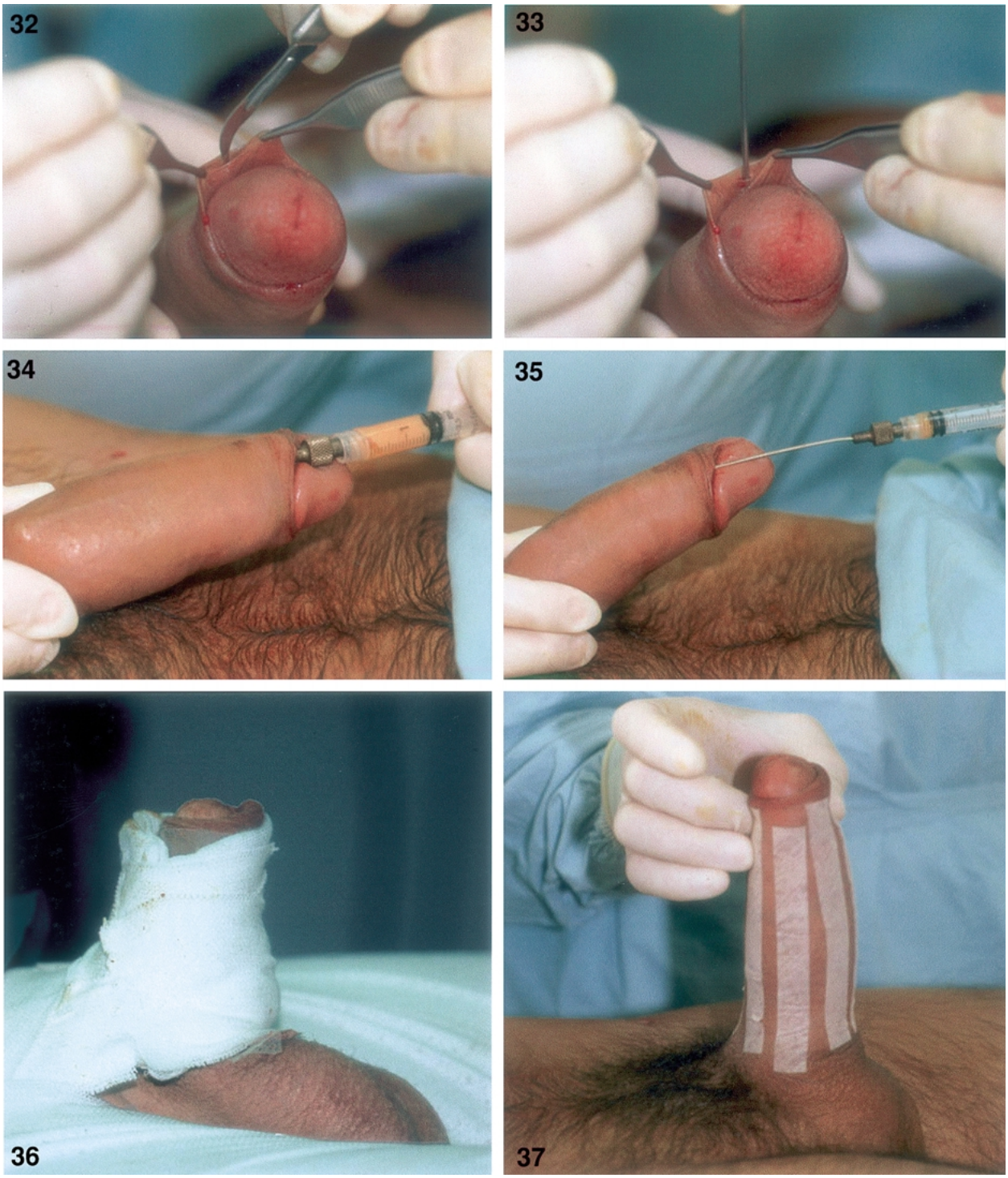

Fig. 32. Incision with a 12 blade scalpel at the stretched preputium, between two forceps.
Fig. 33. Inserting the Coleman cannula.
Fig. 34. While withdrawing the cannula, purified body fat is injected from the penis root upwards.
Fig. 35. Body fat cylinders implanted according to this method have a radius of 1 mm, and are nurtured and kept alive by capillary sproutings.
Fig. 36. Early bandaging attempts were very complicated.
Fig. 37. Currently, we use longitudial suture strips.

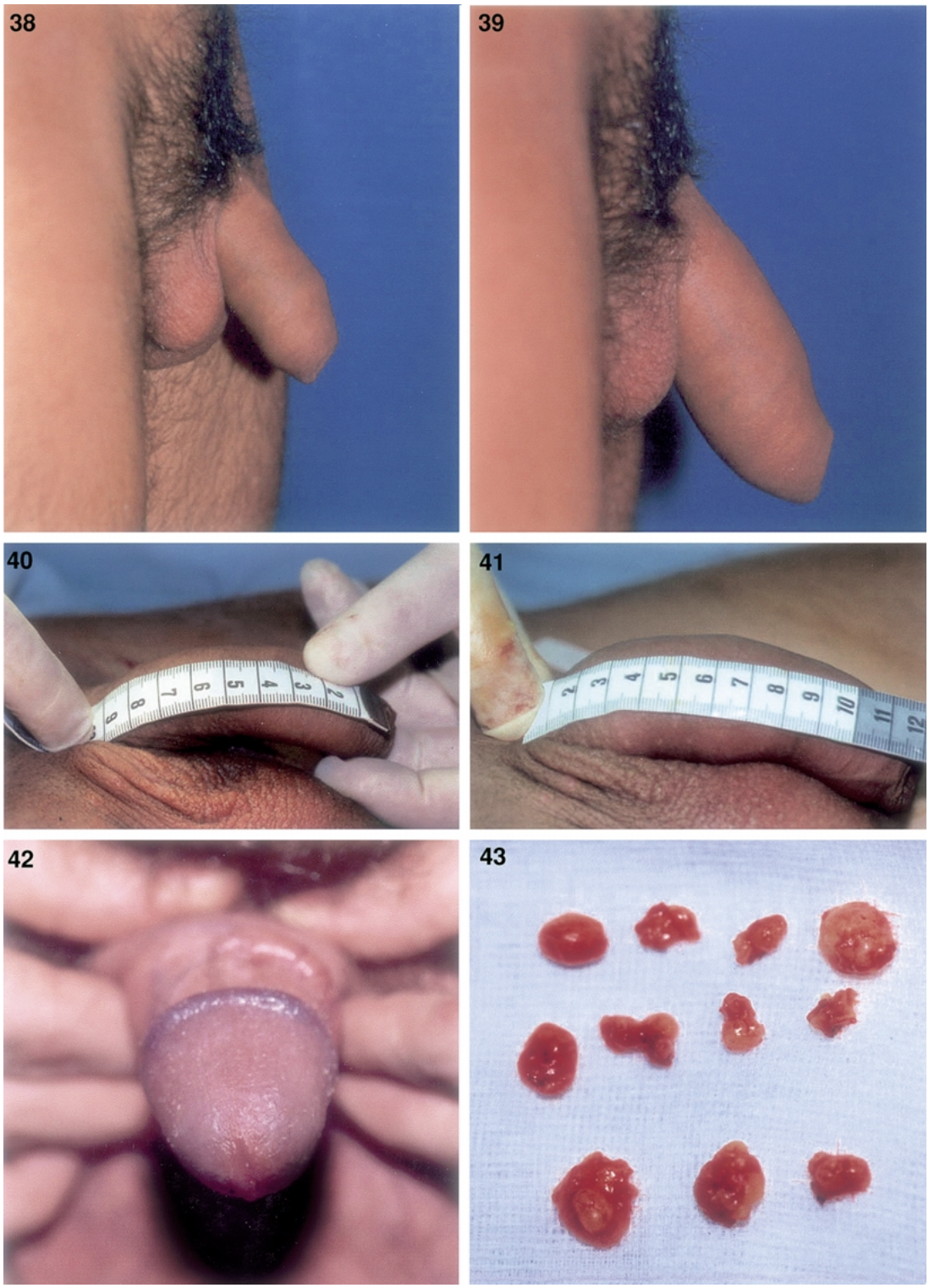

Fig. 38. Penis before fat transplantation.
Fig. 39. Penis 1 year after surgery.
Fig. 40. Measurement before augmentation.
Fig. 41. Measurement after augmentation.
Fig. 42. Too much fat was implanted into the foreskin.
Fig. 43. Extracted small fat lumps after 6 months; the fat is vital.

additional augmentation with autologous fat transfer.

In terms of professions, patients with higher education diplomas, managers, business people, and craftsmen have made up the dominant clientele. Among our patients 21 were married, 5 were divorced, 14 had fathered children, and 9 were homosexual.

The original length of the penises in the nonerect state have ranged from 6.5 to 10.0 cm (average, 8.75 cm). The presurgical circumference, measured proximal to the glans, ranged from 8.2 to 10.5 cm (average, 9.18 cm). The average length of 8.75 cm could be increased to 11.14 cm after 12 months, which corresponds to an average increase of 2.39 cm. The average circumference of 9.18 cm, proximal to the glans, could be increased to 11.83 cm, which corresponds to an average increase of 2.65 cm (Figs. 40 and 41).

The most modest penis elongation was 1.5 cm after 1 year, from an original length of 6.5 cm. The increase in circumference was less modest: 4.0 cm. Sterling Bunnel said with regard to tendon surgery: ''Little is much if you have nothing.'' The greatest postsurgical elongation measured 5.0 cm, from 8 to 13 cm, which had decreased to 3.6 cm 1 year after surgery. The greatest elongation after 1 year measured 4.2 cm, and the greatest increase in size after 1 year measured 4.0 cm (Figs. 42–44).

Complications

Interviewed 1 year after their operation, 77 patients said they were highly satisfied, 8 patients were fairly satisfied, and 3 patients were not satisfied. For one unsatisfied patient, we had implanted too much fat into the foreskin (Fig. 42–44). Two patients experienced an extreme fat loss. These two patients had, however, as it was discovered later, had not been able to remain sexually abstinent for 5 weeks [12].

Careful attention should be paid to reducing the possibility of infection and to ensuring that the reattachment of the penil fascia to the periost symphysis is made distant from the midline. Otherwise, complications may occur during the learning curve for a surgeon who has little experience with this technique. In experienced hands, however, these are very reliable techniques with low complication rates (Figs. 45–47).

Discussion

The surgeon's experience in the urologic field with adenomectomies of the prostate, hypospadies treatments (C. Horton's flip-flap-technique) [8], and circumcisions serves as an advantage for understanding the operative techniques for augmentative phalloplasty, yet this knowledge is not obligatory. Particular care is needed for ligament release in the periostal area below the symphysis as well as for the lateral fixation of the penis facia to the symphysis' periost. Body fat transplantation requires care as well as scrupulous attention to detail, ensuring minimal exposure of body fat to air.

The described surgery requires about 2 hours. It leaves no allergic or foreign-body reactions behind. Single microcalcifications may develop in some cases. To the patient, they feel like small semolina grains beneath the skin. They can be digitally imaged, although in contrast to grains in breasts after body fat transfers, which might lead to a false diagnosis because of their pathognomonic relevance for breast cancer, they are irrelevant. However, patients should be explicitly informed that these grains have no negative effect on their health.

During presurgical briefings, I warn my patients that stability of the erect penis may be affected after-surgery because of the subtotal ligament release. My patients have, however, not expressed complaints about this after their operation. When asked whether an increase in the circumference of the penis is apparent also in the erect state, I answer that it is mainly the ''dressing room effect,'' assuming that the soft parts edge out the fat grafts. My patients afterward have informed me of the opposite. The increase in the size of the penis is noticeable also in an erect state.

Once a tall man asked for penis enlargement at our clinical although his penis was 11 cm long in the nonerect state. When asked why he wished to undergo enlargement surgery although his penis was longer than average, he answered that his sexual organs were in discord with his wife's after she had given birth to four children. I told him that a vaginal narrowing for his wife would be much more reasonable, not the least financially. ''No,'' he said, ''she has suffered four times when giving birth. Now it is my turn.'' In the end, we did not conduct surgery on this gentleman.

On September 18, 1999, the author of this text reported his experience after his first six penis enlargement surgeries at the 4th Annual Congress of the German VDÄPC. The head of the meeting accused the speaker of not mentioning complications to the audience. Due to the low number of conducted surgeries, however, the author had not been able to report any complications [10]. Even currently, 88 surgeries later, complications occur at a low level. There was only and one case in which we transplanted too much body fat into the foreskin and had to remove it surgically 6 months later (Figs. 42–44). Two other patients experienced extreme fat loss. It was later discovered that they had violated the prescribed 5-week period of sexual abstinence.

In contrast to patients undergoing other procedures, our patients do not show annoyance with augmentative phalloplasty (no complaints or legal letters). they are trusting and extremely grateful for each centimeter they have gained. As a surgeon, I enjoy such satisfied patients (Figs. 48 and 49).

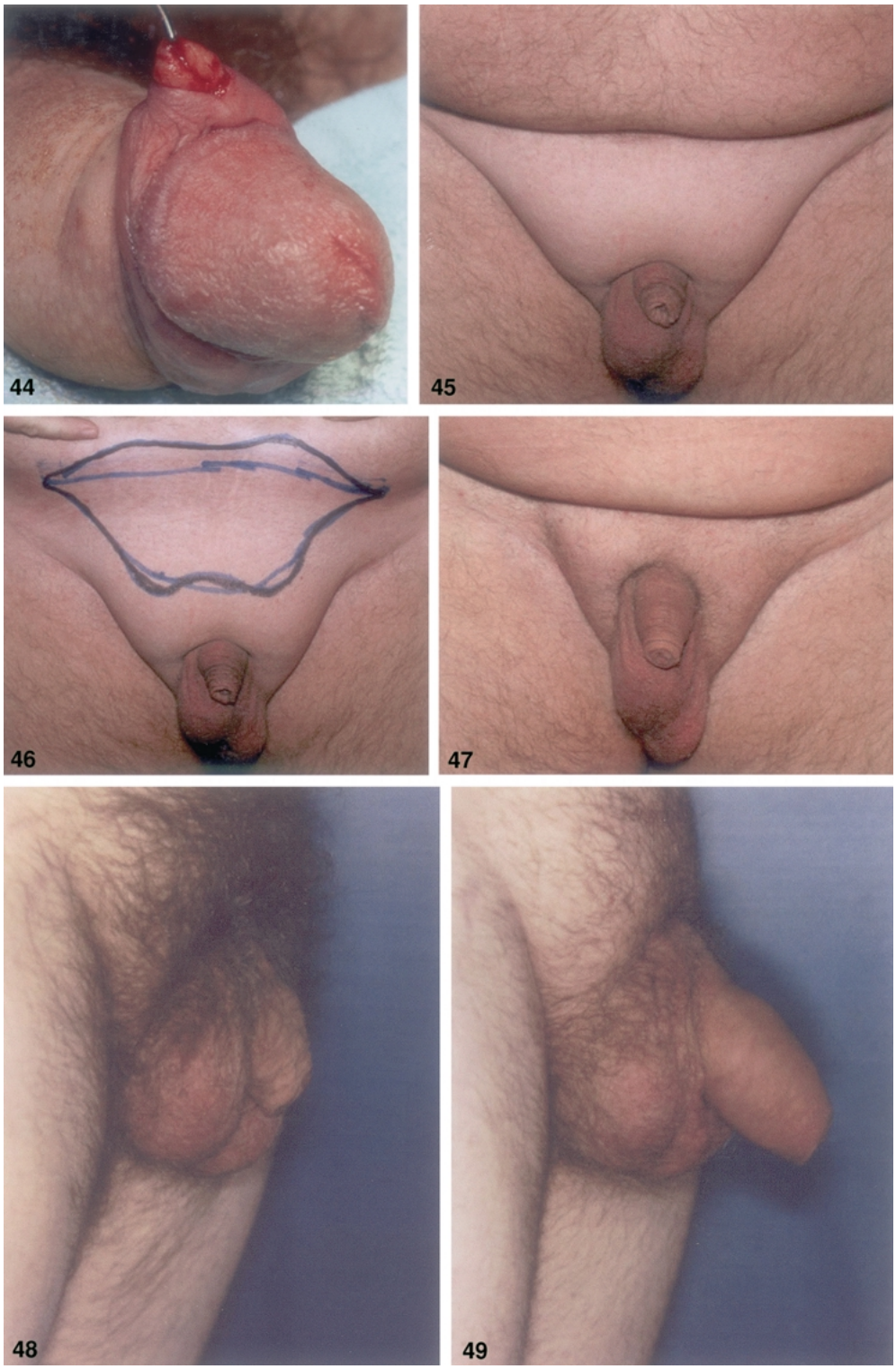

Fig. 44. Foreskin relieved of too much fat.
Fig. 45. Adiposogenital syndrome (M. Fröhlich) with ''hidden'' penis.
Fig. 46. Presurgical graphic of suprapubic dermolipectomy.
Fig. 47. Penis shaft is ''freed'', which crates a relative enlargement.
Fig. 48. A small penis before augmentation, a reason for a sense of shame and mental suffering.
Fig. 49. This man has gained remarkab self-esteem after augmentation.

Various foreign materials have been used in penis elongation surgeries: hot wax, vaseline, liquid silicone, acrylamides, skin lobes from pigs, Parmacol (Bioscience Laboratories, England), Alloderm (Lifecell Laboratories, USA), Vipro II Implantat (Ethicon, Germany) [6], and others. All foreign materials share the characteristic that they may sooner or later trigger a foreign-body reaction, especially if the penis increases its volume by three times its size (maximum), which no foreign material can accomplish. Irritations are thus almost preprogrammed. We therefore believe that autologous material should be the preferred material in the surgical routine.

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