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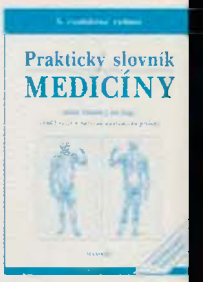
NABÍDKA KNIH Z NAKLADATELSTVÍ MAXDORF

FARMAKOLOGICKÝ SLOVNÍK

MUDr. Radomír Hrdina, CSc., prof. MUDr. Zdeněk Fendrich, CSc., prof. MUDr. Vratislav Hrdina, CSc., prof. MUDr. Peter Višňovský, CSc., doc. RNDr. Jiří Vlček, CSc., *katedra farmakologie Farmaceutické fakulty UK v Hradci Králové*

První český výkladový slovník farmakologie umožňuje maximálně efektivní orientaci ve složité oblasti léčiv a farmakoterapie a je spolehlivým zdrojem informací nezbytných pro cílenou a účinnou léčbu pacientů. Nabízí na jedné straně možnost rychlé a praktické orientace, na druhé straně umožňuje získat hlubší znalosti a díky velkému počtu křížových odkazů pochopit důležité souvislosti v působení léků na lidský organismus. Kromě základní textové části obsahuje slovník podrobné tabulky doporučených dávek pro běžnou lékařskou praxi (pro dospělé i pro děti) a převodní tabulky generických a obchodních názvů.
Publikace je určena praktickým a klinickým lékařům všech oborů, farmaceutům a studentům těchto i příbuzných oborů.
Tabulková příloha, názorné obrázky a schémata, formát A5, váz. (V8), barevný laminovaný potah desek, 412 str., 375 Kč

PRAKTICKÝ SLOVNÍK MEDICÍNY



5. rozšířené vydání, 11000 hesel, barevná anatomická příloha
MUDr. Martin Vokurka, CSc., MUDr. Jan Hugo

Páté, rozšířené vydání úspěšného výkladového slovníku lékařské terminologie. Obsahuje cca 11 000 hesel, velký počet příkladů, ilustrace. Nově je do slovníku zařazena barevná anatomická příloha. Slovník kromě aktuální lékařské terminologie obsahuje také řadu hovorových výrazů užívaných zdravotníky, zkratky a pro snazší orientaci i české výrazy. Publikace je prvním výkladovým slovníkem lékařských termínů srozumitelným široké veřejnosti u nás za posledních 50 let. ***Slovník je určen*** především široké veřejnosti a nelékařům ve zdravotnictví. Pro lékaře může být zajímavý zařazením mnoha výrazů z nových oborů medicíny, důsledně propracovaným propojením hesel formou odkazů a srovnání, stejně jako praktickým a živým zpracováním lékařské etymologie.
Barevná anatomická příloha, velký počet obrázků, formát A5, váz., 512 str., 245 Kč

FARMAKOLOGIE DO KAPSY

Přehledné repetitorium pro praxi
Prof. MUDr. Peter Višňovský, CSc., *katedra farmakologie Farmaceutické fakulty UK v Hradci Králové*

Knížka poskytuje srozumitelnou a přehlednou formou nejdůležitější informace z farmakologie. V obecné části je mj. značná pozornost věnována farmakologicky významným receptorům. Kapitoly speciální farmakologie jsou psány se zřetelem na patofyziologii příslušných chorobných stavů a jejich ovlivnění léky a jsou doplněny názornými schématy. Kromě výkladu jsou v každé kapitole zařazeny tabulky s výčtem jednotlivých léčiv i příslušných specialit. Praktický charakter knihy podtrhuje rozsáhlý rejstřík a jako novinka i rejstřík nejdůležitějších příznaků a chorobných stavů.
Obrázky a tabulky, barevný tisk na křídovém papíře, rejstřík, praktický kapesní formát (110 × 190 mm), barevná laminovaná obálka, 350 str., 245 Kč

MANUÁLNÍ MEDICÍNA

Vyšetřování, diagnostika, léčení (2. vydání úspěšné knihy)
Doc. MUDr. Eva Rychlíková, CSc.

Úspěšná kniha se zabývá závažnou problematikou bolestí zad a onemocnění pohybového aparátu vůbec. V úvodu autorka věnuje pozornost teoretickým a diagnostickým aspektům vertebrogenních obtíží, nejrozsáhlejší část však tvoří detailní popis jejich léčby pomocí manipulací, mobilizací, cvičením a dalšími metodami manuální medicíny. Kniha obsahuje podrobné popisy pohybů doplněné názornými obrázky a fotografiemi. Praktické zaměření knihy podtrhuje přehled všech typických chyb, který je uveden u každého popisu. ***Knížka je určena*** lékařům, rehabilitačním pracovníkům a všem, kteří se zabývají bolestmi zad, resp. vertebrogenními poruchami.
Velký počet instruktivních fotografií, rejstřík, formát A5, váz. (V8), barevný laminovaný potah desek, 432 str., 385 Kč

KONTRACEPCE PRO PRAXI

Průvodce metodami zábrany otěhotnění
MUDr. Dana Seidlová, *II. gynekologicko-porodnická klinika 1. LF UK v Praze*

Kniha je stručným a velmi praktickým průvodcem metodami moderní kontracepce. Popisuje jednotlivé metody (hormonální, bariérovou, nitroděložní, přirozenou aj.) antikoncepce a značnou pozornost věnuje jejich výběru se zřetelem na věk a zdravotní stav. Poskytuje informace, které pomohou lékařům ve správné volbě a doporučení antikoncepčního prostředku. ***Kniha je určena*** jak gynekologům, tak praktickým či rodinným lékařům. ***Slovníček*** důležitých lékařských výrazů umožňuje, že z ní mohou čerpat také další pracovníci ve zdravotnictví, zejména zdravotní sestry.
Praktický kapesní formát (110 × 190 mm), barevná laminovaná obálka, 148 str., 138 Kč

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ACTA CHIRURGIAE PLASTICAE 41, 1, 1999, pp. 3 - 6

GASTROCNEMIUS MUSCLE TRANSFER IN LIMB-SPARING SURGERY FOR BONE TUMORS AROUND THE KNEE

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SUMMARY

Limb-sparing surgery for bony tumors around the knee, resulting in large segmental defects, involves its replacement with an endoprosthesis. The viability of the overlying skin flaps is of utmost importance. Their healing without breakdown is essential or else leads to prosthesis exposure, infection and perhaps prosthesis removal.

In this situation, gastrocnemius muscle transfer is a robust vascular option, not only providing soft padding to cover the endoprosthesis, but also supporting the vascularity of the skin flaps. Out of 16 such muscle transfers done, 15 survived completely with good wound healing. One patient developed a severe infection of the wound associated with skin flap breakdown and necrosis of part of the muscle flap. There was 1 case of wound haematoma which was treated successfully.

ZUSAMMENFASSUNG

Die Übertragung des Muskels Gastrocnemius bei dem chirurgischen Eingriff wegen der Rettung der Extremität bei den Knochentumoren im Kniegebiet

Cunha-Gomes D., Manglani H. H., Bhathena H., Badhwar R., Kavarana N. M.

Der chirurgische Eingriff, der zur Rettung der von einem Knochentumor betroffenen Extremität im Kniegebiet dient, verursacht breite segmentale Deffekte, deren Ersatz eine Endoprothese verlangt. Die Lebensfähigkeit der überdeckenden Knochestücken ist von einer großen Bedeutung. Wichtig ist ihre Heilung ohne Absterben der Knochenstücken. Diese Komplikation führt zur Abdeckung der Prothese, Infektion und vielleicht auch zur Ablehnung der Prothese.

In diesem Fall ist die Übertragung des Muskels gastrocnemius nicht nur eine starke Unterstützung der Vaskularisation, sondern auch sie bildet eine weiche Ausstopfung, die die Endoprothese überdeckt und zugleich unterstützt sie die Aderversorgung von Hautlappen. Von 16 Übertragungen des Muskels überlebten 15 mit einer guten und völligen Verheilung der Hautlappen. Bei 1 Fall erschien eine ernsthafte Infektion der Wunde verbunden mit Absterben des Hautlappens und der Nekrose eines Teiles des Muskellappens. Es kam auch ein Fall vor mit Haematom in der Wunde, der erfolgreich behandelt wurde.

Key words: total knee arthroplasty, gastrocnemius muscle flap.

Bony tumors of the distal femur and proximal tibia are more prevalent in younger age groups of patients and account for 80% of all bony tumors at our centre (1). For effective treatment and rehabilitation, the essential steps are: complete tumor extirpation, replacement of the knee joint by an endoprosthesis, adjuvant chemotherapy and early rehabilitation.

The problems faced in such patients include the breakdown of the skin flaps leading to exposure of the endoprosthesis, infection and lack of stability of the quadriceps muscle. This is especially encountered in cases of upper tibial resections.

The gastrocnemius muscle was harvested in these patients and transferred to afford an effective muscle padding over the implant, improve the vascularity of the skin flaps and therefore promote wound healing.

MATERIALS AND METHODS

Sixteen patients undrewent limb-sparing surgery in a period of 19 months (Feb '97 to August '98). After a thorough preoperative evaluation and metastatic workup, patients were offered limb-sparing surgery with a total knee arthroplasty (Modular Total Knee Prosthesis or Customized Total Knee Prosthesis).

Excision of the tumor was carried out as per oncological principles, i.e. bone clearance of 5 cm away from the tumor, and a soft tissue margin of 2 cm. The margins of the soft tissue and the bone marrow scrapings of the cut edges of the bone

were confirmed to be free of tumor on frozen section. After introduction of the endoprosthesis, the integrity of the vascular pedicle of the gastrocnemius flap was assessed. The muscle was then harvested from between the deep fascia and the soleus in an avascular plane, divided inferiorly through its tendon, transposed over the prosthesis and sutured to the quadriceps muscle and the cut edges of the extensor muscles of the leg. The skin flaps were sutured over suction drains. In the postoperative period the limb was immobilized for 2 weeks, following which supervised graduated physiotherapy was instituted. Static quadriceps exercise was started within 7 days of surgery.

In 15 cases the gastrocnemius muscle was transposed across the endoprosthesis pedicled on its origin and vascular pedicle (Type II transfer) (2). In 1 case the gastrocnemius muscle origin from the femur was erased in addition to the division of its tendon. The muscle was transferred over the endoprosthetic knee joint pedicled only on the vascular pedicle, turned on itself through 180 degrees. (Type III transfer) (2). Follow-up of these patients ranged from 2 months to 17 months. Wound healing and rehabilitation were analyzed.

RESULTS

Sixteen patients were operated on for tumors around the knee joint (14 involving the tibia and 2 involving the femur), between February 1997 and August 1998 (19 months). Ten had osteogenic sarcomas, 1 multiple osteochondroma, 1 haemangiopericytoma and 4 Giant cell tumors.

All underwent Total Knee Replacements; 9 patients had a Customized Total Knee Endoprosthesis implanted, and 7 patients had a Modular Total Knee Endoprosthesis implanted. Three patients underwent a revision surgery involving the change of the prosthesis, in which a gastroicnemius transfer was done at the time of the secondary surgery.

In 15 cases, a Type II Gastrocnemius muscle transfer was done (2). In 1 case a Type III Gastrocnemius muscle transfer was done (2).

One patient had a fulminant infection necessitating the removal of the endoprosthesis. In this patient there was a wound breakdown and necrosis of the distal half of the muscle. One patient had a haematoma which was aspirated successfully.

Patients were followed-up for 7.5 months (mean, range 2-13 months) and showed good healing of the skin flaps in 12 out of 13 cases (92.3%). One patient developed a recurrance after 12 months which necessitated an above-knee amputation.

DISCUSSION

With advances in the field of endoprosthesis and chemotherapy, limb-sparing surgery can be offered to patients afflicted with bone tumors of the distal femur and proximal tibia. These tumors are seen in younger patients, therefore radical excision, effective reconstruction and quick rehabilitation are all the more important. Survival rates are encouraging in early tumors (1).

The gastrocnemius muscle flap (Medial or Lateral head or both heads) is a very effective reconstructive option for the reasons stated below:

1. It is a robust, vascularised transfer, which affords padding between the prosthesis and the skin flaps. This is important in the region of the prosthetic knee joint.
2. The muscle is present in the area of dissection and fills up the dead space in the area.
3. On suturing the muscle to the quadriceps muscle and the patella tendon, it stabilizes the knee joint.
4. Its removal from the gastrosoleus complex does not lead to any significant loss of active plantar flexion.

According to its vascular anatomy, the Gastrocnemius muscle is a Type I muscle, with a single vascular pedicle (3). Feldman described the course of the neurovascular pedicle in cadaveric

Fig. 1. Preoperative Photograph.

Fig. 2. Gastrocnemius muscle harvested.

PATIENT PROFILE

SL. NO.	DATE OF SURG.	DIAGNOSIS	BONE INVOLVED	PROSTHESIS	MUSCLE TRANSFER	COMPLICATIONS
1.	19.02.97	OS	TIBIA	C-TKR	Med. Gast(II)	Nil
2.	19.03.97	OS	TIBIA	C-TKR	Med. Gast(II)	Recurrance of tumor. Above-knee amputation done.
3.	09.04.97	MOC	TIBIA	C-TKR	Med. Gast(II)	Nil
4.	09.05.97	OS	TIBIA	M-TKR	Med. Gast(II)	Infection, skin flap breakdown, prosthesis removed, 1/2 muscle necrosed.
5.	18.06.97	OS	TIBIA	C-TKR±	Med. Gast(II)	Nil
6.	10.09.97	OS	TIBIA	C-TKR	Med. Gast(II)	Nil
7.	28.11.97	OS	TIBIA	C-TKR	Med. Gast(II)	Nil
8.	31.12.97	OS	TIBIA	M-TKR	Med. Gast(II)	Nil
9.	09.02.98	OS	FEMUR	M-TKR±±	Med. Gast(II)	Nil
10.	06.04.98	GCT	TIBIA	C-TKR	Med. Gast(II)	Nil
11.	08.04.98	HPC	TIBIA	M-TKR	Med. Gast(II)	Haematoma, treated conservatively
12.	10.05.98	OS	FEMUR	M-TKR	Med. Gast(III)	Nil
13.	09.06.98	OS	TIBIA	M-TKR±±	Med. Gast(II)	Nil
14.	02.08.98	GCT	TIBIA	C-TKR	Med. Gast(II)	Nil
15.	10.08.98	GCT	TIBIA	M-TKR	Med. Gast(II)	Nil
16.	27.08.98	GCT	TIBIA	C-TKR	Lat. Gast(II)	Nil

KEY: OS: Osteosarcoma; MOC: Multiple Osteochondromas; GCT: Giant Cell Tumor; HPC: Haemangiopericytoma; C-TKR: Customized Total Knee Replacement; M-TKR: Modular Total Knee Replacement; ±: Secondary Surgery - Arthrodesis converted to C-TKR; ±±: Secondary Surgery - C-TKR converted to M-TKR; (II): Type II Gastrocnemius transfer; (III): Type III Gastrocnemius transfer.

dissection (4). The sural artery, on emergin from the popliteal artery, pierces the muscle at or above the level of the knee joint line. Accompained by its vena commitantes, it runs in an „axial" fashion along the entire length of the muscle (4). The sural artery may be accompanied by an accessory artery, which enters the muscle on its deep surface (3). There are also small perforating arteries between both heads of the gastrocnemius where they come in contact with each other, and some enter the medial belly from the soleus along the medial border (3).

Fig. 3. Gastrocnemius muscle sutured to the quadriceps tendon.

Fig. 4. Postoperative photograph.

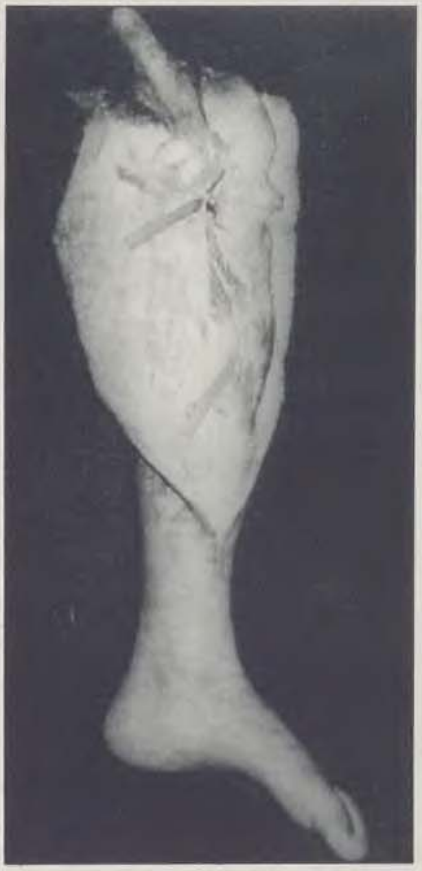

Fig. 5. A dissection of an amputated leg in which a gastrocnemius transfer was done 1 year before.

The use of the gastrocnemius muscle and myocutaneous transfer for defects caused by non-malignant (3, 4, 5) and malignant (2, 6, 9, 11) lesions has already been documented. The gastrocnemius muscle transfer has been classified by Meller (2). In our series, Type II and Type III transfers were used. (Refer to the table).

This muscle transfer brings in vascularity to the critical area, the region of the knee joint, and supports the healing of the overlying skin flaps. Several authors have reported the use of gastrocnemius transfer after skin flap breakdown and infection, in some of their cases, of total condylar knee joint arhtroplasty (6, 7, 8). The use of gastrocnemius transfer as a part of primary surgery prevents the above complication. In cases in which the tibia has to be split vertically to remove a previously implanted broken prosthesis, the gastrocnemius muscle transported over the osteotomy aids in healing by increasing the local vascularity. (Patient No: 9 & 13).

We had an opportunity to see the gastrocnemius muscle in situ 12 months after surgery, when a patient developed recurrences in the tibia and required an above-knee amputation. The leg was dissected and the transferred gastrocnemius muscle exposed (Fig. 5). As evident in the photograph, the muscle, though atrophied to some extent, forms a good padding for the prosthesis and anchors the quadriceps tendon.

By suturing the muscle to the quadriceps tendon, much needed stability is afforded, which aids in active extension of the knee joint.

Quick healing of the wound allows early institution of adjuvant chemotherapy and early mobilization of the limb. This in turn leads to faster rehabilitation of the patient.

The functional recovery of these transfers is being analyzed presently, and the results will be reported in the future.

CONCLUSION

Gastrocnemius muscle transfer is a good option for primary oncoreconstruction in limb-sparing surgery in conjunction with total knee arthroplasties done for bone sarcomas. Apart from effective padding, it supports the vascularity of the skin flaps, aiding in wound healing in critical areas.

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THE LATERAL TONGUE FLAP: A SALVAGE OPTION FOR RECONSTRUCTION OF BUCCAL RECURRENCES

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SUMMARY

Background: Surgery in an irradiated, previously operated field is fraught with danger. Though microvascular tissue transfers are being gone, they may not be feasible in all circumstances.

Methods: A lateral tongue flap was executed in 11 cases of intraoral buccal recurrence. The aims of this study were to evaluate the procedure, the function of the remaining tongue and the speed of rehabilitation with respect to preoperative functional status.

Results: Out of 11 such reconstructions in a period of 12 months, only 1 flap had tip necrosis while a haematoma developed in 2 cases. Swallowing, speech, and tongue protrusion were not significantly hampered by the procedure. Patients were rehabilitated very quickly (within 2 weeks), to preoperative functional status.

Conclusions: The Lateral Tongue Flap is a simple, robust vascular transfer and an effective salvage reconstructive option in a post-excisional defect caused by a recurrent intraoral cancer.

ZUSAMMENFASSUNG

Der laterale Zungelappen: die Auswahl der Methode für die Rekonstruktion der Gesichtsrezidiven

Cunha-Gomes D., Joshi P., Bhathena H., Kavarana N.

Hintergrund: Die Chirurgie des bestrahlten und vorher operierten Gebiets ist voll an Gefahr. Obwohl die mikrovaskulare Gewebeübertragung durchgeführt wurde, es ist nicht machtbar unter allen Umständen.

Methode: Der laterale Zungelappen wurde bei 11 Fällen der intraoralen Wangeerneurung angewandt. Mithilfe dieser Studie wurde ausgewertet das Verfahren, die Funktion der übriggebliebenen Zunge und die Schnelligkeit der Rehabilitation mit Rücksicht auf den Zustand vor der Operation.

Ergebnisse: Von 11 auf dieser Weise durchgeführten Rekonstruktionen im Laufe von 12 Monaten kam nur bei 1 Lappen die Nekrose der Endung vor, aber das Haematom kam bei 2 Fällen vor. Das Schlucken, die Sprache und die Protursion der Zunge wurden durch dieses Verfahren nicht beschädigt. Die Patienten wurden sehr schnell (im Laufe von 2 Wochen) in den Zustand vor der Operation rehabilitiert.

Abschluß: Der laterale Zungenlappen ist eine einfache Aderübertragung und eine effektive und wirksame Wahl für die Rekonstruktion eines Deffekts nach der Exision, die durch das rezidivierte Krebs verursacht wurde.

Key words: tongue flaps

The problems faced by reconstructive surgeons in intraoral cancer recurrence resurfacing are numerous. Unyielding fibrosed tissues, the poor vascularity of the surrounding region due to scarring caused by previous surgery and the untoward effects of local irradiation, and the advanced age of most of the patients are a few of them.

Few viable options remain. We find that in these circumstances the Lateral Tongue Flap affords a simple, quick, robust and vascular salvage option for intraoral resurfacing.

PATIENTS AND METHODS

A retrospective study of patients undergoing reconstruction for buccal recurrence by the Lateral tongue flap was carried out at the Tata Memorial Hospital, Mumbai.

In a 12 month period 11 patients, who previously underwent a hemimandibulectomy and buccal mucosa excision and were reconstructed by regional flaps, now presented with a recurrence of the tumor at the junction of the flap and the buccal mucosa. Six patients received radiation after

the first surgery. A wide excision of the buccal recurrence required vascularized tissue for resurfacing. A lateral tongue flap was used for this purpose.

The operative technique and functional status of the remaining tongue was analysed. The patients were examined postoperatively and the remaining tongue function evaluated with respect to protrusion, speech and swallowing. The time taken for the function of the tongue to return to preoperative status was noted.

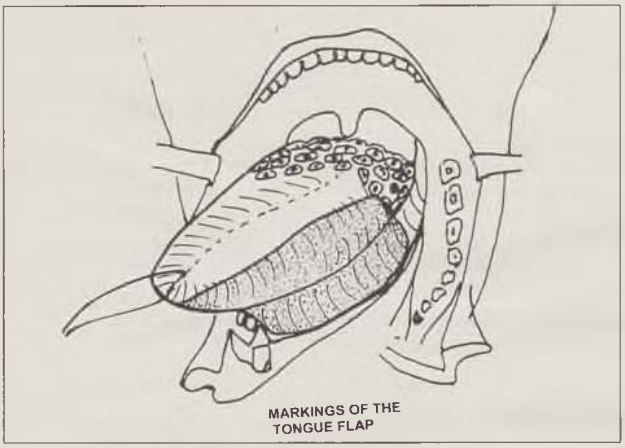

Fig. 1. Markings of the Lateral Tongue Flap.

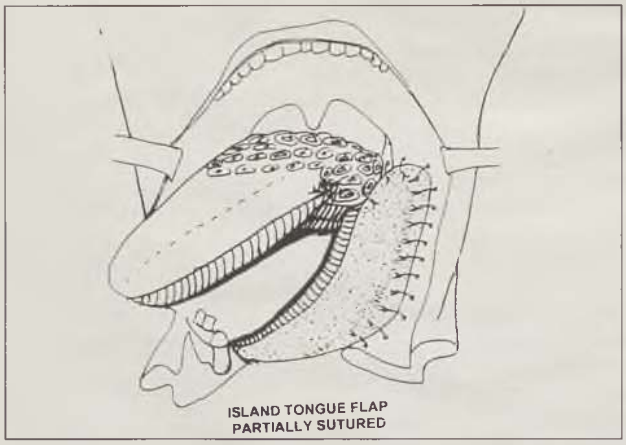

Fig. 2. Line diagram of an Island Lateral Tongue Flap.

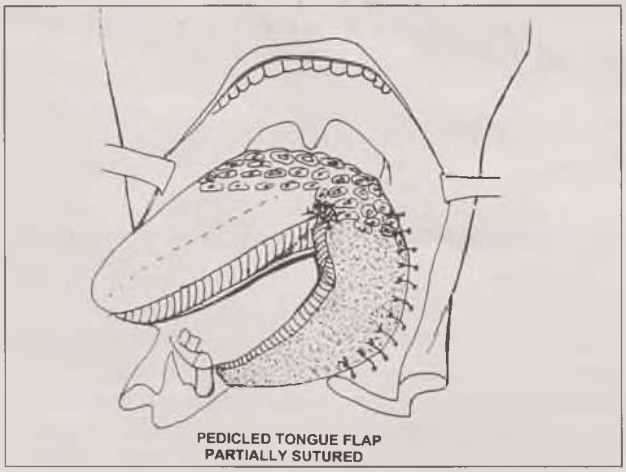

Fig. 3. Line diagram of a Pedicled Lateral Tongue Flap.

TECHNIQUE

The tongue flap can be raised as a pedicled or island flap based on the ipsilateral lingual vessels. The area of the flap includes the lateral 1/3rd of the tongue extending from the tip to the sulcus terminale (Fig 1, 2, 3). Infiltration with 1 : 150,000 saline - adrenaline reduces the intra operative bleeding to a large extent.

The mucosa and muscle are cut and the flap raised. The flap can be islanded by making a posterior incision in the mucosa and upper layer of the muscle. This enables better posterio-lateral movement of the tongue flap, especially when the defect involves the retromolar trigone.

The remaining tongue is sutured in two layers giving it a curved shape anteriorly. The flap is inset in the defect. Meticulous haemostasis is achieved, and the wound closed over suction drains. As all these patients had previous mandibulectomies there was no need to divide the pedicled tongue flap.

REPRESENTATIVE CASE REPORT

A 65-year-old female with a well differentiated squamous cell carcinoma of the Rt. Cheek underwent a composite resection of the Rt. Cheek, hemimandibulectomy and a radical neck dissection 5 years ago. For this an ipsilateral Pectoralis Major Myocutaneous Flap was utilized. Postoperatively she was administered external radiation (5000 Gy).

A second recurrence was now excised leaving a defect (6 x 4 cms.) of the buccal mucosa. The neck skin was plastered due to previous irradiation. A contralateral Pectoralis Major Flap was not feasible. An ipsilateral Island Lateral Tongue Flap was designed and raised to resurface the lining defect (Fig. 4, Fig. 5).

Postoperatively the flap flattened out and afforded good intraoral lining (Fig. 6). The remaining tongue can be protruded though with ipsilateral deviation (Fig. 7). The patient can swallow liquids and solids normally. Speech is not af-

Fig. 4. Photograph of a buccal mucosal defect with markings of the Lateral Tongue Flap.

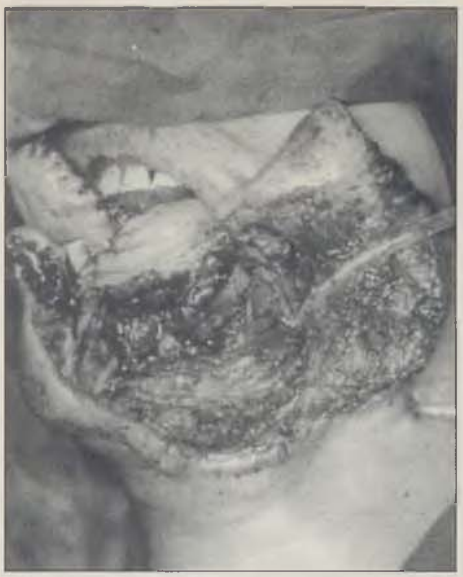

Fig. 5. Tongue Flap being sutured in position.

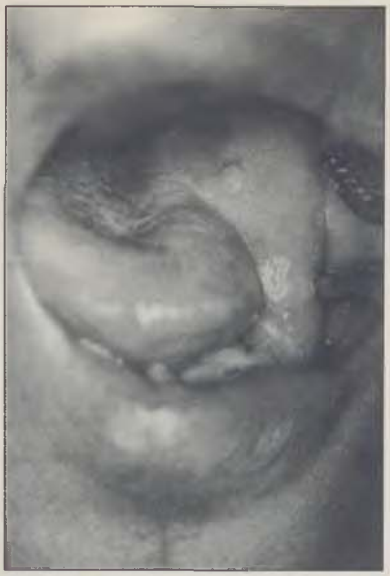

Fig. 6. Postoperative photograph (3 months). Note the shape of the remaining tongue.

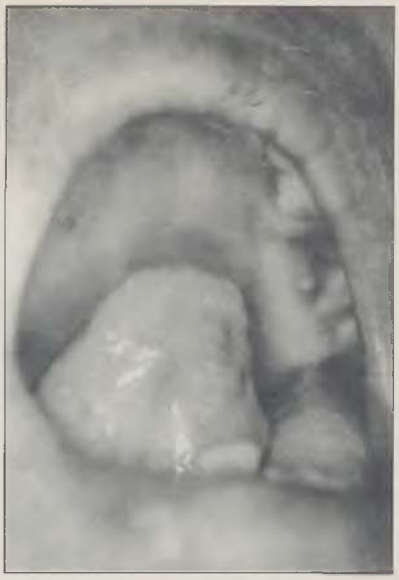

Fig. 7. Photograph showing the mobility of the remaining tongue.

Patient Profile

S.No	Lesion	Prev. Surg	Radiother.	Type of Tongue Flap	Tongue Function			Complic
					Pr	Sw	Sp	
1.	(L) BM	DP	50 Gy	Pedicled	+	N	I	Nil
2.	(L) BM	DP+PMMC	Nil	Pedicled	+	N	I	Nil
3.	(L) BM+RMT	PMMC	Nil	Pedicled	+	N	I	Bleed
4.	(R) BM	DP+PMMC	60 Gy	Island	+	N	I	Nil
5.	(L) BM+FOM	F	50 Gy	Island	+	N	I	Nil
6.	(L) BM	PMMC	Nil	Island	+	N	I	Nil
7.	(R) BM	DP	Nil	Island	+	N	I	Nil
8.	(R) BM+RMT	PMMC	Nil	Pedicled	-	N	I	Distal Nec.
9.	(L) BM	DP+PMMC	50 Gy	Island	+	N	I	Bleed
10.	(R) BM	PMMC	50 Gy	Island	+	N	I	Nil
11.	(L) BM+RMT	PMMC	50 Gy	Island	+	N	I	Nil

Key: B.M.: Buccal mucosa; R.M.T.: Retromolar trigone; F.O.M.: Floor of Mouth; D.P.: Deltopectoral flap; PMMC: Pectoralis Major Myocutaneous Flap; F: Forehead Flap.
P: Pedicled Lateral Tongue Flap, I: Islanded Lateral Tongue Flap.
Prot: Protrusion (+: ability to protrude the tongue outside the oral cavity).
Swall: Swallowing (N: Normal Swallowing of liquids and solids).
Sp: Speech (I: Intelligible Speech).

fected. The patient reverted to preoperative functional status in 2 weeks.

RESULTS

Eleven patients of buccal mucosa recurrence excisions were reconstructed using a Lateral Tongue flap in 12 months. (Refer to Patient Profile).

Ten flaps survived completely. The tongue flap flattened out and formed an excellent intraoral lining. One patient had necrosis of the distal 1 cm of the flap. In this case part of the lateral border of the tongue was excised with the recurrence. Two patients had a haematoma in the floor of mouth which was drained successfully.

In the postoperative followup it was noted that apart from ipsilateral deviation of the tongue on protrusion, the function of the remaining portion of the tongue as reflected in protrusion, swallowing, and speech was not affected (Fig 6). Oedema of the tongue settled down in 12-14 days after which the patients reverted to preoperative functional status of the tongue.

DISCUSSION

Recurrence of buccal mucosa lesions at the junction of the intraoral flap and buccal mucosa is a common occurance. Most of these patients have already been reconstructed in the primary surgery by regional pedicle flaps (deltopectoral, pectoralis major myocutaneous and forehead flaps). External radiotherapy is often administered in the postoperative period.

Now in this situation where the tissue has been irradiated, scarred and fibrosed due to previous surgery a vascular transfer for resurfacing of the defect is essential. The objective should be achieved with the minimum surgical intervention, and the patient should be rehabilitated as fast as possible.

In many cases, regional flap options have been exhausted in previous operations. Though microvascular free transfers may be suggested for such situations, they may not be always feasible in a high volume centre where there are constraints on theatre time, personnel and resources. Apart from this, tissue planes in an irradiated area are not easy to develop. The neck flap is often stuck to the underlying structures if a radical neck dissection has been done in the past. Also in this circumstance, the quality of the recipient vessels may not always be optimal for a free flap transfer. This may necessitate the use of vein grafts to extend the pedicle to reach the opposite neck.

Tongue flaps have been used for intraoral reconstruction as early as the end of the last century (1). The vascular supply of the tongue is profuse as described by Bracka (2). Due to the immense communications within the body of the tongue, flaps raised proximally or distally, on the dorsal or ventral aspect, have a good arterial supply and venous drainage (2). As the tongue embryologically develops from two arches, the vascular input is also derived from two sources. It follows that the lateral tongue flap should survive even if the ipsilateral lingual artery was damaged or ligated in the previous surgery (3). In such cases it would be prudent to maintain the posterior communication with the body of the tongue, as a pedicled lateral tongue flap (Fig 3).

In 1909 Lexer repaired 2 cheek defects using lateral mucosal tongue flaps (4). Klopp and Shurter were the first to describe the use of the longitudinally split tongue flaps for soft palate and tonsillar defects (5). In 1964, Bakamjian used the ipsilateral tongue flap to repair a moderately sized facial defect (6). Conley used the tongue flap to line an external flap for full thickness cheek defects (7). Other authors have also described this flap as a primary reconstructive procedure for intraoral defects (3, 8-14).

We recommend this modality of reconstruction especially for the resurfacing of an excised buccal recurrence. Due to the central position of the tongue in the mouth and its extreme mobility, moderately large buccal mucosa defects can be resurfaced. The mucosa of the tongue resembles that of the excised region. It is adherent to the underlying muscle maintaining its robust vascularity in spite of shearing forces in the oral cavity. Incising the mucosa all around, as in an island lateral tongue flap, allows better movement of the proximal part of the tongue into the retromolar trigone. This does not in any way jeopardize its vascularity (11). This flap can be used even if the mandible is intact or reconstructed. In this case the pedicle of the flap will have to be divided at a second stage. As the tongue is immensely vascular, meticulous haemostasis has to be achieved and the operated field has to be drained to prevent a haematoma. The vascularity of the tongue does not get adversely affected by radiation, and flaps have been raised from irradiated tongues (3).

Removal of the lateral 1/3rd of the tongue does not hamper its function to a large extent (Fig 6). These patients are seen to revert to their original functional status within 12-14 days. Tongue mobility, swallowing and speech are not hampered by this procedure. Deviation of the tongue to the same side is observed on asking the patient to protrude the tongue. This is probably due to the flap being a full thickness mucomuscular flap.

Quick rehabilitation is very important in this category of patients, as they have undergone major surgeries and irradiation which have upset their routine lives. We find that the lateral tongue flap is an easily reproducible, local salvage flap option for resurfacing of a buccal mucosa recurrence.

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REVASCULARIZATION OF A FREE NERVE GRAFT WRAPPED IN OMENTUM

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SUMMARY

The revascularization of free nerve grafts wrapped in omentum was assessed in an experimental model using rats. Revascularization of the grafts, using the original vessels, proceeded in the same way as reported in earlier studies, being in progress on the 4th day after the operation and essentially complete on the 8th day. The observations made in the experiment suggest that using omentum does not offer much of an advantage with nerve grafts transplanted to tissues with a good blood supply. Using omentum would seem indicated for grafts transplanted into cicatrized or irradiated tissues.

ZUSAMMENFASSUNG

Revaskularisation eines freien Nerventransplantates im Omentum

Šmahel, J., Clodius, L.

In einem Modellexperiment an Ratten verfolgten wir die Revaskularisation freier Nerventransplantate, die in Omentum eingewickelt wurden. Die Revaskularisation der Transplantate, bei welcher ihre ursprünglichen Gefässe benutzt wurden, nahm denselben Verlauf, wie es in den früheren Studien über die Heilung der Nerventransplantate beschrieben wurde: am 4. Tag nach der Operation war die Revaskularisation im Gang und am 8. Tag war sie im wesentlichen abgeschlossen. Unsere experimentellen Beobachtungen deuten an, dass der Einsatz des Omentums bei der Nerventransplantation im gut durchbluteten Gewebe kaum einen Vorteil bringt. Die Anwendung des Omentums erscheint dann sinnvoll, wenn die Transplantation in einem vernarbten oder in einem bestrahlten Gebiet stattfindet.

Key words: nerve defects, nerve transplantation, revascularization, use of omentum

On the basis of clinical and experimental data, it is generally thought that revascularization of a free nerve graft in healthy tissue requires no special measures of any kind. Difficulties that might seriously affect revascularization may arise if the nerve graft is placed in cicatrized or irradiated tissues. The two methods recommended in such situations are the use of a vascularized graft and wrapping the graft in omentum, which is then transposed with vascular connections performed or, more rarely, as a free graft. The advantages of a vascularized graft are evident, but the effect of omentum on the revascularization of a nerve graft is less well known. The marked angiogenic potential of the omentum (4) might favour revascularization of the graft, but the mesothelium covering the omentum and providing an effective barrier for the development of adhesions might complicate the revascularization process. We have developed an experimental model for closer investigation of nerve graft revascularization in omentum.

MATERIAL AND METHODS

15 male rats of the SIV 50 strain were used, weighing 300 - 350 g. They were kept in individual cages and given food and drinking water ad lib.

The surgery in 12 of the 15 animals was done under general anaesthesia induced with halothane and maintained by the use of valium and pentobarbital. The first step was to make a skin incision, split the gluteal group of muscles and dissect out the sciatic nerve. This was done on one side only, alternating between left and right. A 14 mm segment of the nerve was removed, after which the skin wound was closed and sutured. The nerve segment was fixed in a device that functioned as an arc (Fig. 1). We made the device from a 20 ml plastic syringe, cutting off rings that were about 1.5 mm in width. The epineurium at the end of the nerve segments was picked up with an 8-0 nylon suture, and a further knot made in this was used to anchor the segments in the tiny

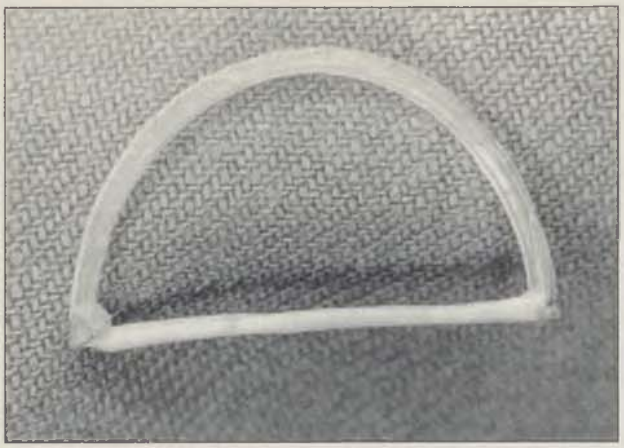

Fig. 1. Plastic device with nerve graft held in position.

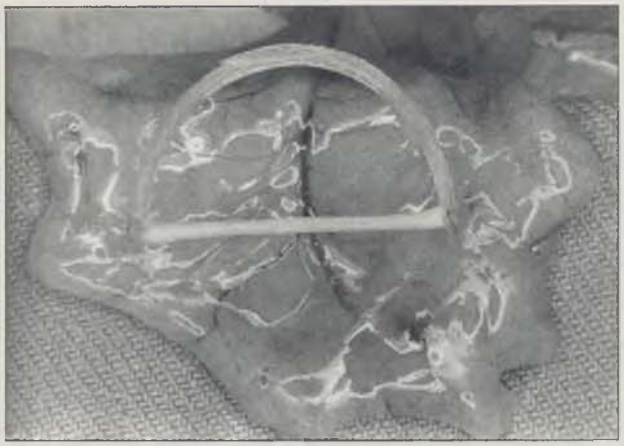

Fig. 2. Positioning of graft on omental fold.

notches at the ends of the arc. When the grafts had been prepared, a laparotomy was done in the midline and the main fold of the greater omentum lifted out from the peritoneal cavity. We implanted the arc with the nerve segment in a pocket made by turning up the caudal end of the omentum (Figs. 2. & 3). The graft was fixed in situ with three 8-0 nylon sutures that passed around the plastic arc. The omentum was then replaced in the peritoneal cavity and the abdominal wound closed. The remaining 3 animals in the group had no surgical intervention. They served as donors of intact nerves to assess vascularization.

On examination on the 4th (4 animals) or 8th (8 animals) day after surgery, the vascular systems of all animals were perfused with a mixture of black India ink and gelatine supravitally via the ascending aorta. When the mass had gelatinized, the nerve grafts with the adhering omentum were removed, fixed in formalin and cleared with glycerin. We studied them under a stereo microscope, removing the omentum in stages until the vessels of the nerve graft could be seen. Following assessment under the stereo microscope, the grafts were embedded in paraffin and both longitudinal and transverse sections made, which were then stained with haematoxylin and eosin.

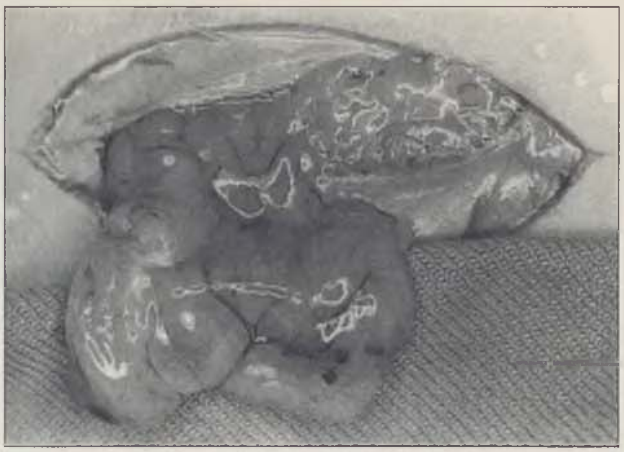

Fig. 3. Enclosing the graft in the omental pocket.

RESULTS

Implantation of the nerve segments with plastic arc was well tolerated by the animals whose vital functions showed no impairment.

The examinations on the 4th day after the operation showed the grafts to be in the early stages of revascularization. The omentum wrapped around the grafts contained dense vascular networks consisting of irregularly developed capillaries. When these were partly removed, anastomoses were seen between the omental reticula and the vessels of the grafts. Some of the meso- and epineural vessels were already filling up with India ink via those anastomoses (Fig. 4).

Fig. 4. Development of anastomoses between the capillary networks of the omentum and the original vessels of the nerve graft. 4th day after the operation. Whole preparation, vessels filled with India ink. x 24.

On the 8th day after the operation the vessels of the whole graft filled up (Fig. 5). Hypervascularization persisted in the omentum, which had fused with the epineurium. The graft itself did not show vascular proliferation, with only the original vessels filling up (Fig. 6).

Comparison with the blood supply in an intact sciatic nerve (Fig. 7) showed that the grafts reached a similar level of vascularization, with the pattern of their vascular system very similar to that of an intact nerve.

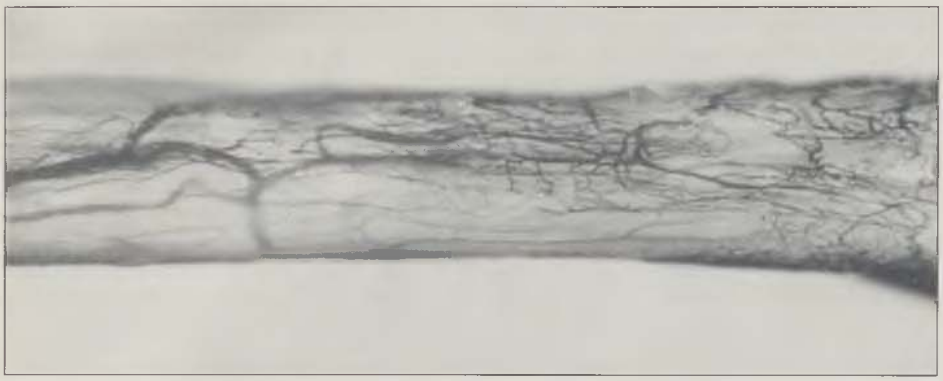

Fig. 5. Complete revascularization of nerve graft on 8th day after the operation. Whole preparation, vessels filled with India ink. x 18.

Fig. 6. Omentum (above) fused with epineurium of the graft (below). 8 days after the operation. Longitudinal section, H & E, vessels filled with India ink. x 110.

Fig. 7. Vascular system of an intact sciatic nerve. Whole preparation, vessels filled with India ink. x 18.

DISCUSSION

The use of the plastic arc for implantation of the nerve segment proved highly important from the methodological point of view. It meant that the graft was kept extended, thus ensuring standard contact with the omentum. The measure also helped to immobilize the graft. A segment not fixed in the plastic arc would have rolled up in a ball, and it would have been almost impossible to assess revascularization.

On examination on the 4th day after the operation, anastomoses were seen between the vascular systems of omentum and grafts, with some vessels in the grafts filling up. This relatively advanced stage of revascularization justifies the assumption that revascularization of the grafts had started on the 3rd day after the operation. Revascularization of the grafts was essentially complete on the 8th day after the operation. Most of the authors writing about the healing of free nerve grafts—though without omentum—described a similar revascularization process. Their methods and observations were recently considered in a review paper by Best and Mackinnon (1). The use of omentum in our experiment brought no advantage or disadvantage in this sense. This provides indirect proof that the mesothelium covering the omentum presents no appreciable obstacle to the revascularization of grafts.

The work of Chamorro et al. (2) led to different conclusions

than our own. The reason for the discrepancy is probably that these authors were using free omentum in their experiments. It is possible that the angiogenic impulse is greater with a free graft than in one that is peducunlate.

Dissension also exists concerning the question as to whether blood circulation is restored to the original vessels of the graft or a new vascular system develops. In analogy to free skin grafts (3), we believe that both modes of revascularization may occur, and that they may be taken as healing by first and second intention. In the first case the proliferating vessels in the wound base make the connection with the vessels of the graft on the 2nd or 3rd day after surgery, and the circulation is restored to its original vascular system. As the ischaemic phase is relatively short in this case, degenerative processes in the graft play no appreciable role. This mode of revascularization was typical in our experiment. Characteristic features were a marked vascular proliferation in the omentum and practically none in the graft, the anastomoses seen between omentum and graft, and finally, the fact that the structure of the vascular system in the healed graft was very similar to that of an intact nerve. Healing by second intention occurs because anastomoses do not develop for a variety of reasons. Vascular proliferation from the wound base extends into the graft, finally resulting in the development of a new vascular system. Revascularization of the graft comes later if healing is by second intention and therefore also always involves extensive degenerative changes in the graft. The outcome of the healing process depends mainly on the thickness or volume of the graft.

The experiment has led to the conclusion that the use of omentum serves little purpose with grafts transplanted into healthy tissue, merely making the surgeon's work more complicated. The use of omentum would appear to be indicated only when grafts are transplanted into cicatrized or irradiated tissues.

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PHALLOPLASTY USING A LATERAL GROIN FLAP IN FEMALE-TO-MALE TRANSSEXUALS

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SUMMARY

The paper presents a one-stage procedure for neophallus construction using a lateral groin flap. In the years 1991-1997, 127 female-to-male transsexuals underwent surgery in the Department of Plastic Surgery of the Medical University of Łódź using this method. Good results were obtained in 96 patients (75,6%). Necrosis of the distal part of the flap or other complications that adversely affected the final results of the treatment occurred in 20 cases (20,5%). In 5 cases the flap was completely lost. Phalloplasty along with urethra was done in 5 female-to male transsexuals. In 47 patients the constructed penis was stiffened with the use of three types of prostheses.

ZUSAMMENFASSUNG

Die Phalloplastik mithilfe des lateralen Lohelappen bei den Transsexualen Frau zu Mann

Zieliński T.

Die Arbeit beschreibt das einstufige Verfahren bei der Gestaltung des Neophall mit Anwendung des lateralen Lohelappen. In den Jahren 1991-1997 wurden an der Klinik der plastischen Chirurgie der Universität für Medizin in Łódź auf dieser Weise 127 Transsexualen Frau zu Mann operiert. Gute Ergebnisse wurden bei 96 Patienten (75,6%) erreicht. Die Nekrose des distalen Lappenteiles oder andere Komplikationen, die die Endergebnisse der Behandlung beschädigt hatten, kamen bei 20 Fällen (20,5%) vor. Bei 5 Fällen wurde der Lappen völlig verloren. Die Phalloplastik gemeinsam mit der Urethra wurde bei 5 Transsexualen Frau zu Mann angewandt. Bei 47 Fällen wurde der rekonstruierte Penis mithilfe drei Prothesentypen gestützt.

Key words: transsexualism, penis construction

The term „transsexualism“ was used for the first time by Caldwell in 1949 (3). It achieved more widespread interest, however, in the sixties, mainly because of papers by Harry Benjamin, who created the basis of a theory of transsexualism (2). In Poland, the most well known definition of transsexualism is the one proposed by Imieliński, which states that it is a discrepancy between the feeling of personal gender identity and the morpho-biological structure of the body as well as the social connotation of gender. The latter are perceived as strange and belonging to the opposite gender (11). There are two clinical types of transsexuals: the male-to-female type (M/F), in which a male body is associated with mental female gender identification, and the female-to-male type (F/M), which is just the reverse. It is estimated that the frequency of transsexualism in Poland is 1:150 000 and that the F/M type prevails (5, 5:1) (7). The etiology of transsexualism is still not clear. Some investigators believe that genetic and hormonal factors during the intrauterine period of life play a dominant role. Others think that environmental conditions during the individual growth and development of a child may have a crucial role. Examinations by a sexologist, psychiatrist and endocrinologist are most important for diagnosing transsexualism (15).

Surgical treatment, which, along with hormonal therapy, is the most effective treatment for transsexualism, is a multistage procedure. In female-to-male transsexuals, it includes such surgical procedures as breast reduction and hysterectomy with adnexectomy, and then constructive steps in order to form a penis (5, 12, 13).

MATERIAL AND METHODS

In the years 1983-1997, 252 female-to-male transsexuals were treated in the Department of Plastic Surgery of the Medical University of Łódź. Neophallus constructions were performed in 209 patients. In the years 1984-1990 we constructed the neophallus by using a multistep technique involving the following three flaps: a bipedicled ab-

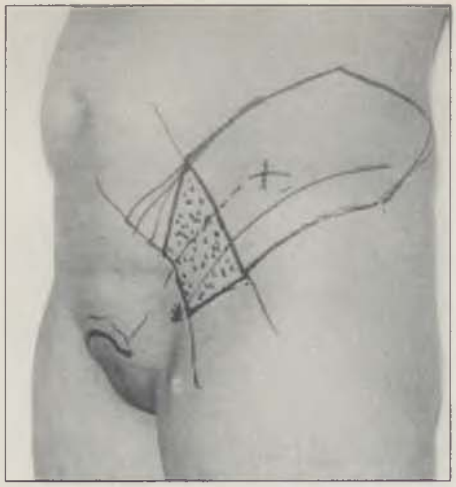


Fig. 1a. The lateral groin flap marked for phalloplasty.

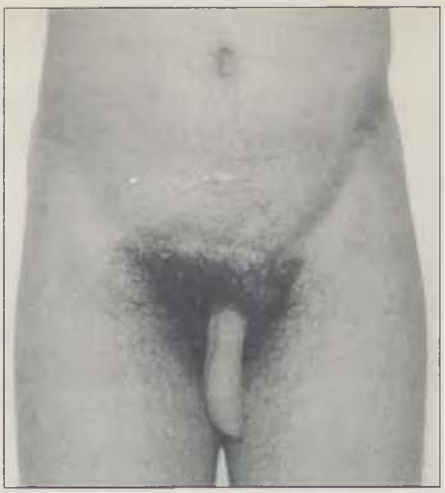


Fig. 1b. Two years after penis construction.

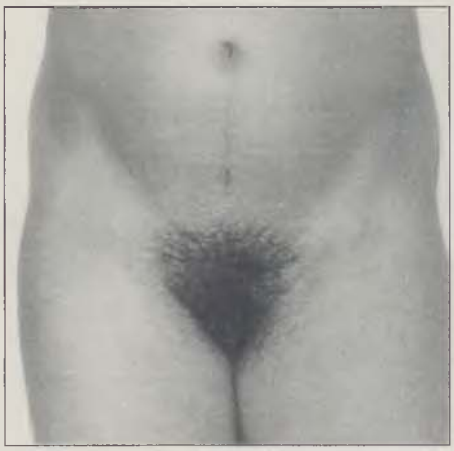


Fig. 2a. Pre-operative view of a 28-year-old female-to-male transsexual.

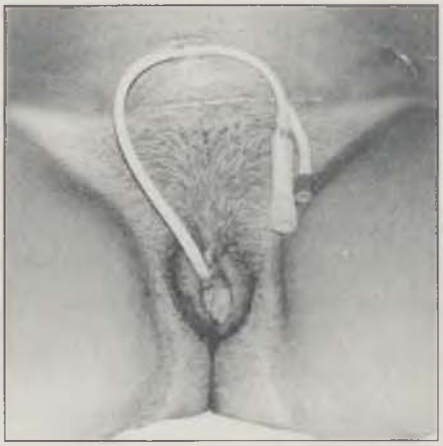
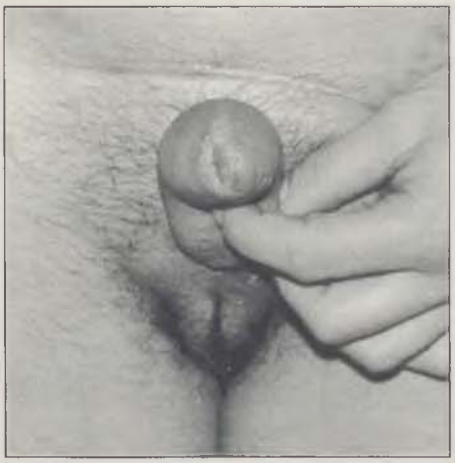


Fig. 2b. Construction of the fixed part of the urethra.



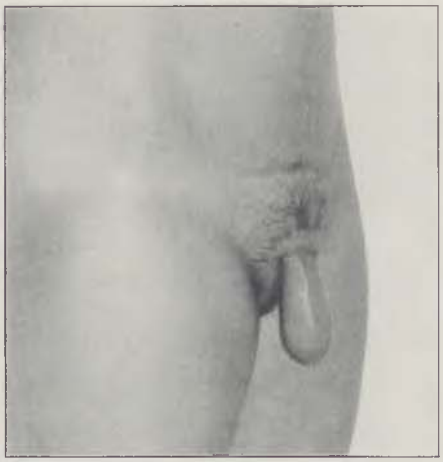


Fig. 2c and 2d. One year after penis construction.

dominal tubed flap, a single pedicled infraumbilical flap and a pedicled gracilis myocutaneous flap. In 1991, for the first time, we performed a one-step penis construction operation using a lateral groin flap. During 8 years (1991-1997), 127 female-to-male transsexuals, ranging in age from 21 to 55 years, were operated on with the use of this technique.

The operations were performed under general anaesthesia. Before the operation, we marked on the skin the passage of a inguinal ligament as well as the corresponding femoral artery, and we planned the proportions of the flap, which should be 9 x 14 cm in size, along with the pedicle. The length of the pedicle should equal the distance between a femoral artery and the pubic symphysis. Correctly planned, the flap should contain a superficial circumflex iliac artery. To dissect a flap, we made an incision until we reached the deep fascia, and then we dissected the flap medially, to the side. The subcutaneous tissue was kept intact around the vascular pedicle for the purpose of enhancing venous drainage. A subcutaneous tunnel was created in the inguinal area, and the flap was transposed through the tunnel to the recipient site. The flap was tubed and sutured with the skin outside to create the phallus. The donor wound was always closed directly (Fig. 1).

Phalloplasty along with urethra was done in 5 female-to-male transsexuals. It is a three-stage procedure. In the first stage we formed part of the urethra according to Snyder - along the middle line of the groin flap. During the second stage we created a part of the urethra between its natural opening and the top of the pubic symphysis with the use of a mucosal graft of the anterior wall of the vagina as well as the vestibular skin and the labia minora. In the final stage we formed the penis out of the lateral groin flap and connected the parts of the urethra made earlier (Fig. 2).

Table 1. Early results and complications of penis construction in 127 female-to-male transsexuals

Early results			Early complications			
good	satisfactory (necrosis of the distal part of the flap)	poor (necrosis of the whole flap)	oedema and venous congestion	hematoma	infection	lympho-rrhagia
96 (75.6%)	26 (20.5%)	5 (3.9%)	14 (11%)	4 (3.1%)	7 (5.5%)	4 (3.1%)

Table 2. Results of the procedures to achieve rigidity of the constructed penis with the use of various types of prostheses

Result / type of prosthesis	good (permanent healing in the flap)	satisfactory (the prosthesis required a translocation or a temporary removal)	poor	Total
polyester	5 (83%)	0 (0%)	1 (17%)	6 (100%)
rigid silicone rod	20 (57.1%)	9 (25.7%)	6 (17%)	35 (100%)
semirigid silicone rod	3 (50%)	1 (17%)	2 (33%)	6 (100%)
Total	28 (59.6%)	10 (21.3%)	9 (19.1%)	47 (100%)

Despite the notion that the sexual interests of transsexuals are secondary and less important, the majority of them would like to have the penis stiffened with a prosthesis to be capable of sexual intercourse. Forty-seven out of 127 female-to-male transsexuals underwent the implantation of a prosthesis into the penis, formed with the use of the lateral groin flap, in order to achieve rigidity. Three types of prostheses were used. In 6 patients, a knitted polyester-polypropylene prosthesis was used; single silicone rigid rods were implanted in 35 transsexuals, while 6 other patients underwent the implantation of single silicone semirigid rods (otherwise used in pairs as a treatment for impotency). Such operations were performed at least 6 months after phalloplasty. Implantation of the prostheses into the flap was done through a small incision over the pubic symphysis and then sewn with nonabsorbable suture to the periosteum of symphysis for stability.

RESULTS

Since 1991, penis construction with the use of the lateral groin flap has been performed in 127 female-to-male transsexuals. We obtained good results in 96 patients (75,6%), satisfactory results in 18 (20,5%), and a poor outcome in 5 individuals (3,9%). We considered a good result to be a case in which we achieved the intended result and the postoperative period was without complications. As satisfactory, we considered cases in which the postoperative course was complicated by necrosis of the distal part of the flap. When the flap was completely lost, the result was regarded as poor. Oedema and venous congestion were the most frequently observed complications - in 14 patients (11%). Four transsexuals (3,1%) had lymphorrhagia from the inguinal region, and in 7 cases (5,5%) a wound infection was observed. Hematoma in the wound took place in 4 patients (3,1%). In all subjects, the surgery was performed in one stage. The average time of hospitalisation was 19 days. We observed little deformation of the donor area and the return of sensation in the proximal 1/3 or 1/2 of the penis. The early results and complications are shown in Table 1.

Among the 5 patients in which phalloplasty with urethra was done, a fistula developed in 4 of them. In 3 cases a fistula appeared at the location of the female external urethral orifice, while in another individual there were 2 fistulas - at the location of the natural urethral orifice and at the point of anastomosis. In two patients we attempted to close the fistula, but only in one case was the attempt successful. One patient had recurrent infections in the urinary tract after the second stage of the surgery. None of the patients with a constructed neo-urethra had a prosthesis implantation to achieve rigidity of the neophallus.

Forty-seven out of 127 female-to-male transsexuals in which the penis was constructed with the use of a lateral groin flap underwent an implantation of a prosthesis. The remaining 80 patients opted not to receive such an implantation. In 5 of the 6 cases in which we used a knitted polyester-polypropylene prosthesis, the implant permanently healed. In one patient, however, we had to remove it. In 35 transsexuals, single rigid silicon rods were implanted. In 29 cases we obtained good results, but 9 patients (25,7%) required shortening of the prosthesis. In 6 patients (17%) the prosthesis was removed, in 4 cases due to a pressure sore on the tip of the penis while in 2 others because of inflammation.

In the remaining 6 transsexuals with semirigid silicon rods, we achieved permanent healing in 4 cases (66,6%). In the other 2 (33,3%), the prosthesis was removed because of pressure sores on the tip of the penis and perforation of the prosthesis. The period during which complications forced us to remove the implants was 2 to 36 months. The results of the procedures used to

evoke rigidity in the neophallus by the use of various types of implants are compared in Table 2.

DISCUSSION

Penis construction in female-to-male transsexuals is still one of the most challenging procedures in reconstructive surgery. There are several different surgical procedures used to form a penis, from the most simple method using a bipedicled abdominal tube flap, to more complicated microsurgical techniques, which finally give better or worse functional and esthetic results.

The lack of definite criteria for evaluation, the great number of surgical techniques used to form a penis in transsexuals, as well as the frequently small groups of patients make a suitable evaluation of the effects and a comparison with the results obtained in other centres very difficult.

Phalloplasty from a bipedicled abdominal tube flap is presently a rarely used method, since authors are in general agreement with one another as far as the disadvantages of this method are concerned. It is a multistage procedure, the formation and translocation of a flap leave many deforming scars on the abdomen, and blood supply to the created organs is poor.

Although the use of a single pedicled infraumbilical flap reduces the number of stages necessary for phalloplasty, it also results in extensive deformation of the donor area and circulation in the flap, especially in obese patients, and therefore is not recommended (9).

A groin flap, described by McGregor and Jackson as an axial fasciocutaneous flap based on superficial circumflex iliac vessels, was used for the first time for phalloplasty in female-to-male transsexuals by Puckett and Montie in 1978 (14, 16). In 1979 Acland modified the method by moving the cutaneous island laterally, parallel to a groin ligament, although still using the same blood supply (1). This made the pedicle longer and the flap thinner, with an elastic, hairless skin. Such a flap is called a lateral groin flap or an iliac flap. Authors who use a groin flap for phalloplasty agree that it is a convenient one-step procedure with good esthetic effects. The skin used in this method is elastic, smooth and hairless, whereas the flap itself has a good blood supply, which reduces the risk of complications. The primary closing of the wound after taking the flap is not difficult, and the remaining linear scar does not deform the donor area (17, 18). We found a recovery of sensory loss in 1 /3 to 1 /2 of the length of the created phallus in about 2 years following the operation, which corresponds to the observations of Cheng et al. who noticed such recovery even in 2/3 of the penis length (4).

Free flap techniques offer a further method for construction of a neophallus in female to-male transsexuals. Today, the radial forearm flap seems to be the most frequently used free flap for phalloplasty. Compared to the methods used in our Department, this technique has the advantage of a greater chance for the preservation of better sensation. However, a major drawback of this technique is a large scar on the forearm and the loss of one of the two main vessels supplying the hand. When the subcutaneous tissue is very thin, the penis will have insufficient bulk (4). The use of other free flaps has been described and among them are: the dorsalis pedis flap, the upper arm flap and osteocutaneous fibula flap (6). These techniques are very expensive, with a large number of complications, and very often they result in doubtful effects.

Recommendations for phalloplasty along with a neo-urethra are controversial. In the Department of Plastic Surgery of the Medical University in Łódź, we are of the opinion that indications for such an operation in female-to-male transsexuals are questionable since the construction of a neo-urethra is a multistage procedure with a high risk of complications, both early and late. Among the former, urethral fistulas are the most common. Among the later complications, these are mainly narrowings in the points of anasthomosis of the created and natural parts of the urethra. This may subsequently lead to a secondary dilatation in the proximal part of the urethra, retention of urea and possible infections in the urinary tract. It is also difficult to find a proper, hairless skin for construction of the urethra. Therefore, we construct a neo-urethra in the formed phallus only in very determined patients who insist on this procedure in order to be able to void while standing (19). Most authors express a similar opinion, but there are centres where the construction of a neo-urethra is considered necessary (8).

Obtaining sufficient rigidity of the constructed neophallus is a serious problem. Although various types of transplants and implants are used, in many cases these procedures lead to complications (10). In our Department only alloplastic implants were used. Failures which forced us to remove the prostheses were caused by developing pressure sores in the neophallus, which has naturally poor sensation, or by an inflammatory reaction to a foreign body. In 9 patients a disconnection of the prosthesis from the pubic bone, its dislocation to the distal tip of the flap and skin perforation occurred. Other surgeons have used cartilage and bone to obtain rigidity in phalloplasty, but these transplants also have some disadvantages. Although autologous cartilage and bone transplants are not foreign bodies and therefore are rarely rejected, their resorption, curving and fracture are often causes of failure.

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Multiplier effect projects in view of the 1999 including the LEONARDO DA VINCI PROJECT No. INC. 307/96

Title: Realization of a system of initial and continuing distance vocational training, in the health-care sector of BURNS, through specialized interactive multimedia modules and telematic connections.

Through the years 1991-1995 several international meetings took place that established cooperation of the Prague Burn Center, 3rd Medical Faculty, Charles University with the principal coordinator of this project - Mediterranean Club for Burns and Fire Disasters - and the contractor of this project INFORMED SRL in Palermo. Thus the Prague Burn Center has been informed also about the other European Projects such as Comett, Tempus etc.

In November 1996 the Prague Burn Center was invited by the European Commission, Leonardo da Vinci Technical Assistance in Brussels as an associated partner with scientific competencies to create new teaching modules and to test them for distance training and to guarantee experimentation of multimedia technologies through direct participation of the medical staff and of students.

In March 1997 the Contract was signed by the Dean of the 3rd Medical Faculty in Prague and by the Director of the National Training Fund in Prague.

All the other scientific partners from Italy, France, Spain, Greece, accepted lessons they should develop on prevention, immediate care, management of disasters, nutrition in burn patients, surgical treatment, infection, immunology, rehabilitation and post-burn scars, and the Prague Burn Center was entrusted to prepare the module on „Multiple Organ Failure Syndrome in severe burns". The documentation attached to the data base includes:

- general menu of the module, - text and images using Word for Windows, - the links between the various parts of the module, - archives of images on disk, - list of questions + answers for each question specifying the value beyond which the test is considered as passed, - bibliography of texts + images.

At the final meeting of LDV in Palermo in November 1998 the objectives for proposals in the 1999 were focused on dissemination of the teaching modules through national and European networks to real users.

Prof. MUDr. Radana Königová
Prague Burn Center

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SURGICAL TREATMENT OF PIGMENTED MELANOCYTIC NEVI DEPENDING UPON THEIR SIZE AND LOCATION

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SUMMARY

Cutaneous melanocytic nevi may cause cosmetic defects and represent a risk of malignant transformation. Most problems are posed by nevi of the face or those covering large areas of the body, the so-called giant congenital nevus. From 1986 until 1995, 295 patients with pigmented nevi underwent surgical treatment. The method employed depended upon the size and location of the melanocytic nevus. Results were evaluated according to a three- stage scale with consideration of the cosmetic outcome and satisfaction of the patients.

Good results were obtained in 280 patients, satisfactory ones in 11 patients, and unsatisfactory ones (requiring corrective treatment) in 4 patients. Small and medium size nevi (up to 5 cm in diameter) can be removed in a one-stage procedure with suturing of the wound, local plasty or free- tissue skin graft. Blepharal and central facial lesions are best reconstructed with full-tissue skin grafting. Large nevi (over 5 cm in diameter) mandate a staged excision or removal at one-stage with prior use of a tissue expander or presuturing. Giant nevi require staged treatment with the use of an intermediate thickness skin graft or removal of superficial layers of the nevus, always preceded however by a histopathological examination.

ZUSAMMENFASSUNG

Die chirurgische Behandlung der pigmentierten melanozytischen Neven in Abhängigkeit von ihren Ausmassen und Lokalisation

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Die melanozytischen Hautneven können kosmetische Deffekte verursachen und stellen ein Risiko der malignen Transformation dar. Die meisten Probleme wurden durch Neven im Gesicht verursacht oder von jenen Neven, die ausgedehnten Körperteile bedecken (ein riesiges kongenitale Nevus). In den Jahren 1986 bis 1995 haben sich 295 Patienten mit einem pigmentierten Nevus der chirurgischen Behandlung unterzogen. Die angewandte Methode war von den Ausmassen und der Lokalisation des melanozytischen Nevus abhängig. Die Ergebnisse wurden anhand der dreistufigen Skala ausgewertet (mit Rücksicht auf die kosmetischen Ergebnisse und die Zufriedenheit der Patienten).

Bei 280 Patienten wurden gute Ergebnisse, bei 11 Patienten befriedigende Ergebnisse und bei 4 Patienten unbefriedigende Ergebnisse (hier war eine korektive Behandlung nötig) erreicht. Die kleinen und mittelgroßen Neven (bis 5 cm im Durchschnitt) können anhand eines einmaligen Verfahren mit Suture der Wunde, der lokalen Plastik oder einem freien Gewebestück beseitigt werden. Die Läse im mittleren Teil des Gesichts oder am Lid kann man am besten mit ganzem Hautgewebestück rekonstrurieren. Die breiten Neven (über 5 cm im Durchschnitt) brauchen eine allmähliche Exision oder eine einmalige Beseitigung mit vorangängiger Anwendung der Gewebeexpandeuren oder ein wiederholtes Nähen. Die riesigen Neven verlangen eine allmähliche Behandlung mit Anwendung eines mittlestarken Hautstücken oder eine Beseitigung der Oberflächenschichten des Nevus. Immer muß eine histopathologische Untersuchung hervorgehen.

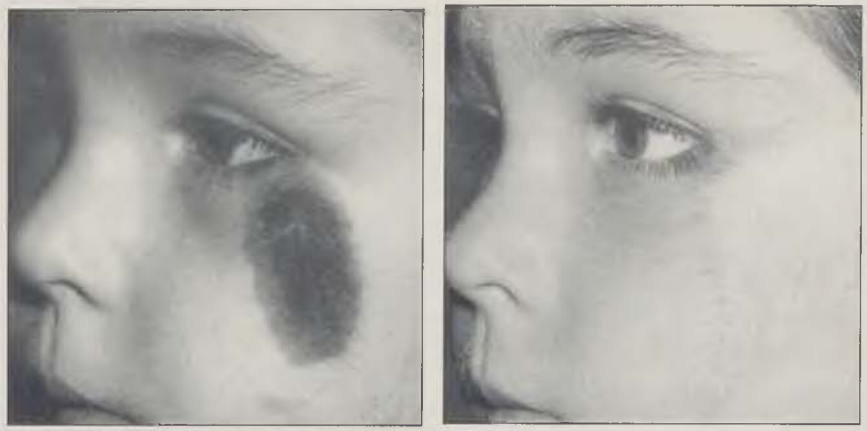
Key words: pigmented melanocytic nevi, nevi size and location, surgical treatment

The optimal treatment of cutaneous melanocytic nevi has been and remains a source of controversy (1, 4, 5, 6, 8, 10-12). They may be congenital or acquired, appearing predominately between 2 and 6 years of age. They may be single or numerous; their anatomic location is variable. During puberty and pregnancy, the number of pigmented nevi may increase and the preexisting lesions may become larger and darker. The number of cutaneous melanocytic nevi is variable, unrelated to sex, and depends upon the population group and age examined (4, 15). The histological appearance of the pigmented nevi depends upon the stage of development and the variety of cells forming them. The majority of nevi develops from melanocytes inhabiting the epidermis and hair follicles. There are several types of pigmented nevi, based upon their clinical and pathological features (2, 3, 7, 15). The etiology of pigmented nevi remains unclear. There is evidence confirming the role of solar radiation in the pathogenesis of pigmented skin nevi on exposed

parts of the body, especially when it is intense and causes sunburn. All congenital nevi should be regarded as potential precursors of melanoma, particularly large congenital melanocytic nevi (7, 10, 11).

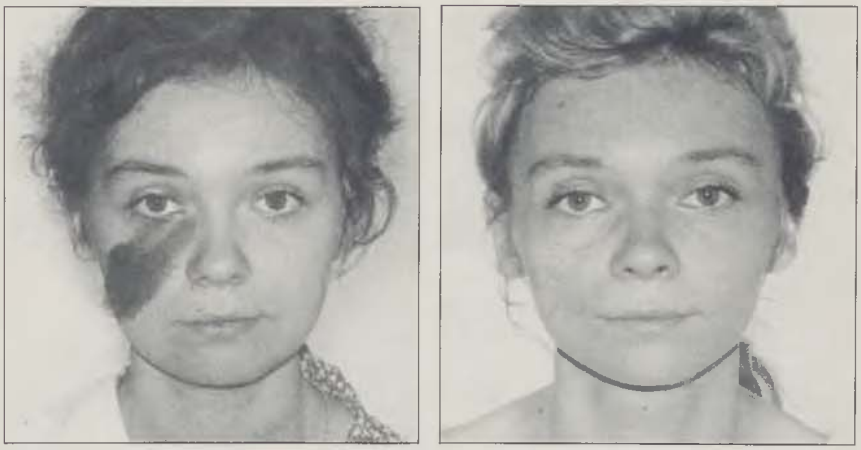
MATERIALS AND METHODS

From 1986 until 1995, 295 patients, among them 198 women and 97 men, ranging from 5 to 36 years of age, with pigmented melanocytic nevi were treated at the Department of Plastic Surgery of the Medical University in Łódź. The patients were divided into three groups. The criterion adopted was based upon the size of the nevus. The first group comprised patients whose nevi were small, not exceeding 2 cm in size. The second group contained patients with medium sized nevi ranging from 2-5 cm. The third group included patients whose nevi were larger than 5 cm., often covering large body areas such as all of the back, chest, abdomen, buttocks or an entire extremity, known as giant nevi. Surgical treatment of patients with pigmented nevi was aimed at oncological prophylaxis and good cosmetic results. In all cases a histopathological examination of the nevus was performed. Most often patients had nevi located on the face, trunk or extremities. The operative technique depended upon the size and location of the nevus. The first group comprised 239 patients with small nevi in whom, after excision of the nevus, the wound was sutered in layers (Fig. 1). The second group included 38 patients with medium sized nevi. Their nevi were completely removed and the lesion reconstructed by local plasty or free-tissue transfer of full or intermediate-thickness (Fig. 2, 3). The third group contained 18 patients with large nevi. Seven patients underwent one-stage excision and 11 serial excision. Within this group the following methods were used: 2 cases, presuturing; 2 cases, tissue expander prior to nevus excision; 3 cases, free-tissue transfer of full-thickness; 5 cases, skin graft



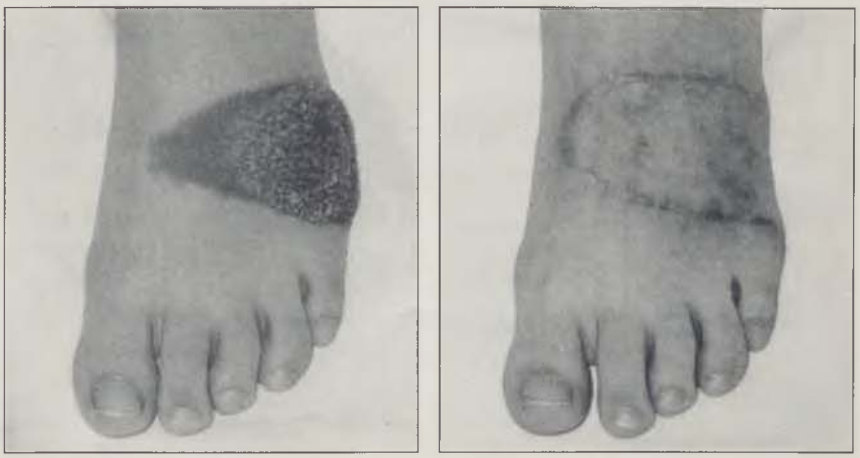
1a) 1b)

Fig. 1a, b. A girl with a melanocytic nevus on her cheek (a), prior to excision and suturing (b).



2a) 2b)

Fig. 2a, b. A girl with nevi on cheek and eyelid (a), after excision and use of a full-thikness skin graft from behind the ear to eyelid and suturing on cheek (b).



3a) 3b)

Fig. 3a, b. Nevus on the dorsum of the foot (a), after excision and covering the lesion with a partial - thickness skin graft (b).

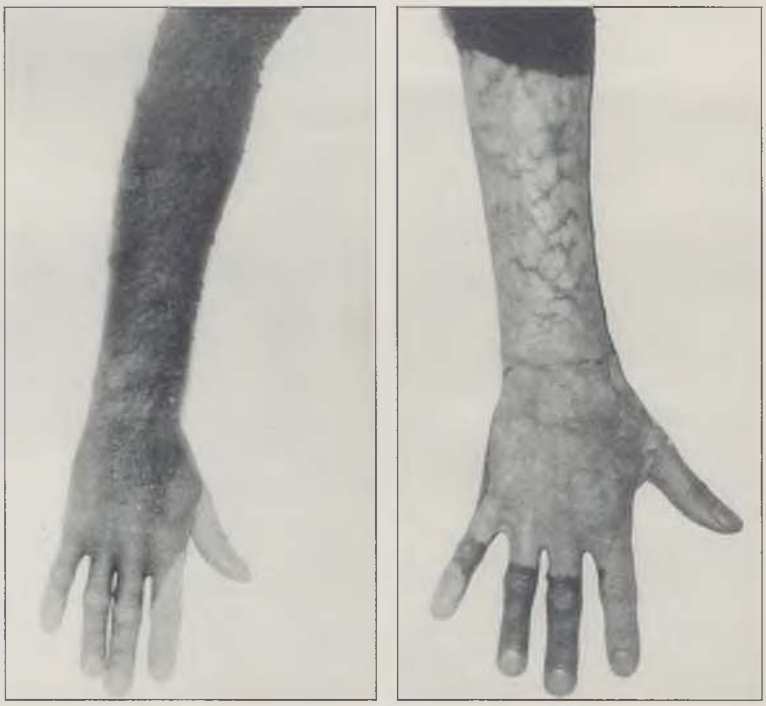
of partial thickness; 2 cases, superficial removal of nevus with a dermatome; 3 cases, dermabrasion; and in 1 case, electrocoagulation (Fig. 4-8). The anesthetic used varied according to a variety of considerations, including the patients' age, the nevus size and location, and the operative plan. In children up to 14 years of age and patients with large nevi, general intravenous or intratracheal anesthesia was preferred, whereas in the remaining patients, infiltration of anesthesia was used. Patients were advised to apply an emollient to the post - operative scars and avoid exposure to sunlight for one year following the surgery. Observation of these out- patients continued for a period of 1 to 10 years.

RESULTS

During a period of 10 years, 295 patients with cutaneous pigmented melanocytic nevi underwent treatment. Histopathological examination of excised nevi did not show atypical proliferative changes such as those of a Spitz nevus. The patients were examined 4 weeks, 1 year and 10 years following the operation. The majority of patients were provided with photographic documentation prior to and upon termination of treatment, which facilitated early and remote evaluation of operative results. A three- degree scale to evaluate the achieved cosmetic outcome was determined. The result was regarded as good in 280 patients whose postoperative scars were slightly visible and the patients were satisfied. A satisfactory

4a)

Fig. 4a, b. A girl with facial nevus (a), after excision and full - thickness skin grafts (b).

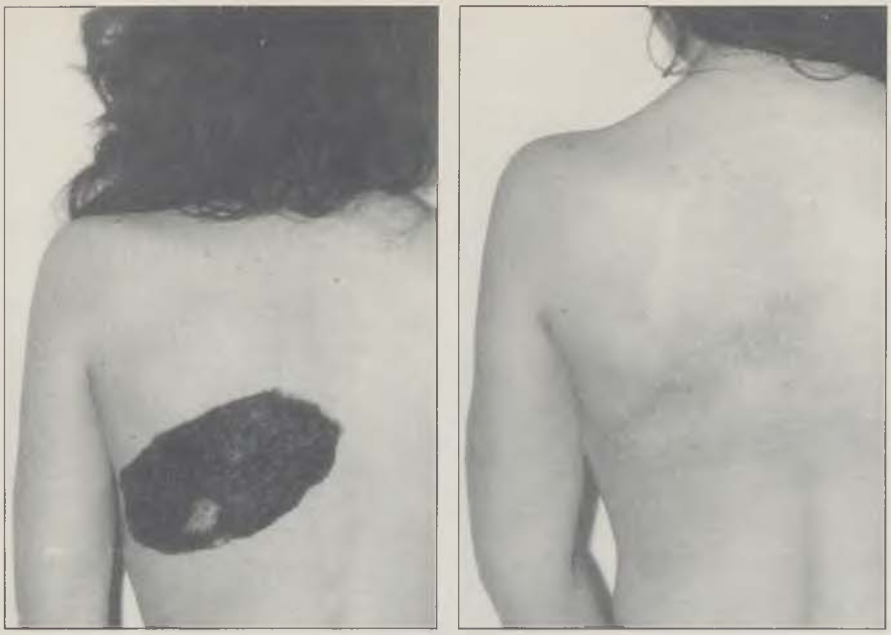


5a)

Fig. 5a, b. Nevus on upper extermity (a), after partial shaving and skin transfer to hand (b).

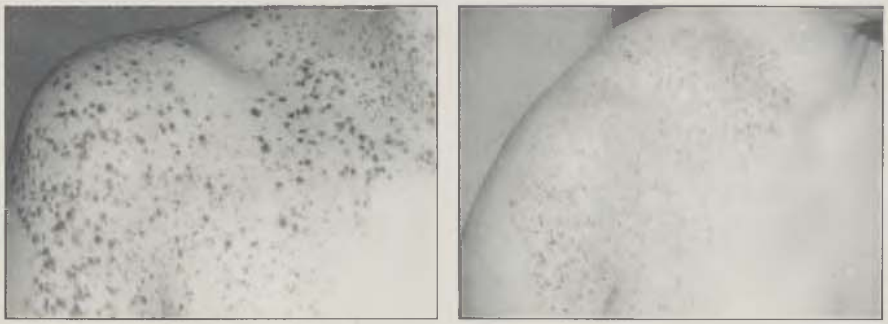
Tab. 1. Size, location, type of operation and results of surgical treatment of 295 patients with pigmented melanocytic nevi

Type of operation	Nevus size			Nevus location			Treatment results		
	small	medium	large	face	trunk	extremities	good	satisfactory	unsatisfactory
wound suturing	66	-	-	5	53	8	63	2	1
local plasty	173	29	-	74	101	27	195	6	1
skin graft	-	9	8	11	3	3	13	3	1
presuturing	-	-	2	1	1	-	2	-	-
expander	-	-	2	-	2	-	2	-	-
dermatome shaving	-	-	2	-	1	1	1	-	1
dermabrasion	-	-	3	-	2	1	3	-	-
electrocoagulation	-	-	1	-	1	-	1	-	-
Total	239	38	18	91	164	40	280	11	4



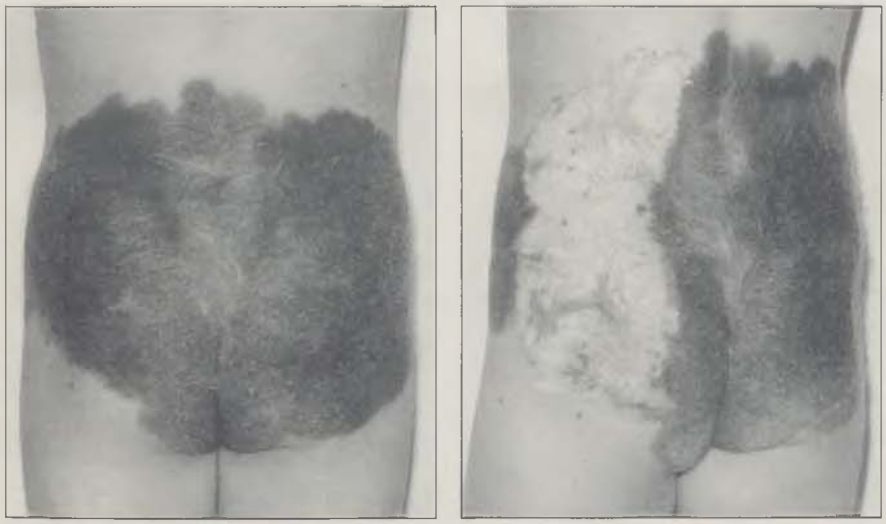
6a) 6b)

Fig. 6a, b. Melanocytic nevus on the back (a), after presuturing, excision and suturing (b).



7a) 7b)

Fig. 7a, b. Numerous pigmented melanocytic nevi on shoulder (a), after electrocoagulation (b).



8a) 8b)

Fig. 8a, b. Giant melanocytic nevus (a), after partial, superficial dermabrasion (b).

result was obtained in 11 patients whose postoperative scars were visible, broad and discolored. An unsatisfactory outcome was achieved in 4 patients whose scars were hypertrophied or caused deformation of the operated area and required corrective treatment (Tab. 1).

DISCUSSION

The treatment of melanocytic nevi is surgical, comprising a variety of surgical techniques, often depending on the nevi's size and anatomic location (7).

Most surgical problems are posed by pigmented melanocytic nevi, regardless of their size, located on eyelids or the central part of the face, due to visible postoperative scars and the risk of functional impairment. Other surgical options are also available. For example, treatment of small melanocytic nevi with a Q-switched ruby laser may also be effective (13, 14). However, small and medium-sized congenital nevi tend to respond only partially or recur (14). Removal of a large melanocytic nevus, especially a giant one, as a rule leads to extensive scar formation both in the area of the nevus as well as within the donor site used to reconstruct the primary defect. These giant pigmented nevi often require early and radical excision, which is sometimes difficult due to nevus size and location (10, 11). In our investigations, we adopted a classification of melanocytic nevi depending on their size and introduced surgical methods considering their location. Some of these methods have been used by others (6, 16). Recent reports indicate that removal of superficial layers of the nevus shortly after

birth leads to healing with non-pigmented or much less pigmented skin (8). Our studies confirm that superficially pigmented nevi treated with dermabrasion or shaving of the superficial skin layer in adults can be similarly effective. In cases of large deeply pigmented nevi, a serial excision can be performed with the use of a free-tissue transfer of full or intermediate thickness to cover the lesion. In addition, a tissue expander and presuturing can be employed. Good results have been reported with the use of a tissue expander (1, 5, 7, 8, 12). We agree that surgical treatment should be completed before the age of 5 or 6 years in order to prevent psychological trauma and minimize the risk of malignancy (10, 11).

CONCLUSIONS

1. Pigmented melanocytic nevi causing a cosmetic defect or subject to continual solar exposure should be surgically removed, always with pathological examination.
2. The surgical technique should consider the size and location of pigmented melanocytic nevi.
3. Small and medium size nevi (up to 5 cm in diameter) can be removed in a one-stage procedure with suturing of the wound, local plasty or a free-tissue skin graft.
4. Blepharal and central facial lesions are best reconstructed with full- tissue skin grafting.
5. Large nevi (over 5 cm in diameter) can have a staged excision or be removed at one-stage with the prior use of a tissue expander or presuturing.
6. Giant melanocytic nevi require staged treatment with the use of an intermediate thickness skin graft or the adoption of methods removing superficial layers of the nevus, always preceded by a histopathological examination.

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THERAPEUTICAL ASPECTS OF USING CITALOPRAM IN BURNS

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SUMMARY

Conclusion of the ICU: Preliminary results from this stage of our study demonstrate a significant decrease of the duration of oedema, probably due to the effects of the inhibition of vascular hyperpermeability.

This means that patients under Citalopram therapy can undergo surgical procedures such as necrectomies and autografts sooner because they are stabilized as early as the begining of their treatment. Particularly the patients with burned faces and deep dermal burns have a better prognoses in respect to cosmetics.

Conclusion of the psychologist: From the beginning of the study to the present time, no patient experienced PTSD. The compared group of out-patients had been treated on average of 3 months when the first signs of a reduction in the clinical symptoms of PTSD was registered.

The clinical onset of the therapeutical effect - on average in the third week - is comparable with references from anxiety or inhibitory depression treatment by using Citalopram.

We suggest, at present, that the above-mentioned, preliminary results of our study have shown that Citalopram treatment has a beneficial effect on emotional disturbances in severely burned patients.

Conclusion of the scar specialist: Seropram is a very useful preparation in burn praxis. When we apply it as a bolus 40 mg i.v. immediatelly after admission to the ICU, the scaring process is very good and hypertrophic scars are not seen. When we apply Seropram in the form of a continual infusion, using the injectomat during a 24-hour period, scaring is better than in the control group, but hypertrophic scaring is not out of the question.

ZUSAMMENFASSUNG

Die Heilungsauswirkungen des Citalopramus bei den Verbrannten

Bláha J., Svobodová K., Kapounková Z.

Schlußbetrachtung des Arztes an der Intensivstation: Die vorläufigen Ergebnisse in diesem Stadium unserer Studie zeigen eine beduetende Zeitverkürzung des Dauerns der Anschwellung nach der Verletzung. Dazu hat wahrscheinlich die Inhibition der erhöhten Durchlässigkeit der Aderwände beigetragen.

Das bedeutet, daß sich der mit Citalopram behandelte Patient verschiedenen chirurgischen Prozeduren früher unterziehen kann (wie z.B. der Nekrektomie oder Autohauttransplantation), weil es irüher zur Stabilisation seines Zustandes kommt. Besonders im Falle der Gesichtsverbrennungen und der tiefen Hautverbrennungen kann man eine bessere Prognose auch im kosmetischen Hinsicht erwarten.

Schlußbetrachtung des Psychologen: Seit dem Beginn dieser Studie bis jetzt wurde bei keinem Patienten eine posttraumatische Streßzerstörung (PTSD) registriert. Die klinisch betrachteten Heilauswirkungen - im Durchschnitt in der dritten Woche - sind im Einklang mit den Angaben über die Reduktion der Angst und die Inhibition der Depresse nach Citalopram.

Wir können also bestätigen, daß der vorläufigen Studie nach Citalopram eine positive Auswirkung auf Emotionstörungen bei Patienten mit schweren Verbrennungen hat.

Sclußbetrachtung des Arztes der die Vernarbung auswertet: Citalopram ist ein sehr nützliches Präparat in der Verbrennungsmedizin. Wenn man es in Form von Bolus 40 mg i.v. unvermittelbar nach der Stationisierung an der Intensivstation anwendet, ist der spätere narbenhafte Prozeß sehr günstig und die hypertrophischen Narben kommen fast nicht vor. Wenn Citalopram in der kontinualen Infusion mit Benutzung von Injectomat während 24 Stunden angewandt wird, ist die Vernarbung besser als bei der Kontrollgruppe, jedoch man kann nicht die Gestaltung der hypertrophischen Narben ausschließen.

Key words: burn shock, fear and depression, PTSD, postburn scars.

For over 20 years we have systematicly researched the causes of hypertrophic scarring of burned patients. In my 1989 presentation in the Netherlands, I showed some important coincidences between the type of patient and his or her lasting sequele. Considerable influence has been attributed to psychological factors, but adequate confirmation of this has been missing.

The battery of psychological tests which we implemented (Luscher's, Rohrschachs's, Raven's, Grinker's, etc.) proved inconclusive, and the evaluation of the results showed that non of the

tests used can give satisfactory information concerning the future development of scars or the possible complications of any particular patient. The problem lies in the relative inaccuracy of the questions with which we attempted to uncover the patient's main psychological influences giving rise to the development of hypertrophic scars.

At that time, we listed the factors responsible for scarring in their order of importance:

Temporary loss of natural skin firmnes

Infection

Psychological factors

Now, on the basis of the latest research, we must rearrange the order of the above factors and re-define them more accurately:

1) Stress, caused by fear and depression

2) Systemic and local immunity

3) Temporary loss of natural skin tone and firmness

Point 3) (above): This effect is very striking and convincing based on many cases of deep dermal donor areas for grafting. Even though the donor area healed without infectious complications, hypertrophy was evident where deeper incissions had been made. The same observation was evident in the uncomplicated healing of deep dermal burns, where the edges remained flat and the deeper burn center hypertrophied in the place where the most dermis had been lost.

Point 2) (above) this aspect of burn trauma increases in importance with the size of the affected area. With extensive and deep burns it becomes a question of life and death.

Point 1) (above): This problem is the main theme of our publication and whose successful conclusion necessitates the making of two basic assumptions:

a) Emotion, which is responsible for creating complex reactions called stress, must be clearly defined.

b) A method of minimizing stress must be found.

Systematic observation of patients suffering from light and extensive burns resulted in the selection of fear and depression as the origin of all evil. After consultation with the psychiatrist Dr Vinař, Seropram Lundbeck was chosen for our experiment as a very effective and immediately functional anxiolyticum and antidepressant, which has minimal side effects.

A burned person's treatment success fluctuates according to their ability to adapt to stress . The body's initial response to injury is sympathoadrenal stimulation, with the negative feedback system maintaining homeostasis. The impact of the stressor also depends upon certain conditioning factors and the available coping mechanisms. First, stress stimulates the rellease of adrenocorticotrophic hormone, from the anterior lobe of the hypothalamus. Continued stimulation causes the production of cortical hormones, first it acting on the brain and then on the sympathetic nervous system stimulating the production of epinefrine and norepinefrine.

The type of stress that influences ACTH secretion can be either physiological or psychological. Trauma to the body, infections and surgical procedures are examples of psychological stresses that increase ACTH secretion. What constitutes an emotional stress is unique to as individual's perception, or interpretation of events. Emotions such as fright and fear may stimulate the increased secretion of ACTH as well.

The duration of shock is an important variable in survival. Shock is a dynamic body response to a life threatening injury that results in decreased tissue perfusion and cellular hypoxia. The severity of the injury and time influence the chance of the patient's surviving the shock. The underlying disease process and the physical condition of the patient also influence the variability of the shock state. The decreased cardiac output initiates the sympathoadrenal response. Catecholamines are released while the body responds to stress. Restlessness and anxiety, which we can see in the patients in the early stages of shock, are the results of diminished cerebral blood flow.

MATERIAL AND METHODS

The research team consisted of an internist, plastic surgeon, psychiatrist, psychologist and scar specialist. The study protocol was reviewed and approved by ethics committees.

We started our study in January, 1995. Altogether, our investigation of this preparation, included 15 randomly chosen patients according to these criteria: age = 18 - 50, extent of burns = 10 - 50% TBSA, depth = 2nd and 3rd degree, and locality of injury = predominantly face, neck, chest and upper extremities. Selective serotonin re-uptake inhibitor (SSRI) was applicated for 14 days in doses of 40 mg i.v. and after 20 mg per os for a duration of 6 months.

We did not notice any side effects in our patients after the application of Citalopram. The tolerability was very good in all of the 15 patients involved in this study. They were under the daily supervision of an internist.

From the new generation of antidepresants and anxiolytics, Citalopram (Seropram inf/tbl - Lundbeck, Danmark) had been recommended by a psychopharmacologist and a psychiatrist for our aim, to reduce fear and anxiety. It was chosen for the most selective inhibition of serotonin re-uptake, which enhances neurotransmission. This drug had previously been tested for a sufficient time with minimal side effects. For therapeutical use in burns, it had proven been suitable due to its high tolerability, minimal cardio- and hepatotoxicity, and minimal sedative effect. Another advantage was its effectiveness in pain relief and the potentiation of analgesia.

The pharmacological and clinical effects were measured on rating scales generally used for

measuring the efficacy of influencing anxiety, depression and emotional disturbances. Subjective feelings of fear, recovery motivation, pain, mood and psychosocial limits were recorded on self-rating scales.

We have tested the hypothesis of the possible influence of fear and anxiety as a general stress response on the course of burn treatment, on the development of posttraumatic stress disorders (PTSD) and finally, on the tendency to scarring.

Stress responces have been characterized as central neurohormonal, as well as behavioral and physiological changes, which disrupt dynamic equilibrium, known as homeostasis. The starting point of our study was our longlasting empirical experience with the scaring tendencies of some typical groups of burned patients. The aim of our effort was to reduce stress responces as early as possible on a cognitive level, to perceive the situation of the accident as not too life threatening, in order to reduce the strong hormonal responce to stressors.

Because the stress response is an interactional process between personality and environment and is determined to a great extent by the individual's own perceptions, we would like to mention two very significant aspects emotion.

The alarm stage of adaptation to stressor, in our case to burns, serves to alert the sympathetic nervous system. When the threat has been perceived, the nervous and endocrine systems have been notified of the emergency. In this moment, the man experiences overwhelming physical sensation from heat, light, smell and pain.

Thist stimulation of the sensory system goes hand in hand with individual perception, which affects the importance for the man. According to strenght of stimulus, we can follow the development of the quality designed as a tension. By the individual's own perception of significance of the situation, we can distinguish different kinds and degrees of emotions.

The threat of the loss of life produces a fear of death and a fear of pain and causes behavioral changes. After admission to the hospital the patient extends emotion, but without a specific object. This type of emotion can be identified as anxiety. As a result of anxiety, certain physiological changes are involved, primarily mediated by the autonomic nervous system. Mild or moderate anxiety tends to increase physiological functioning, while severe levels slow down functioning and can ultimately result in death.

The trauma of the accident is stored in the somatic memory and expressed as changes in the biological stress response. Intense emotions, at the time of the trauma, initiate the long-term responses to reminders of the event. Continued physiological hyperarousal and altered stress hormone secretion affect the ongoing evaluation of sensory stimuli as well. This process seems to be responsible for the development of PTSD.

The control group of patients was composed of patients alredy discharged but receiving periodic check-ups. This group of patients was manifesting a tendency towards scar growth. One half of them had signs of PTSD.

To stabilize the long-term effects of stress in burns, we used Citalopram, which normalizes overactivity in the hypothalamic pituitary adrenergic axis. From the psychological point of view, the patients were screened every week the first month, every 2 weeks the following 4 months and then once a month till the end of the treatment. Only one patient was excluded from the psychological screening. The patient died before the verbal contact was open up.

Now we are going to present our experience from the ICU.

All the patients were resuscitated in the same way according to Brooke's formula, using crystaloid solutions and plasma. The group of patients without the Citalopram application was chosen in

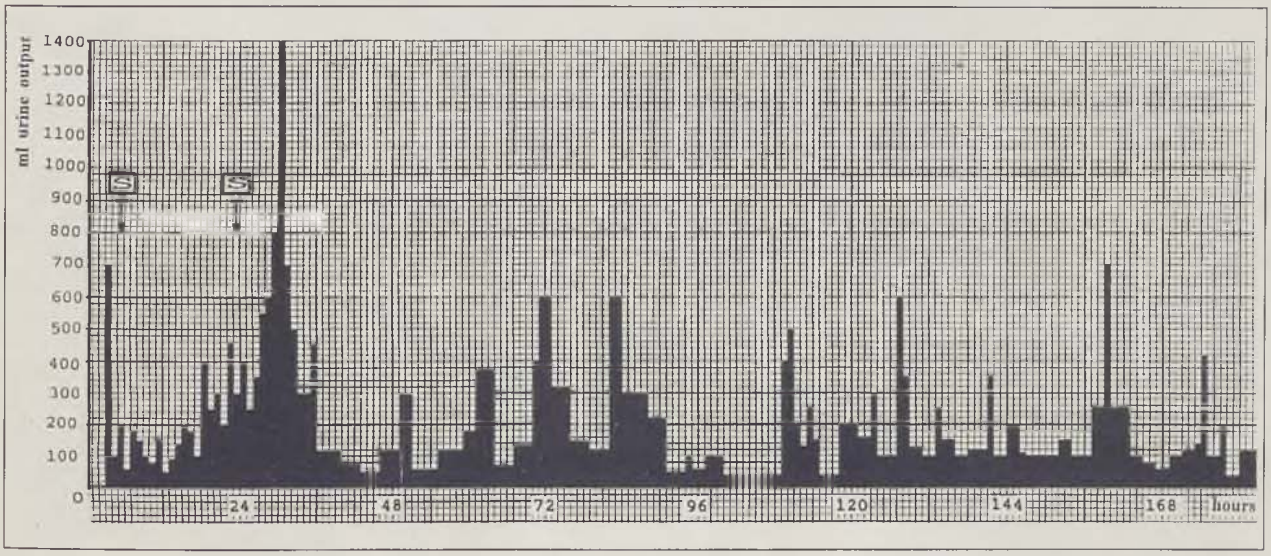


Fig. 1. Typical picture of one hour's urine output after Seropram bolus 40 mg i.v., very soon after burn trauma.

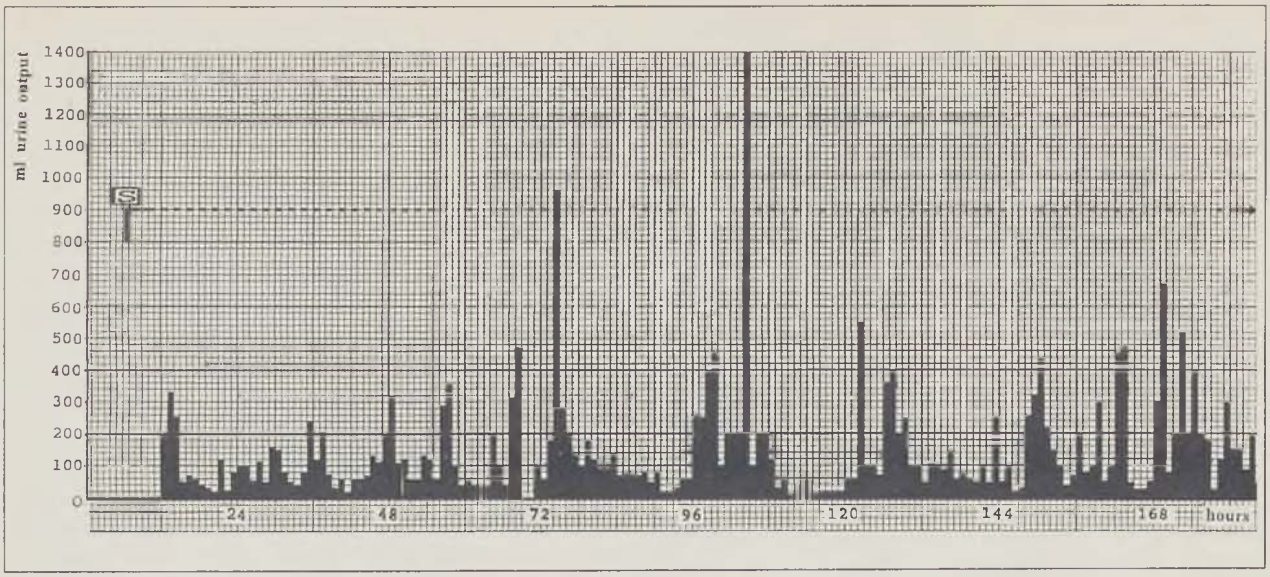


Fig. 2. Graph of one hour's urine output after application in the form of a continual infusion, using the injectomat, during a 24-hour period.

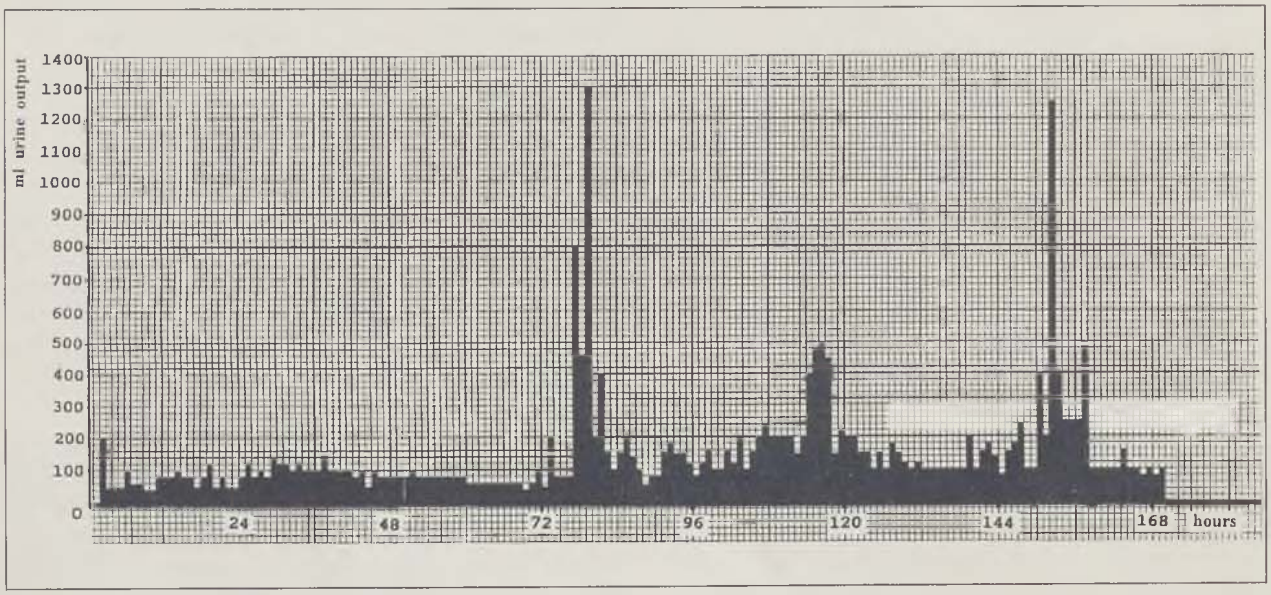


Fig. 3. Typical picture of one hour's urine output, when Seropram is not used. Control group.

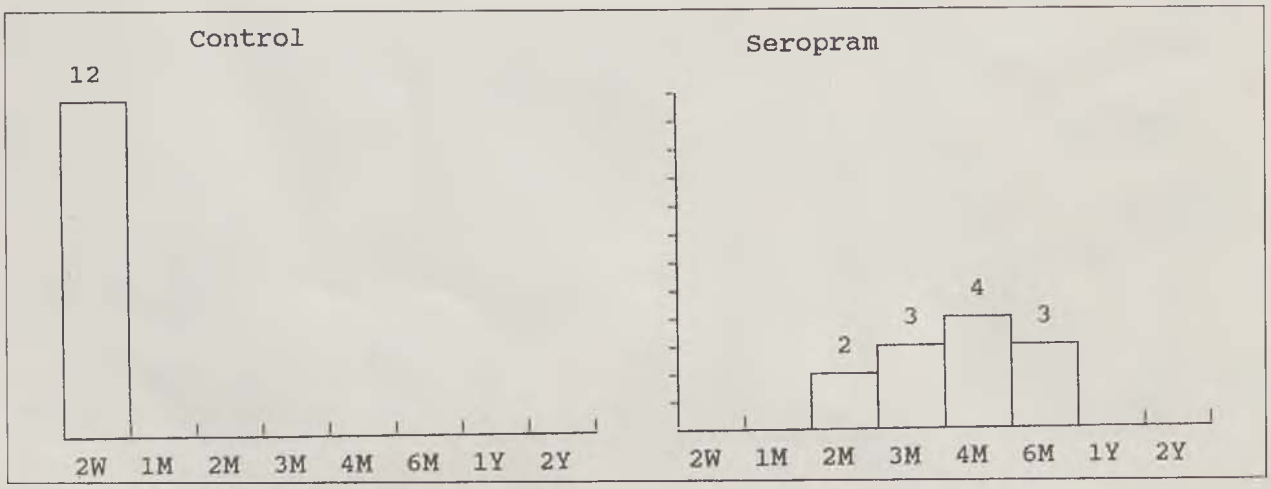


Fig. 4. Manifest begining of hypertrophic scarring of the spontaneously epitelisated areas.

respect to the same extent of burns, same locality, depth and age.

These two groups were compared on the criteria of the duration of shock, the volume of plasma replacement and urine output measurement.

Plasma replacement:

Citalopram group 200 - 8600 ml

Control group 400 - 9500 ml

The turned-over ratio of the electrolyte imbalance was used as a criterion of shock duration.

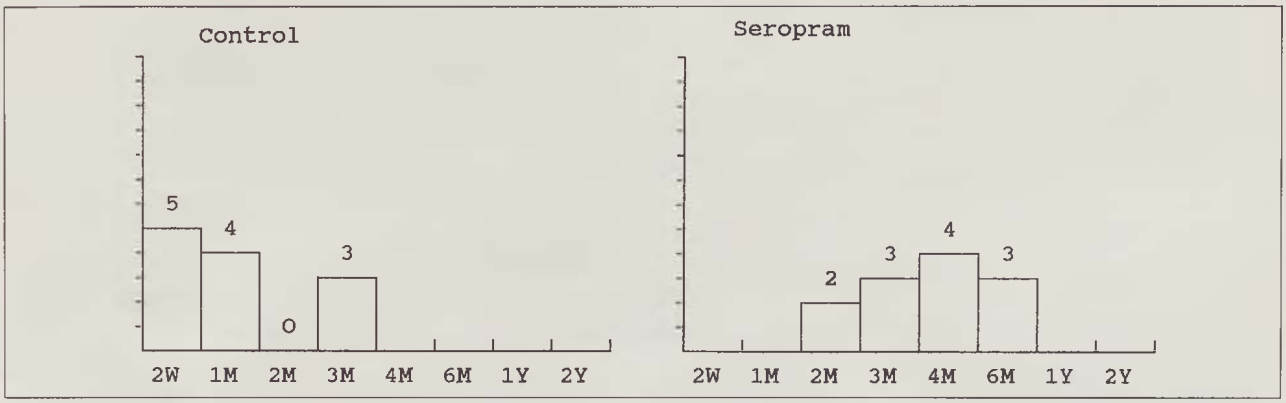


Fig. 5. Manifest begining of hypertrophic scarring in grafted areas.

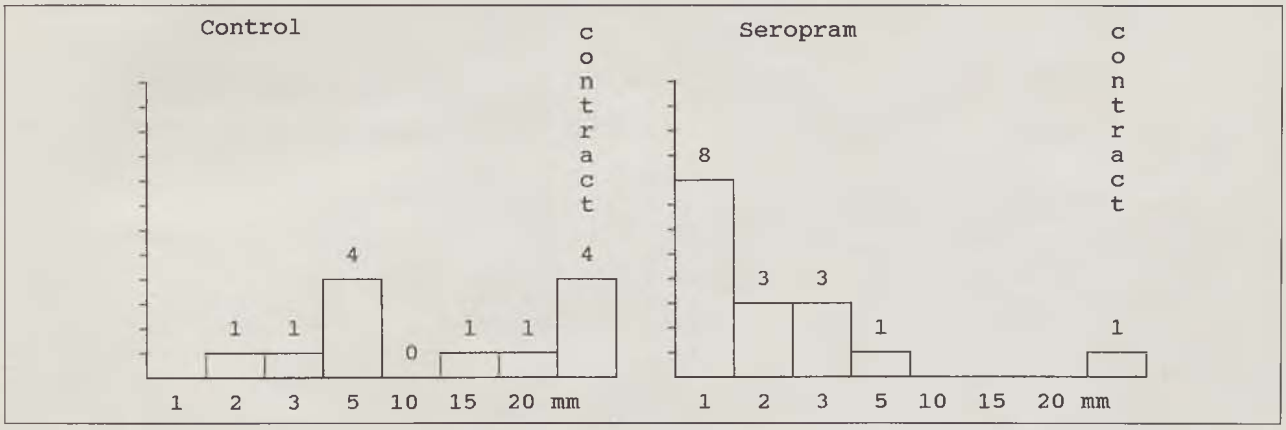
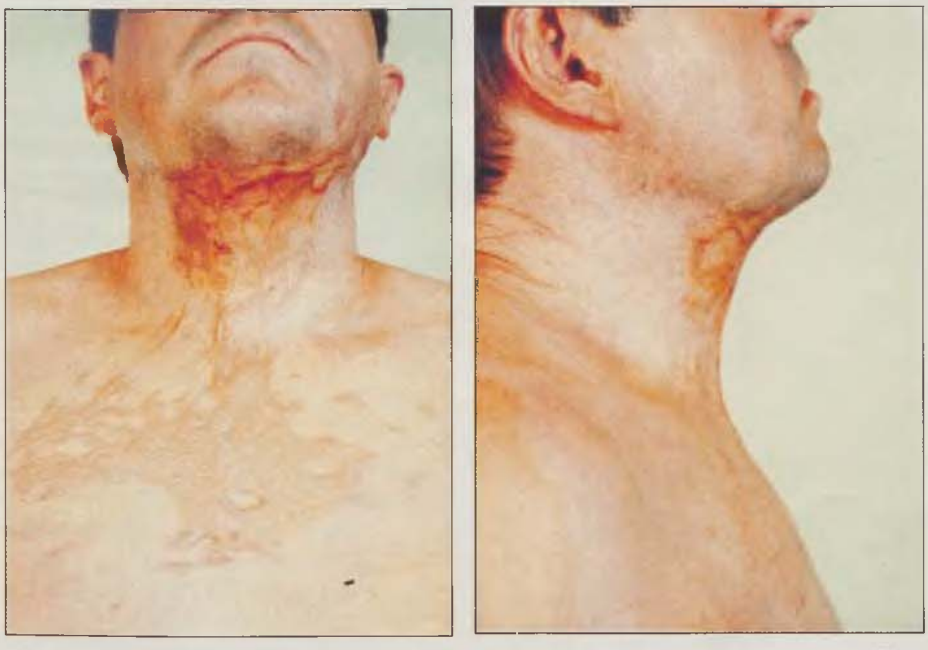


Fig. 6. Maximal culmination of scars during the healing process after a deep dermal burn.



7a) 7b)

Fig. 7a, b. Patient J. P. 1944, II and III degree burn, 24% BSA after reconstruction and contracture relieving. This is the state after operation.

Potassium and sodium were measured from the urine output. The disappearance of interstitial oedema was used as another sign of the shock state. To compare these two groups, we had to simplify the signs of our criteria.

Depending upon the two ways of Seropram application, we may see two different responses in the shock period. Those differences are best shown by a graph of the urine output. It was measured every hour mainly during the first several days, which was very important for observing the patient's actual condition and now

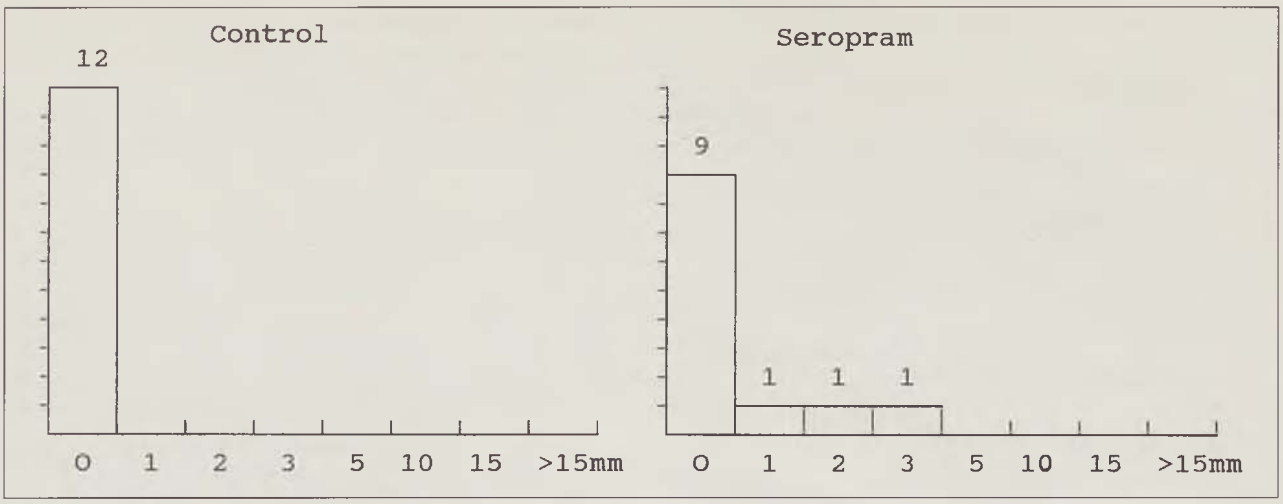


Fig. 8. Maximal culmination of scars following a deep dermal burn in areas after stabilization.

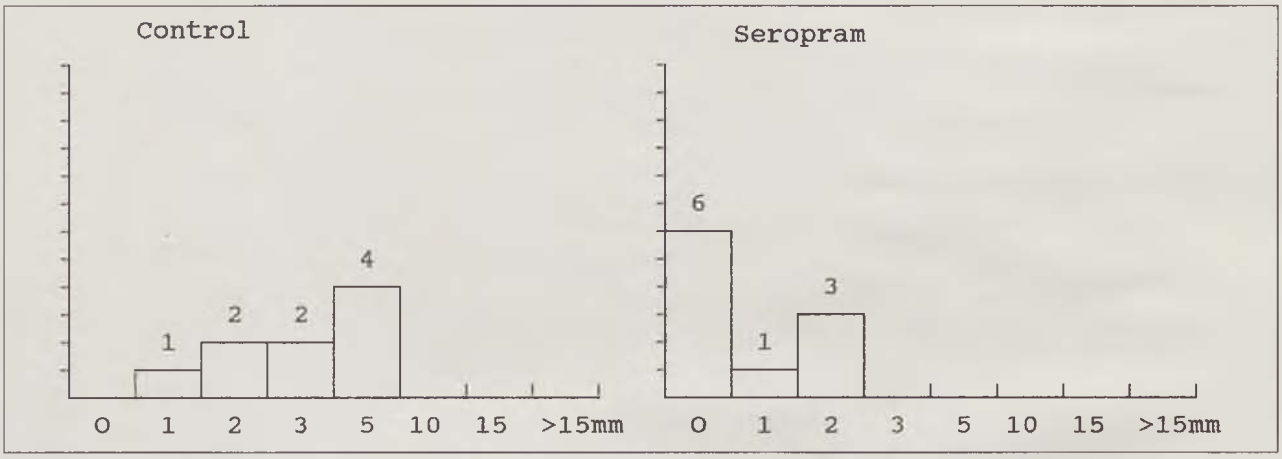


Fig. 9. Maximal culmination of scars in grafted areas after stabilization.

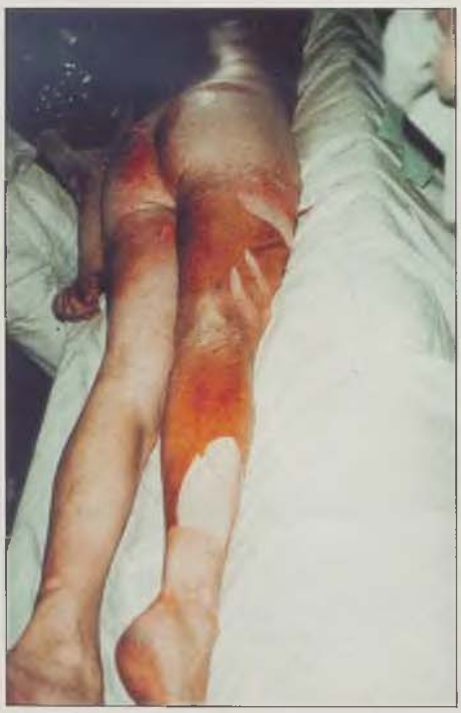


Fig. 10. Patient J. C. 1952, II and III degree burn, 42% BSA.

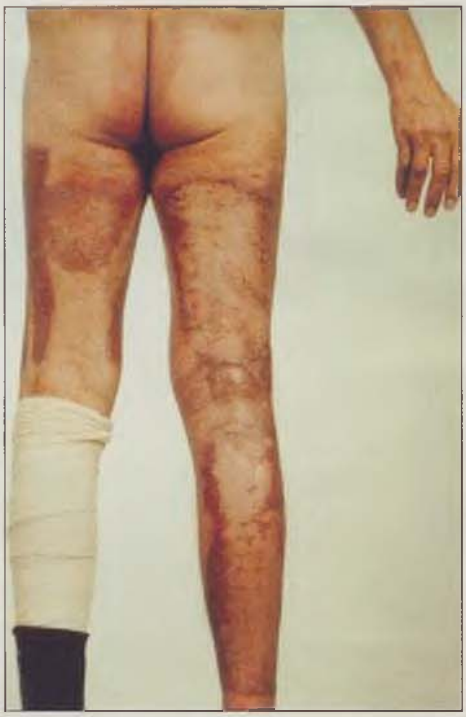


Fig. 11. The same patient 6 months after trauma. Very good result after Seropram.

serves well for our research. We may see the basic difference between an application: immediately after admission to the ICU by single bolus 40 mg i.v. in 500 ml of crystalloid solution (Fig. 1), and a second method of application in the form of a continual infusion, using an injectomat during a 24-hour period (Fig. 2). The bolus shows a very quick effect, and the main urine output is finished during the first 36 hours. All other periods of higher urine outputs, which succeed after several days, are accelerated. The result

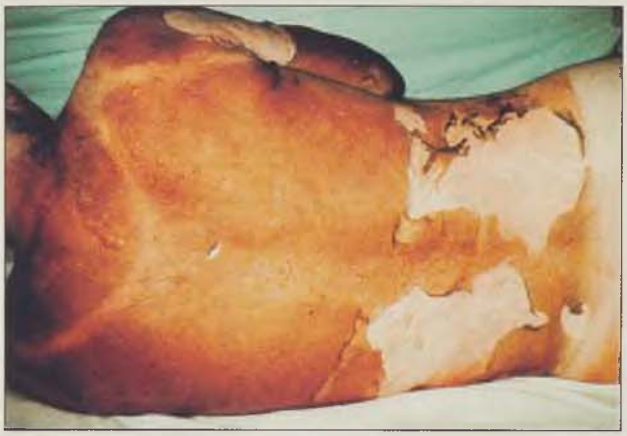


Fig. 12. Patient F. K. 1954, II and III. degree burn, 37% BSA.

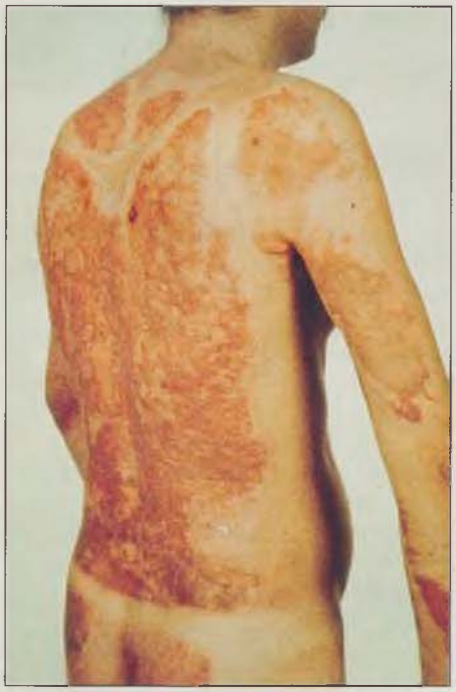


Fig. 13. The same patient 6 months after trauma. Very good scars after Seropram in form of a bolus 40 mg i.v.

is a short cut of about one half or more compared to the control group (Fig. 3). The latter way of application, continual infusion of the Seropram during a 24-hour period, shows a very small and imperceptible effect.

The maximum oedema of the scars in the control group in places after deep dermal burns and non-grafted areas appears up to 2 weeks after epithelialization (Fig. 4). In The Seropram group the interval is very long, from 2 to 6 months, and therefor we have a sufficient period of time to use compressive therapy more effectively. A similar picture may be seen in grafted areas (Fig. 5).

Figure 6 shows the maximum height of scars in places of deep dermal burns after epithelialization. Here the beneficial influence of Seropram is clearly seen in reducing the oedema of the scars. An interesting fact is, that in the control group

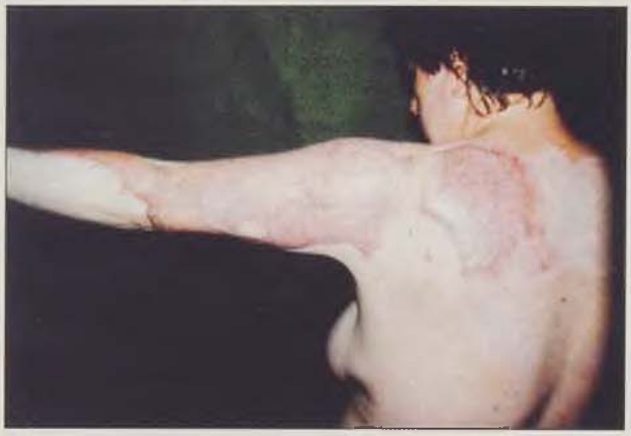


Fig. 14. Patient L. K. 1945 II and III. degree burn, 34% BSA. Hypertrophic scars 3 years after trauma.

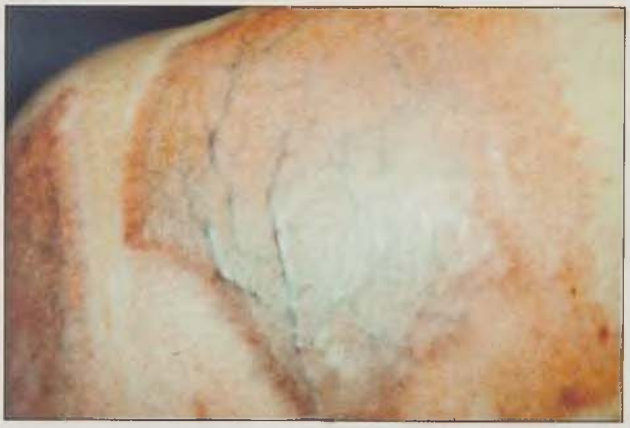


Fig. 15. The same patient, detail of the scars.

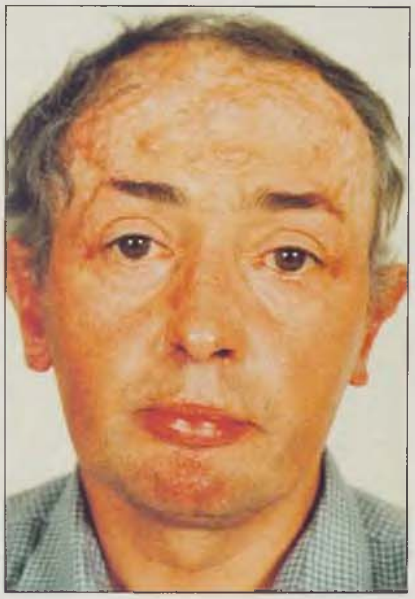


Fig. 16. Patient L. M. 1950, II and III degree burn, 12% BSA with inhalation trauma. Seropram 40 mg i.v./24 hours, using the injectomat, was applied 3 hours after injury.

we have 4 patients with scar contractures while in the Seropram group we have only one patient.

This case is very interesting (Patient J. P., Fig. 7a, 7b). The patient, after finishing the Seropram cure, was hospitalized in another hospital

for trombophlebitis and pulmonary arterial embolism. Before this new stress the patient's scars were completely flat; during 6 weeks of treatment for the embolism event, the scars grew up to 3 mm with scar contracture of the neck. After stabilization of the scars the patient underwent an operation and contracture was relieved. This is the state after the operation.

The slightly worse effect of Seropram therapy after deep dermal burns can be explained by the fact that in the group of patients with Seropram therapy we had 4 patients with inhalation burns and with worse infection complications (Fig. 8). In the control group we did not have inhalation trauma.

The beneficial effect in the group with Seropram is seen in the form of better scars on grafted areas (Fig. 9). Six of 10 grafted patients - that is 60% - have scars totally flat, with only colour changes.

We would like to present our most interesting patients.

Patient J. C. 1952 (Fig. 10). This patient was burned together with his colleague after an explosion of gun powder. It was an industrial accident in a chemical factory. On the right leg we may see a full thickness burn on the day of admission. TBS burned area was 42%. Seropram in the form of a bolus 40 mg i.v. into 500 ml crystalloid infusion was applied 6 hours after injury.

The same patient (Fig. 11) after finishing the healing process with the use of Seropram during hospitalization and for a period of 6 months after leaving the hospital. Deep dermal burns healed without surgery and full thickness burns were grafted. This is the picture of the scars 4 months after the accident.

Patient F. K. 1954 (Fig. 12). The colleague of the previous patient had a similar burn, 37% BSA, and also used Seropram from the first day for a period of 6 months too. Seropram in the form of a bolus 40 mg i.v. into 500 ml crystalloid infusion was applied 6 hours after injury.

The same patient after healing, 4 months after the accident (Fig. 13).

Both patient are today 3 years after their burns and both are now returning to their previous profession. Their scars are totally flat and stabilized.

Patient L. K. 1945 (Fig. 14). A very interesting and similar case occured 3 years ago - industrial accident, explosion of gun powder - without Seropram therapy. 3 years after the accident hypertrophic scars are not stabilized and are red and painful despite good compressive garments (detail of the scars Fig. 15).

Patient L. M. 1950 (Fig. 16). Seropram is a very useful preparation, but it is not a medicine that cures infection. This patient, burned after a gas explosion with a deep dermal burn of the face with inhalation trauma caught chronic st. aureus infection, and you may see a very striking unevenneses in his face. There is an interesting fact that the skin is relatively pale and flat on its surface, but scars are in the deep layer under the skin. Seropram 40 mg i.v./24 hours, using the injectomat, was applied. The start of therapy was 3 hours after injury and result in a relatively poor effect of Seropram.

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SOUHRN

Přenos musculus gastrocnemius u kostních nádorů v krajině kolena při chirurgickém zákroku k záchraně končetiny

Cunha-Gomes D., Manglani H. H., Bhathena H., Badhwar R., Kavarana N. M.

Chirurgický zákrok zachraňující končetinu postiženou kostním tumorem v oblasti kolena způsobuje široké segmentální defekty, jejichž náhrada vyžaduje endoprotézu. Životaschopnost překrývajících kožních štěpů má obrovský význam. Důležité je jejich hojení bez odumření. Tato komplikace vede k obnažení protézy, infekci a snad i vyloučení protézy.

V tomto případě je přenos musculus gastrocnemius nejen silnou podporou vaskularizace, ale vytváří i měkkou vycpávku, která překrývá endoprotézu a zároveň podporuje cévní zásobení kožních laloků. Ze 16 přenosů svalů 15 přežilo úplně s dobrým zhojením kožních laloků. U jednoho pacienta se objevila vážná infekce rány, spojená s odumřením kožního laloku a nekrózou části svalového laloku. Vyskytl se také jeden případ s hematomem v ráně, který byl úspěšně léčen.

Lalok z laterální strany jazyka: výběr metody pro rekonstrukci tkáňových recidiv

Cunha-Gomes D., Joshi P., Bhathena H., Kavarana N. M.

Pozadí: Chirurgie ozařovaného a již předtím operovaného pole je plná nebezpečí. Mikrovaskulární přenos tkáně není proveditelný za všech okolností.

Metoda: Laterální lalok z jazyka byl použit v 11 případech intraorální obnovy tváře. Pomocí této studie byl vyhodnocen postup, funkce zbývajícího jazyka a rychlost rehabilitace s ohledem na předoperační funkční stav.

Výsledky: Z 11 takto provedených rekonstrukcí v období 12 měsíců, měl pouze jeden lalok nekrózu konce, hematom se rozvinul ve dvou případech. Polykání, řeč a protruze jazyka nebyly tímto postupem poškozeny. Pacienti byli rehabilitováni velmi rychle (během dvou týdnů) do předoperačního funkčního stavu.

Závěry: Laterální lalok z jazyka je jednoduchý cévní přenos a efektivní a účinná volba rekonstrukce defektu po excisi způsobené recidivující rakovinou.

Revaskularizace volného nervového štěpu zabaleného do omenta

Šmahel J., Clodius L.

V experimentálním modelu na kryse byla hodnocena revaskularizace volného nervového štěpu zabaleného v omentu. Revaskularizace štěpu při použití původních cév probíhala shodně jak uváděly předchozí studie, započala čtvrtý den po operaci a byla v podstatě ukončena osmý den. Experimentální studie ukazuje, že použití omenta neposkytuje mnoho výhod oproti transplantaci nervového štěpu do tkáně s dobrým cévním zásobením. Užití omenta se zdá být indikováno pro štěpy přenášené do zjizvených nebo ozařovaných tkání.

Falloplastika pomocí laterálního tříslového laloku u transsexuálů žena na muže

Zieliński T.

Práce popisuje jednostupňový postup při utváření neofallu s užitím laterálního tříslového laloku. V letech 1991-1997 bylo na klinice plastické chirurgie Lékařské univerzity v Lodži tímto způsobem operováno 127 transsexuálů ze ženy na muže. Dobré výsledky byly získány u 96

pacientů (75,6 %). Nekróza distální části laloku nebo jiné komplikace, které poškodily konečné výsledky léčby se vyskytly ve 20 případech (20,5 %). V pěti případech byl lalok zcela ztracen. Falloplastika společně s uretrou byla použita u pěti transsexuálů. U 47 případů byl rekonstruovaný penis vyztužen pomocí tří typů protéz.

Chirurgická léčba pigmentovaných melanocytických névů v závislosti na jejich rozměrech a lokalizaci

Kruk-Jeromin J., Lewandowicz E., Rykala J.

Kožní melanocytické névy mohou působit kosmetické defekty a představují riziko maligní transformace. Většina problémů je způsobována névy obličeje nebo těmi, které pokrývají rozsáhlé oblasti těla (obrovský kongenitální névus). Od r. 1986 do r. 1995 podstoupilo 295 pacientů s pigmentovaným névem chirurgickou léčbu. Použitá metoda závisela na rozměrech a lokalizaci melanocytického névu. Výsledky byly hodnoceny podle tříúrovňové stupnice, s ohledem na kosmetické výsledky a spokojenost pacientů.

U 280 pacientů byly dosaženy dobré výsledky, uspokojivé u 11 pacientů a neuspokojivé (vyžadující korektivní léčbu) u 4 pacientů. Malé a středně velké névy (do 5 cm v průměru) mohou být odstraněny jednorázovým postupem pomocí sutury rány, místní plastikou, nebo volným tkáňovým kožním štěpem. Léze ve střední etáži obličeje nebo na víčku se nejlépe rekonstruují plným tkáňovým kožním štěpem. Široké névy (nad 5 cm v průměru) potřebují postupnou excisi nebo jednorázové odstranění s přednostním užitím tkáňových expandérů nebo postupného šití. Obrovské névy vyžadují postupnou léčbu s užitím středně silného kožního štěpu nebo odstranění povrchových vrstev névu. Vždy však musí předcházet histopatologické vyšetření.

Léčebné účinky Citalopramu u popálených

Bláha J., Svobodová K., Kapounková Z.

Závěr lékaře jednotky intenzivní péče: Předběžné výsledky v tomto stadiu naší studie ukazují významné zkrácení doby trvání poúrazového otoku pravděpodobně inhibicí zvýšené propustnosti cévní stěny.

To znamená, že pacient léčený Citalopramem může podstoupit chirurgické procedury, jako jsou nekrektomie a autotransplantace kůže dříve, protože ke stabilizaci stavu dojde dřív. Zvláště postižení s popáleninami obličeje a hlubokými popáleninami kůže mají lepší prognózu i co se týče jejich kosmetického vzhledu.

Závěr psychologa: Od zahájení studie do současnosti nebyl u žádného pacienta zaznamenán posttraumatický stresový rozvrat (PTSD). Klinicky pozorovatelný léčebný účinek - v průměru ve 3. týdnu - je v souhlase s údaji o redukci strachu a inhibici deprese po Citalopramu.

Můžeme tedy potvrdit, že podle předběžné studie má Citalopram příznivý vliv na emoční poruchy u závažně popálených pacientů.

Závěr lékaře hodnotícího jizvení: Seropram (Citalopram) je velmi užitečný preparát v popáleninové medicíně. Je-li užit ve formě bolusu 40 mg i.v. bezprostředně po přijetí na JIP, pozdější jizevnatý proces je velmi příznivý a hypertrofické jizvy nevídáme. Užit v kontinuální infuzi s užitím injectomatu během 24 hod je jizvení lepší než u kontrolní skupiny, ale tvorbu hypertrofických jizev nelze vyloučit.

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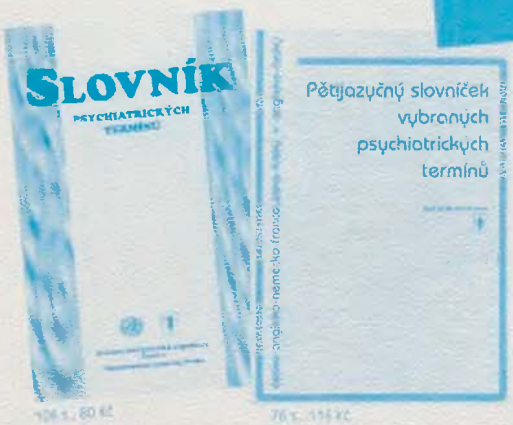
První publikace je určena především klinickým pracovníkům. V úvodní části se mohou hlouběji seznámit se znaky panické poruchy, jejím výskytem, diagnostikou a etiopatogenezou. Druhá část je manuálem pro terapeuty. • Paralerní příručka slouží především těm, kteří trpí panickou poruchou. Dozvědí se z ní vše k pochopení svých potíží a také si uvědomí, že nejsou se svými starostmi sami, že podobnou cestou už před nimi šlo mnoho jiných. Výklad je proložen řadou úkolů a příkladů, na kterých je možné postupně nacvičovat nové žádoucí pohledy a dovednosti. Pro úspěšné zvládnutí je třeba spojit své síly s odborníkem, který pomůže vystavět reálný postup terapie a bude důležitým pomocníkem v obtížných chvílích.

Příručka pro nemocné začíná vysvětlením co je to deprese a pokračuje jako kognitivně-behaviorální sebeinstrukční manuál k léčbě. Obsahuje základní informace o depresi a její léčbě (farmaky a psychoterapií) a látku jednotlivých lekcí, která je probírána na setkáních s terapeutem. Každá lekce má jak část výkladovou, tak řadu cvičení, která pomáhají naučenou látku zažít. • Manuál pro terapeuty obsahuje jednotlivé kroky skupinové kognitivně-behaviorální terapie v šestnácti lekcích s domácími cvičeními i ukázkami. První část manuálu pojednává o indikacích a kontraindikacích výběru klientů do skupiny a o způsobu klientovy přípravy na práci ve skupině. Způsob vedení jednotlivých lekcí je rozpracován ve druhé části manuálu.



Bez jasného a přesného myšlení a vyjadřování není ve vědě ani v medicíně přesné diagnostiky a tím ani terapie. To platí i pro psychiatrii. Ke sjednocení našeho myšlení i vyjadřování slouží přehled základních, nejdůležitějších a nejužívanějších psychiatrických termínů spolu s jejich výkladem. Jedná se o překlad publikace WHO provedený členy terminologické komise Psychiatrické společnosti s cílem poučit a přispět k jednotnému a přesnějšímu užívání psychiatrických pojmů. • Pětijazyčný slovníček je rovněž převzatou publikací WHO doplněnou o české ekvivalenty psychiatrických termínů.

Nobelova cena za fyziologii a medicínu je udělována od r. 1901. Laureáti jsou povinni prezentovat shrnutí hlavních výsledků své výzkumné práce v přehledné přednášce. Náš projekt přiblíží tuto pokladnici vědeckého poznání vydáváním českých překladů těchto přednášek a životopisů jejich autorů. Úvodní publikace celé řady připomíná sté výročí úmrtí Alfreda Nobela, seznamuje s jeho životem a závětí. Přináší úplný přehled laureátů Nobelovy ceny ve všech 5 odměňovaných oborech. Zvláštní kapitoly jsou věnovány českým laureátům J.Seifertovi J.Heyrovskému a historii opakovaně podávaných návrhů na ocenění K.Čapka. • Druhá kniha obsahuje úplné texty přednášek laureátů ceny za fyziologii a medicínu z let 1993 a 1994 (vč. životopisů a fotografií) v českém překladu našich významných odborníků.

Libigerova kniha je souhrnem poznání o schizofrenii v historické perspektivě i ve světle nejnovějších poznatků. Jde o vyzrálé dílo překvapující nadhledem, vyvážeností, obrovským rozsahem autorových znalostí, jež dokázal s neomylným kritickým instinktem koncentrovat na malou tiskovou plochu. Kniha je doporučována jako učebnice pro všechny vážné zájemce o tuto oblast. • Praktická příručka renomovaných autorů přináší uceleny přehled postupů používaných v prevenci i léčbě návykových nemocí. Je určena především praktickým lékařům, ale i dalším pracovníkům zabývajících se léčbou závislostí.

OBJEDNÁVKA

Vyplněnou objednávku zašlete na adresu: **Nakladatelské a tiskové středisko ČLS JEP, Sokolská 31, 120 26 Praha 2, fax 02/24911420**

___ Panická porucha a její léčba (J.Praško a spol.)
___ Panická porucha a jak ji postupně překonávat (J.Praško a spol.)
___ Co je to deprese a jak se léčí? (J. Praško a spol.)
___ Skupinová kognitivně-behaviorální terapie depresí (J.Praško a spol.)
___ Nobelova cena za fyziologii a medicínu 1993 a 1994
___ Nobelova cena. Historie nadace a laureáti ceny 1901-1996
___ Pětijazyčný slovníček vybraných psychiatrických termínů
___ Slovník psychiatrických termínů
___ Schizofrenie (J.Libiger)
___ Léčba a prevence závislostí (K.Nešpor, L.Csémy)

Jméno: .....

Instituce, firma: .....

Adresa: .....

PSČ: ..... IČO, DIČ: .....

Datum: ..... Podpis, razítko: .....

Nová éra v mokré terapii

TenderWet® 24

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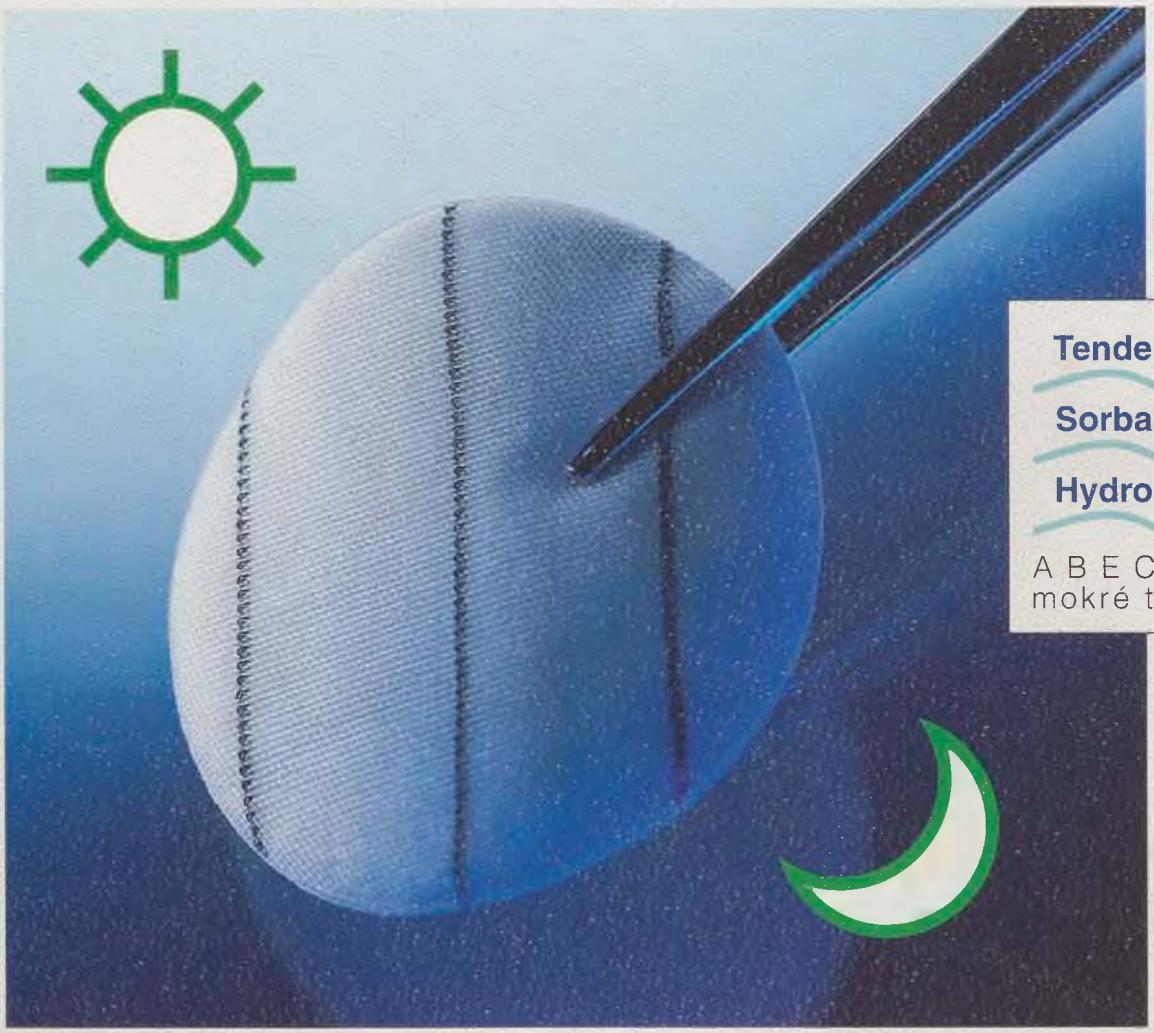

Čistící účinek ve dne v noci: TenderWet® 24

TenderWet 24 je kryt na rány určený k ošetřování chronických a infikovaných ran během fáze čištění a na počátku granulační fáze. Prodloužené intervaly mezi jednotlivými výměnami obvazu umožňují viditelné ulehčení práce a díky ochranné vrstvě odpadá nutnost používání dodatečné komprese.

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