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THE "KITE FLAP" FOR DORSAL THUMB RECONSTRUCTION

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SUMMARY

Skin cover for losses of substance on the dorsum of the thumb is often difficult. The "kite flap", introduced by Foucher, is ideal for this purpose. In the period between 1988 and 1993, this flap was used in five patients presenting with skin defects on the dorsum of the thumb. The results obtained have convinced us to consider this technique as the first method of choice in this area of reconstructive surgery.

ZUSAMMENFASSUNG

Der sog. "Kite" Lappen in der Rekonstruktion des dorsalen Daumens

R. Adani, R. Busa, A. Bathia, A. Caroli

Die Hautdeckung der Gewebsverluste am Dorsum des Daumens ist häufig schwierig. Der von Foucher entworfene sog. "Kite" Lappen gilt als ideal für diese Zwecke. Im Zeitraum zwichen 1988 und 1993 wurde dieser Lappen bei 5 Patienten mit einem Hautdefekt am Dorsum des Daumens angewandt. Die erzielten Ergebnisse überzeugten uns davon, dass die Methode eine Alternative auf diesem Gebiet der rekonstruktiven Chirurfie darstellt.

Key words: kite flap, thumb reconstruction, island flap, dorsal thumb injuries

Foucher described in 1978 an island flap based on the first dorsal metacarpal artery harvested from the dorsum of the index finger (5). However, its use in thumb reconstruction bacame more frequent only towards the mid-1980s (4, 12, 13, 14). The use of the kite flap in reconstruction of the thumb pulp remains controversial. The mechanical characteristics of the skin of the dorsum of the index finger (11), the poor sensory recovery (3), the presence of doublesensibility (10) are disadvantages which, together, have limited the indications of this flap for dorsal reconstruction rather than of pulp defects.

This paper presents our experience with coverage of defects on the dorsum of the thumb using the "kite" flap.

MATERIAL AND METHODS

Between October 1988 and December 1994, the first dorsal metacarpal artery island flap was used in five patients (Tab. 1). They included four males and one female. Their mean age was 42 years (range 23 - 56 years). In three of the five cases, the defect was of traumatic origin (one was due to electric burns) while the remaining two patients had substance loss following repeated surgical excision of warts. Only one of these pacients had an emergency operation. The left hand was affected in three patients while the injury involved the right hand in two patients.

The size of the flap ranged from 1.5x2.5 cm to a maximum of 2.5 x3 cm. There were no post-ope-

Table 1. Clinical material.

Case No.	Sex	Age	Mechanism of injury	Site of skin loss	Dimensions of the flap (cm)
1	M	53	Excision of warts	Dorsum SN	2.5x3
2	M	23	Excision of warts	Dorsum DX	1.5x2.5
3	M	41	Electric burns	Dorsum DX	2x2.5
4	M	56	Electric saw	Dorsum SN	2.5x3
5	F	39	Crush	Dorsum SN	2x3

rative complications nor any problems of venous congestion or of flap ischaemia.

CASE REPORTS

Case No. 1

A male patient aged 53 years, presented with a history of having undergone a series of operations followed by cycles of radiation therapy for recurrent warts on the dorsal aspect of metacarpophalangeal joint of his left thumb. This treatment resulted in the development of actinic dermatitis complicated by a deep ulcer with exposure of the underlying bone (Fig. 1a). The ulcerated skin was excised, the metacarpophalangeal joint was fused and skin cover was provided using a first dorsal metacarpal artery island flap 2.5x3 cm in size (Fig. 1b). Follow-up at two years post-surgery showed a good result at both the donor and recipient sites (Figs. 1c,d).

Fig. 1a: Actinic dermatitis with an ulcer over the metacarpophalangeal joint of the left thumb.

Fig. 1b: Excision of the ulcerated skin with exposure of the underlying bone.

1c)

1d)

Figs. 1c, d: Results at two years post-surgery.

Case No. 4

A male patient aged 56 years suffered a serious injury to his left thumb working with an electric saw and had a large area of loss of substance of skin, tendon and bone at the level of the dorsal aspect of the metacarpophalangeal joint (Fig. 2a). He had an emergency treatment with stabilisation using an external fixator and skin cover in the form of a "kite" flap, 2.5x3 cm in size (Fig. 2b).

Post-operative healing was uneventful and 40 days later he underwent arthrodesis of the MP joint with bone-grafting. Follow-up at more than one year after the initial trauma revealed a good result at flap donor and recipient sites (Figs. 2c, d).

DISCUSSION

The "kite" flap constitutes a reliable technique for skin reconstruction of the dorsum of the thumb. It can be passed easily by means of subcutaneous tunnel to reach this region and provide skin of a similar quality. This flap permits treatment of skin defects of considerable proportions

Fig. 2a: Loss of substance of skin, tendon and bone over the MP joint of the left thumb.

Fig. 2b: Skin cover with a "kite" flap after stabilisation using an external fixator.

2c)

2d)

Figs. 2c, d: Results at one year post-trauma.

and its size can reach upto a maximum length of 7-8 cm and a width of about 4 cm (11). In this way it is possible to cover the entire dorsal aspect of the thumb without interrupting any important vascular axis as it is the case during the use of the ulnar artery flap (7). In addition, the "kite" flap possesses the undoubted advantage of easy execution as compared to the difficulties encountered in the use of the posterior interosseous flap for this type of reconstruction (2). As it does not involve any microsurgical anastomosis, the duration of the operation remains extremely short as compared to other techniques used in the reconstruction of the thumb e.g. the lateral arm flap (8). The homodigital flap with reverse flow vascularisation, described by Brunelli (1), remains a noteworthy option in this situation, the limiting factor being the small size of the defect that can be covered with this flap.

To conclude the excellent results obtained both at the donor and the recipient sites have made us consider the first dorsal metacarpal artery island flap as the first method of choice for skin defects on the dorsum of the thumb.

REFERENCES

1. Brunelli, F.: Le lambeau dorso-cubital du pouce. Ann. Chir. Main, 12: 105-114, 1993.

2. Costa, H., Comba, S., Martins, A., Rodrigues, J., Reis, J., Amarante, J.: Further experience with the posterior interosseous flap. Brit. J. Plast. Surg., 44: 449-455, 1991.

3. Dautel, G., Merle, M.: Direct and reverse dorsal metacarpal flaps. Brit. J. Plast. Surg., 45: 123-130, 1992.

4. Eaton, C., Lister, G.: Treatment of skin and soft tissue loss of the thumb. Hand Clin., 8: 71-97, 1992.

5. Foucher, G., Braun, J. B.: A new island flap transfer from the dorsum of the index to the thumb. Plast. Reconstr. Surg., 63: 344-349, 1979.

6. Foucher, G., Sammut, D.: Indications in the management of fingertip injuries. In: Foucher, G., (Ed.): Fingertip and nailbed injuries. Edinburgh, Churchill Livingstone, 129-139, 1991.

7. Guimberteau, J. C., Goin, J. L., Panconi, B., Schuhmacher, B.: The reverse ulnar artery forearm island flap in hand surgery: 54 cases. Plast. Reconstr. Surg., 81: 925-932, 1988.

8. Inoue, G., Suzuki, K.: Arterialized venous flap for treating multiple skin defects of the hand. Plast. Reconstr. Surg., 91: 299-302, 1993.

9. Katsaros, J., Tan, E., Zoltie, N., Barton, M., Venugopalsrinivasan, Venkataramakrishnan: Further experience with the lateral arm free flap. Plast. Reconstr., Surg., 87: 902-910, 1991.

10. Marin-Braun, F. M., Merle, M., Foucher, G.: Le lambeau cerfvolant. Ann. Chir. Main., 7: 147-150, 1988.

11. Michon, J.: Kite flap in reconstruction of distal thumb. In: Foucher, G., (Ed.): Fingertip and nailbed injuries. Edinburgh, Churchill Livingstone, 79-82, 1991.

12. Ratcliffe, R. J., Regan, P. J., Scerri, G., V.: First dorsal metacarpal artery flap cover for extensive pulp defects in the normal length thumb. Brit. J. Plast. Surg., 45: 544-546, 1992.

13. Sherif, M.: First dorsal metacarpal artery flap in hand reconstruction. I. Anatomical study. J. Hand Surgery. 19A: 26-31, 1994.

14. Small, J. O., Brennen, M. D.: The first dorsal metacarpal artery neurovascular island flap. J. Hand Surg., 13B: 136-145, 1988.

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REPLANTATION BY ARTERIALIZATION OF THE VENOUS SYSTEM OF AMPUTATED PARTS

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SUMMARY

Only in four cases out of 800 replantations and revascularizations as the last resort it was neccessary to anastomose an artery of the stump to a vein of the amputated part. Three of these cases were very distal finger amputations in zone II and III and one was an auricle amputation with so severly damaged arteries of the amputated part that it was not possible to perform their anastomosis. All of these four clinical cases were successful and they confirm the possibility of arterialization of the venous system which was proved in experiments with rabbit auricle replantation by Mundy and Pajn (1994) and by Farrior and Baker (1988).

ZUSAMMENFASSUNG

Arterialisation des venösen Systems bei der Retransplantation von amputierten Körperteilen

J. Veselý, V. Smrčka

Nur in 4 von 800 Replantationen und Revaskularisationen, die als letzte therapeutische Möglichkeit erfolgten, musste eine Anastomose einer Arterie des Stumpfes zu einer Vene des amputierten Teiles durchgeführt werden. In 3 von diesen Fällen bestand eine höchst distale digitale Amputation und bei einem Fall gab es eine Amputation des Aurikels mit einer schweren Schädigung der Arterien des amputierten Teiles, so dass eine Anastomose nicht möglich war. Die Behandlung war in sämtlichen 4 Fällen erfolgreich und lieferte den Beweiss für die Möglichkeit einer Arterialisation des venösen Systems, die bereits im Tierversuch anlässlich der Replantation des Kaninchenohres durch Mundy, Pajn in 1984 und Farrior, Baker in 1988 mit Erfolg durchgeführt wurde.

Key words: replantation, arterialization of the venous system

We have encountered more than 800 replantations and revascularisations of parts of extremities in our clinical practice but only rarely was it necessary to anastomose an artery of the stump to a vein of the amputated part with subsequent arterialization of the venous bed. In spite of the fact that the series of replanted parts of distal phalanges and replantations of auricles is considered to be of no statistical significance, the method is essential for clinical practice. All of the cases have been successful.

Vascularization of the terminal phalanx is abundant. It was studied by Flint (2), who described three arterial arcades on the dorsum of a finger and a convergence of digital arteries either with a cross junction or with an H-shaped junction on the volar side. The veins form a transverse arcus venosus at the nail base on the dorsum of the finger. According to our experience, however, there are bigger veins on the volar side of the distal phalanx and therefore they were used in our clinical cases for the construction of anastomoses. Foucher (3) mentions further two types of distal vascularization (Fig. 1) where the artery in the central part of the finger is usually bigger than the other parts.

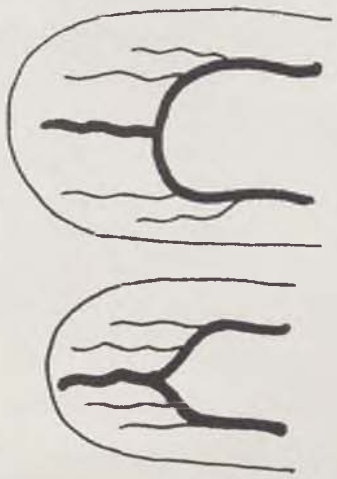


Fig. 1: Two types of distal vascularization of the finger by Foucher.

Among the three replanted parts of digits operated on during the period of 1984-1994 there were distal phalang of the first finger and two distal phalanges of three-phalangeal digits. According to Foucher (3) these were "very distal finger replantations" in zone II and III. In all of these three cases this method was the last resort in the absence of a distal arterial segment which could be used for anastomosis since it was damaged at the time of injury.

CASE REPORTS

J. M., a 16-year-old boy, case report No. 92916, sustained a sharp traumatic amputation of the apex of the middle finger of his left hand. The amputated part was fixed with Kirschner's wire and an ulnar digital artery of an auxiliary incision was anastomosed to a volar vein of the apex. The skin defect over the vessels was covered with a small skin graft. The vein was not sutured in this case and the circulation through the digit was maintained by bleeding into the dressing with both systemic and local administration of heparin. The blood supply during the healing was good (Figs. 2-4).

Fig. 2: Sharp amputation of the apex of the third finger of the left hand in zone III in a 16-year-old boy.

Fig. 3: Status immediately after the replantation.

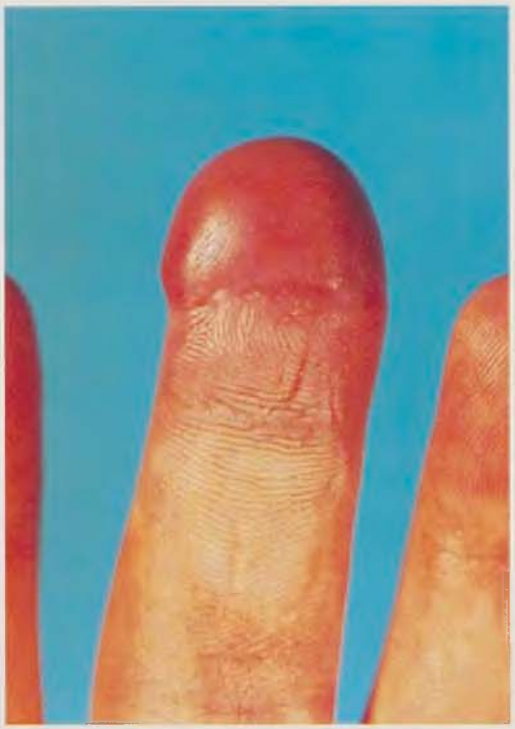


Fig. 4: Three weeks after surgery.

K. J., a 34-year-old man, case report No. 92290, sustained a total amputation of his left auricle. This lorry driver was injured in a traffic accident and suffered a compression fracture of the Th5 and Th6 vertebrae and an amputation of his left auricle, the auricle itself remained undammaged and the auditory canal showed a circular dilaceration in two levels (Figs. 5-6).

In the amputation wound on his head there was a well developed artery of 1.5 mm in diameter - auricular posterior artery. The veins on his head were found easily as well. However, there were no arteries found on the pinna, just an arteriola of less than 0.5 mm in diameter on the lobule. Three marginal veins were easily exposed. The auricle replantation in this situation was performed in the following way: after the resection of the not working anastomosis between posterior auricular artery and the lobule arteriola, posterior auricular artery was sutured to a marginal vein of the pinna and a relatively thick vein was anastomosed at the upper part of the auricle and at the wound on the head. After this arterialization of the venous bed, which was described in experiments with free flaps of rabbit ear by Mundy and Panj in 1984 (4) and by Farrior and Baker in

Figs. 5-6: Total amputation of the auricle in a 34-year-old man.

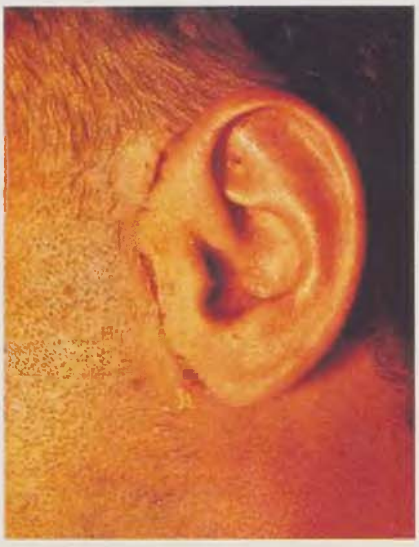
Fig. 7: Immediately after replantation.

1988 (1), the blood supply of the replanted auricle was gradually restored (Fig. 7).

The quality of the capilary return of the replanted auricle was suggestive of a slight venostasis of a free flap during the first two days. Later the auricle had a normal skin colour and the healing was without any complications (Figs. 8-9). During the post-operative period was administrated Rehodextran on the operation day and the first day after the operation, and antiaggregatives Anopyrin and Curantyl.

DISCUSSION

We have reached the conclusion that according to our experience it is possible to arterialize the venous system of the replanted acral parts so far that the replanted part survives without any complications. This has been confirmed in our four clinical cases and it was also confirmed in experiments earlier but other authors, however,



Figs. 8-9: Two weeks after replantation.

mention some unsuccessful arteriovenous anastomoses (3). It would be of interest to find out whether bigger flaps could be also replanted in this way, especially if A - V shunts would occur either in the flap pedicle or in the flap itself. Their existence has been suggested by some observations of arterial bleeding after the suture of a flap vein, as the first vascular anastomosis.

REFERENCES

1. Farrior, E. H., Baker, S. R.: Use of arterialization of venous system in reattachment of the avulsed auricle. Arch. Otolaryngol. , 114: 385-388, 1988.

2. Flint, M. H.: Some observations on the vascular supply of the nail bed and terminal segments of the finger. Brit. J. Plast. Surg., 8: 186, 1956.

3. Foucher, G., Norris, R. V.: Distal and very distal digital replantations. Brit. J. Plast. Surg., 45: 199-203, 1992.

4. Mundy, J. C., Panj, V. R.: Creation of free flaps by arterialization of the venous system. Arch. Otolaryngol., 110: 221-223, 1984.

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THE MANAGEMENT OF EXTENSIVE TUMOURS OF THE SCALP

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SUMMARY

Though tumours of the scalp and skull are not very common certain severe and extensive forms are associated frequently with intracranial propagation and therefore their reconstruction represents often a major problem requiring the use of a series of surgical methods. Their treatment requires the use of expanders, local flaps, pedicled cutaneous and musculocutaneous flaps, as well as free flaps. This report deals with 10 patients with localized extensive tumours larger than 120 cm^2 within the region of the scalp and skull subjected to various reconstruction procedures.

The applied surgical techniques are discussed and attention is devoted also to the involvement of bone in the above mentioned localization as well as to the problems associated with these lesions.

ZUSAMMENFASSUNG

Die Behandlung von ausgedehnten Tumoren des behaarten Kopfteiles

J. Kozák, P. Voska, E. Zvěřina

Tumoren des Behaarten Kopfteiles und des Schädels sind nicht besonders häufig, jedoch ihre schwere und ausgedehnte Formen, die oft mit einer intrakranialen Propagation verbunden sind, ergeben schwierige Probleme für die chirurgische Rekonstruktion, die eine Anwendung einer ganzen Reihe von chirurgischen Methoden nötig macht. Die Applikation von "Expandoren", lokalen Lappen, gestielten Hautlappen, muskulokutanen Lappen und von freien Lappen ist am Beispiel von 10 Patienten mit lokalisierten ausgedehnten Tumoren von mehr als 120 cm^2, im Gebiet des Schädels und des behaarten Kopfteiles illustriert. Zur Anwendung gelangten unterschiedliche Verfahren der Rekonstruktion. Die Technik der Rekonstruktion wird erörtert. Besondere Aufmerksamkeit wird auch den Läsionen der Knochen gewidmet und den mit ihrer Behandlung verbundenen Problemen.

Key words: tumours of the scalp, reconstruction, intracranial propagation of tumours

Skin tumours are the most frequently occuring neoplasms in our population. Yearly are registred 7000 newly detected cases. However they are less common within the scalp where they consist mostly of basaliomas, spinaliomas, cylindromas, sarcomas, and much less frequently of melanomas. Most common are basaliomas and with a high risk is associated their invasive form which, however, accounts only for 5% of basaliomas. According to Beauregard et al. (1995) this invasive form has a recurrence rate of 56%. All form of malignant tumours, especially melanomas, which occur within the scalp, are covered mostly by hair and thus are not detected both by the patient and by the doctor and therefore are diagnosed relatively late (Benmeir et al., 1995). Since the treatment is mostly surgical a subsequent reconstruction of the defect is required as well. For this purpose are applied numerous methods. In small defects is sufficient a suture of the skin. Where after the operation is left an intact periost the defect is covered regularly with a skin graft. The excellent pericranial vascularization allows a satisfactory healing of the applied graft. Very useful proved the use of expanders with subsequent simple suture or in combination with local flaps (Azzolini et al., 1992). It is also possible to use for reconstruction lokal skin flaps or flaps from distant sites including pedicled musculocutaneous as well as free flaps. It should be decided prior to surgery which type of flap will be used for reconstruction.

MATERIAL AND METHOD

Within the period 1989-1994 were treated at our departments 10 patients with extensive tumours in the region of the calva and of the scalp requiring reconstructive surgery. The series of 10

patients consisted of 6 females and 4 males ranging in age from 40 to 62 years, with a mean age of 52 years. All patients had after surgery a skin defect of more than 120 cm^2, while the surface area of the skin of the scalp measures in adults about 900 cm^2 (Lesavoy et al., 1993). Four patients were treated for a basalioma, three for a spinalioma and three for a fibrosarcoma. For the repair were used in four patients Oricochea's modifications of local flaps, in three patients pedicled flaps from distant parts, and in other three patients free musculocutaneous flaps.

CASE REPORTS

Case No. 1: A female patient aged 47 years. Eight years ago she had an excision of a mass on her head. At the present time followed after a blow at a high rate a growth of a mass up to the size of 16x15 cm. Histology established the diagnosis of a fibrosarcoma. Chemotherapy was ineffective. Therefore followed in general anaesthesia a radical excision and reconstruction with the use of three skin flaps, grinding of the bone and closure of the defect (Figs. 1-3).

Fig. 1: Female patient aged 47 years with an extensive recurrent fibrosarcoma in the parietooccipital region.

Fig. 2: Reconstruction with 3 skin flaps and a grinding of the osseous lamina externa.

Fig. 3: Condition after the closure of the extensive defect.

Case No. 2: A female patient aged 56 had repeated excisions for a basalioma in the retroauricular region (Fig. 4). The total duration of this treatment was 10 years. CT scan exposed extensive destruction of the skull (Fig. 5). Because of the huge extent of the tumour the treatment was preceded by the preparation of a deltopectoral pedicled flap (Fig. 6) with a subsequent neurosurgical extensive extirpation of tumour from the region of the middle and posterior cranial fossa with an extensive plastic repair of a large defect of dura (Fig. 7). The skin defect was covered with a spread deltopectoral flap (Fig. 8).

Fig. 4: Female patient aged 56 years with an extensive basalioma in the temporoparietal region with intracranial propagation.

Fig. 5: CT scan shows a skeletal destruction in the temporal region.

Fig. 6: A deltopectoral flap ready for reconstruction.

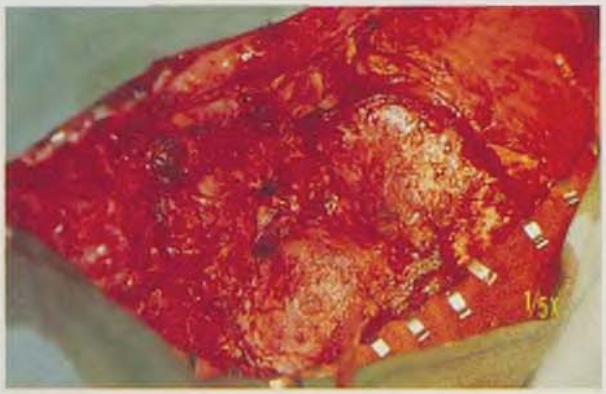

Fig. 7: Peroperative photography after the removal of the bone and of dura mater within the region of the middle and posterior cranial fossa.

Fig. 8: Condition after reconstruction.

Case No. 3: A female patient aged 52 years with a tumour in the frontotemporal region of a size of 14x14 cm. Histology revealed a spinalioma. CT showed an intracranial penetration of the tumour. The extirpation of the tumour was carried out in general anaesthesia with a repair of the defect with a free musculocutaneous flap from the m. latissimus dorsi and an anastomosis to the facial vessels.

Fig. 9: Female patient aged 59 years with an extensive basalioma in the parietooccipital region.

Fig. 10: Condition after reconstruction with a free flap from the m. latissimus dorsi.

Case No. 4: A female patient aged 59 years with tumour in the parietooccipital region of a size of 15x15 cm (Fig. 9). Total duration of the basalioma is 10 years. The exstirpation of the tumour was carried out with a repair of the defect with free musculocutaneus flap from the latissimus dorsi, skin graft. Anastomosis was carried out to temporalis vessels (Fig. 10).

RESULTS

In all our patients it was possible to attain the restoration of skin cover. In the female patient No. 2 was observed a slight superficial transient necrosis in the middle of the flap. In the same patient was equally ascertained a liquorrhea into the subcutis of the flap, which was treated by local puncture and by lumbal drainage and which subsided after five days. Three patients from our series died from the progression of their tumours with intracranial propagation and cachexia associated with neoplastic disease.

DISCUSSION

A defect after a major surgical procedure is often associated with a loss of bone and the surgical reconstruction possess big problems. The surgeon should always during his decisions, especially in reconstruction with local flaps, keep in mind the anatomy of the scalp not only with regard to its anatomical layers, solidity, little possibility of shifting, and mainly its blood supply. The latter is provided by supraorbital, supratrochlear, temporal, auricular and occipital vessels. All of them proceed in the subcutaneous fat layer in the vicinity of the surface of galea aponeurotica. They form loose anastomoses and thus allow the detachment of a long axial flap and its shifting. During decisions on the method of reconstruction preference is given to the use of a local skin flap, because it not only restores the skin cover, but in the presence of favourable conditions it can also restore the normal configuration of the scalp, both with and without hair. Most convenient prooved in this direction the method devised by Orticochea. It was developed on the basis of anatomical studies and reports by Kazanjian (1953) who used originally axial narrow pedicled flaps. The contribution of Orticochea (1967) consisted in the section of the double pedicled flap approximately in its middle part and the flaps were prolonged by small incisions into the galea. However the most important feature consisted in the total mobilization of the flaps dorsally from the eyebrows to the nucheal line. The flaps were used both for the cover of the defect per se, but also of the defect which remained after the transposition of flaps. Originally it was proposed to detach 4 flaps (Orticochea, 1967), but later the author advised in his modification to increase the safety of the method by using only three flaps. The method of Orticochea (1971) was introduced for operations performed in one sitting since it allowed the treatment of emergency situations. On the contrary the treatment with expanders continues for 6 weeks (Azzolini et al., 1992) and is sometimes associated with a damage to the hair folicles and the development of alopecia. In children it is associated with a risk of bone erosion.

Lesavoy et al.(1993) criticized the method of Orticochea and underlined several important facts. Small incisions into the galea allow to increase the length of the flap only by 1-2 cm and they may in addition threaten the blood supply to the flap. Therefore he proposed that the flap should be as large as possible, to verify the pedicle with Doppler and at the site of excessive skin after the rotation of the flap on no occasion perform a cut-back since after a certain time the excessive amount of tissue will flatten without a risk of an impairment of blood supply to the flap. He suggested also a combination of these large flaps with skin grafts which can be later in the case of a favourable prognosis removed. In large defects associated with osseous lesions is recommended the use of pedicled flaps from distant parts (Wolfe and Wagstrom, 1990), or more commonly free flaps. This is also indicated in damaged skin in the vicinity of the tumour due to scars or after radiotherapy. Most discussions are aimed at the determination of the limit of local flaps and where begins the indication for the use of a free flap. Thus Kaplan et al.(1979) suggested that microsurgery should be used in the treatment of defects of more than 120 cm^2, while other authors (Lesavoy, 1981) use local skin flaps in defects exceeding 120 cm^2. For the indication plays an important role also the localisation of the tumour, since in a tumour situated at the periphery, either in the frontal or in the occipital region, it is possible to use without any risk, only one wide local flap and to cover the secondary defect with a skin graft. A comprehensive role during the choice of the applied method of treatment plays the preference given to certain surgical procedures at in-

dividual departments. During a reconstruction with free flaps are most commonly used muscular or musculocutaneous flaps from the m. latissimus dorsi, m. rectus abdominis, an omental flap and other cutaneous and facial cutaneous free flaps (Pennigton et al., 1989; Miyamoto et al., 1986; Batchelor and Sully, 1984; Barrow et al., 1984). Though at erudited departments satisfactory results are attained in as many as about 95%, the complications after the unsuccessful transfer of a free flap can cause great problems, especially in the case of a simultaneous major neurosurgical pocedure and when it is indispensable to attain a good hermetic skin cover. For this reason are sometimes applied cutaneous or musculocutaneous pedicled flaps which are associated with little risk of thrombosis (Wolfe and Wagstrom, 1990).

A special notion merits the involvement of bone which according to our experience can be subdivided into three classes:

1. The tumour produces only an erosion of the external lamina requiring bone grinding and splitting off.

2. The tumour penetrates into the bone but the dura mater which usually provides a good barrier remains intact. In these cases the therapy consists of a removing of the bone and a covering of the defect with a skin flap, mostly without an immediate reconstruction of the bone.

3. An intracranial penetration of the tumour requiring, according to its localization a radical or a semiradical extirpation of the tumour, reconstruction of dura mater and of the skin cover. During this operation is required a cooperation with a neurosurgeon. In those difficult cases proved useful two stage surgery since the age and the general condition of the patient, as well as the large extent of the tumour does not allow an excessive prolongation of the duration of the surgical procedure. Therefore the treatment proceeded as follows: during the first stage of surgery we have transferred a free flap which was anastomosed and one side, in the vicinity of the tumour was sutured to the neighbouring normal tissue closely to the defect and the flap was separated from the tumour with poyethylen. After several days followed the second - neurosurgical stage. At the termination of this procedure the vital flap was already prepared to be used as a cover of the defect.

The assessment of the global complex management of tumours of the scalp and skull allowed a definite conclusion, that expecially in the treatment of basalioma surgical treatment is mostly not sufficiently radical and that especially in the aim to preserve the periost results in large numbers of recurrencies. Because of its high vascularity the pericranium is in this connection associated with a high risk. Therefore if there are any doubts the adequate radicality of the surgical procedure should be verified by a peroperative biopsy. The same holds true in an involvement of bone when its partial or total removal represents for the patients a lower risk than a so-called "sparing approach".

REFERENCES

1. Azzolini, A., Riberti, C., Cavalca, C.: Skin expansion in head and neck reconstructive surgery. Plast. Reconstr. Surg., 90: 799, 1992.

2. Barrow, D. L., Nahai, F., Tindall, G. T.: The use of greater omentum vascularized free flaps for neurosurgical disorders requiring reconstruction. J. Neurosurg., 60: 305, 1984.

3. Batchelor, A. G., Sully, L.: A multiple territory free tissue transfer for reconstruction of a large scalp defects. Br. J. Plast. Surg., 37: 76, 1984.

4. Benmeir, A., Baruchin, S., Lusthaus, S., Weinberg, A., Ad-El, D., Nahlieli, O., Neuman, A., Wexler, M. R.: Melanoma of the scalp: The invisible killer. Plast. Reconstr. Surg., 95: 496, 1995.

5. Chicarilli, Z. N., Ariyan, S., Cuono, C. B.: Singlestage repair of complex scalp and cranial defects with the free radial forearm flap. Plast. Reconstr. Surg., 77: 577, 1986.

6. Kaplan, H., Wexler, M. R., Fiensod, M.: Free groin flap for the reconstruction of the scalp folowing tumour resection. Ann. Plast. Surg., 2: 445, 1979.

7. Kazanjian, V. H.: Repair of partial losses of the scalp. Plast. Reconstr. Surg., 12: 325, 1953.

8. Lesavoy, M. A., et al: Management of large scalp defects with local pedicle flaps. Plast. Reconstr. Surg., 91: 783, 1993.

9. Lesavoy, M. A.: Surgery of the scalp and skull. In M. A. Lesavoy (Ed.), Reconstruction of the head and neck. Baltimore: Williams and Wilkins, 1981, pp. 9-28.

10. Miyamoto, Y., Harada, K., Kodama, Y., Takahashi, H., Okano, S.: Cranial coverage involving scalp, bone and dura using free inferior epigastric flap. Br. J. Plast. Surg., 39: 484, 1986.

11. Orticochea, M.: Four flap scalp reconstructive technique. Br. J. Plast. Surg., 20: 159, 1967.

12. Orticochea, M.: New three-flap scalp reconstructive technique. Br. J. Plast. Surg., 24: 184, 1971.

13. Pennington, D. G., Stern, H. S., Lee, K. K.: Free flap reconstruction of large defects of the scalp and calvarium. Plast. Reconstr. Surg., 83: 655, 1989.

14. Robson, M. C., Zachary, L. S., Schmidt, D. R., Faibisoff, B., Hekmatpanah, J.: Reconstruction of large cranial defects in the presence of heavy radiation damage and infection utilizing tissue transferred by microvascular anastomoses. Plast. Reconstr. Surg., 83: 438, 1989.

15. Wolfe, A., Wagstrom, L.: The postaurical way-station for tubed pedicles from the chest. Plast. Reconstr. Surg., 86: 97, 1990.

16. Beauregard, G., N., et al.: Management of invasive facial basal cell carcinoma. Plastic, reconstructive and aesthestic surgery. Transaction of the 11th Congress of the International Confederation Yokohama, Japan 1995. Kugler publication BV Amsterdam, New York 1995, p. 529.

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THE RELATION OF ISOLATED CLEFT OF THE HARD PALATE TO SUBMUCOUS CLEFT PALATE

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SUMMARY

The authors report a case of a spontaneous development of a fistula in a nonoperated submucous cleft palate in a male aged 40 years. This observation and the search of the underlying causes are based on their report from 1971 dealing with an analysis of 5 cases of an inborn defect in the hard palate.

ZUSAMMENFASSUNG

Ein Beitrag zu den Beziehungen einer isolierten Spaltmissbildung des harten Gaumens zu einer submukosen Gaumenspalte

I. Horák, M. Fára

Die Autoren berichten über einen Fall einer spontanen Perforation in einer nie operierten submukosen Gaumenspalte bei einem 40 jährigen Patienten. Diese Beobachtung und die Suche nach den Ursachen des Geschehens knüpfen an ihren Bericht von 1971 an, der sich mit der Analyse von 5 Fällen mit einem angeborenen Defekt im harten Gaumen befasste.

Key words: submucous cleft palate, spontaneous perforation

In 1971 was published in Plastic and Reconstructive Surgery our report on a series of five inborn isolated clefts of the hard palate (7). The affected individuals were followed-up from birth and operated by us and they still attend regular check-up examinations at our department. We were in the position to reach in all cases objective conclusions on the etiopathogenesis, regularly occuring anatomical features and it was possible to ascertain that isolated cleft of the hard palate occurred in all five cases in association with a submucosal cleft palate (1, 2).

An analysis of all cases was suggestive of our conclusions that an intrauterine rupture of a wide submucous cleft occurred within the area of the highest tension. The patients observed had significantly underdeveloped maxillae and a marked hypoplasia of palatal plates. The inadequate palatopharyngeal closure was repaired in all cases with a primary pharyngeal flap (3). Defects affecting only the hard palate belong among the rarest anomalies seen in clefts. They appear as oval-shaped openings in the midline and do not extend along the whole length of the palatal plates. Their occurrence is usually thought to be connected to a submucous cleft.

However, the few old cases that have been described (1, 4, 6) and which were not always completely demonstrated have not provided reliable data concerning the incidence, pathogenesis, anatomy, functional aspects, and treatment of this unusual anomaly. We belive that in the above mentioned paper we succeeded in providing some contribution to these problems.

Just recently came to our department a male patient born in July 22, 1954, treated by us surgically at the age of 5 months for an incomplete cleft lip on the left side associated with a submucous cleft extending up to the foramen incisivum. The submucous cleft palate was rather wide and was bridged by thin translucent tissue and was not treated later by surgery since it did not induced any important impairment of speech.

On his recent visit the patient, who is now aged forty years, reported that on October 20, 1993, and thus one month ago during the cleaning of his teeth in the morning he observed that a hole developed overnight on his palate. There was neither bleeding, nor a sensation of pain.

On admission for surgical repair was revealed a nonoperated cleft palate with a high cleft uvula and within the vault a perforation of 6x3 mm in

1)

2)

Figs. 1, 2: Isolated cleft in the hard palate. Intraoral view before the operation.

3)

4)

Figs. 3, 4: Intraoral view 3 weeks after the 3 flaps operation with pushback and upper based pharyngeal flap.

size (Figs. 1, 2). The surgical repair on November, 23 consisted of three flaps, a pushback of the palate and of pharyngeal flap with an upper based pedicle. The muscles were detached from the substituted insertions on the posterior margin of palatal plates and sutured end to end. The healing proceeded without any problems. (Figs. 3, 4).

This observation was of interest for us since it represented a single case recorded in our clinical material, which was documented in detail both by description and photographies since 1924 demonstrating the occurrence of postnatal spontaneous rupture of a membraneous bridge over a submucous cleft. It may be possible that increasing age is associated with a shrinking of tissue of poor quality forming the bridging which can lead to its rupture during an overexertion of velar muscles, e.g. during yawning.

However, we believe that in any case this spontaneous occurrence of a perforation within a submucous cleft palate during the subsequent lifetime is in favour of our theory that an inborn cleft of the hard palate develops in the last weeks of intrauterine life, when the intrauterine growth of the head is almost completed and the draught towards the sides increases the tension within the tissues bridging the cleft between the palatal plates.

REFERENCES

1. Burian, F.: The plastic surgery atlas. Butterworth, London, 1967.
2. Fára, M., Dvořák, J.: Abnormal anatomy of the muscles of palatopharyngeal closure in cleft palates. Anatomical and surgical considerations based on the autopsies of 18 unoperated cleft palates. Plast. Reconstr. Surg., 46: 488, 1970.
3. Fára, M., Sedláčková, E., Klásková, O., Hrivnáková, J., Chmelová, A., Šupáček, I.: Primary pharyngofixation in cleft palate repair. A survey of 46 years' experience with and evaluation of 2 073 cases. Plast. Reconstr. Surg., 45: 449, 1970.
4. Lynch, J. B., Lewis, S. R., Blocker, T. G.: Cleft palate not explained by embryology. Plast. Reconstr. Surg., 38: 332, 1966.
5. Trélat, U.: cited by Veau, V.
6. Veau, V.: Division palatine. Masson and Cie, Paris, 1931.
7. Fára, M.: Congenital defects in the hard palate. Plast. Reconstr. Surg., 48: 44, 1971.

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NOSE DEFORMATION AS A RESULT OF BIRTH INJURY

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SUMMARY

The authors have compared the frequency of occurrance of nasal septum deformation in two groups of newborns, using the simplest testing methods for:

1. newborns born by spontaneous labor (254 newborns),

2. newborns born by caesarean section (52 newborns).

The deformation from the central position of the nose were found in 2 newborns from group 2 (3.9%) and in as many as 50 newborns from group 1 (approx. 20%) providing the evidence that most deformations occur as a result of birth injury (during labor).

32 deformations (26 in the cartilaginous section of the nasal septum and 6 in the osseous section) have been tested repeatedly in the third or fourth week of life.

19 out of 26 deformations of the cartilaginous section of the nasal septum (73%) have been repositioned automatically. All deformations in the osseous section detected after birth were also analyzed physically in the third or fourth week of life.

ZUSAMMENFASSUNG

Nasendeformationen infolge einer Schädigung während der Geburt

P. Spiewak, H. Kawalski

Ein Vergleich der Häufigkeit einer Deformation des Nasenseptum bei zwei Gruppen von Neugeborenen mit der Anwendung der einfachsten Untersuchungsmethode:

1. Neugeborene nach einer spontanen Entbindung (254 Neugeborene),

2. Neugeborene nach einem Kaiserschnitt (52 Neugeborene).

Deformationen in der zentralen Position der Nase bestanden bei 2 Neugeborenen der zweiten Gruppe (3.9%), und bei 50 Neugeborenen der ersten Gruppe (ung. 20%).

Dies erbrachte den Nachweis, dass die, meisten Nasendeformationen durch eine Schädigung während der Geburt nervorgerufen werden (im Laufe der Entbindung).

32 Deformationen (davon 26 des Nasenseptumknorpels und 6 des skeletalen Segmentes) wurden in der dritten und vierten Woche nach der Geburt wiederholt untersucht. Bei 19 von 26 Deformationen des Nasenseptumknorpels (73%) erfolgte eine automatische Reposition. Sämtliche Deformationen des skeletalen Segmentes, die nach der Geburt festgestellt wurden, wurden (ebenfalls) in der dritten und vierten Woche nach der Geburt erneut analysiert.

Key words: nose, nasal septum, birth injury, newborn

Deformations of the walls of the nasal cavity occur most frequently within the nasal septum and are very rare within the lateral walls of the nasal cavity and external dorsum nasi (4, 2).

Nasal deformations in the neonatal stage have been described for the first time by Metzenbaum in 1936 (8) and there are only a few publications concerning this problem. Most publications are focussed on the deformations of the nasal septum.

Nose deformation can develop even in the intrauterine phase because of long lasting pressure exerted by e.g. normal structures (fetus' arm or hand) or abnormal uterine myoma (4, 14).

The nose can be deformed as a result of adaptation of the head of the fetus to the walls of birth channel during the second period of the birth. The distance between the nasal apex and the external occipital protuberance is approximately the same as that between the chin and occiput and they represent the largest dimensions of the head of the fetus.

It is therefore justified to suppose that the nose is more exposed to birth injury than any other structure of the face (4, 10).

In 1959 Steiner (14) noticed a correlation between the cephalic longitudinal position of the head of the fetus and the direction of deviation of the nasal septum.

In children who remained in position I (left) a deviation to the right is most frequent, while in those who remained in position II (right) the septum is deviated to the left.

The reason of that is connected with the direction of internal rotation of the head in the birth channel. When the fetus is in the left position (I) the rotation takes place clockwise.

Because of resistance of the walls of the birth channel the cartilage moves from the interosseous groove of the intermaxillary bone to the right, while the nose apex moves in the opposite direction.

When the delivery starts from the right position (II) the direction of head rotation is reverse; therefore the septum moves from the interosseous groove of the intermaxillary bone to the left while the nasal apex may move to the right (14, 15, 4).

Complicated deformations of the septum in its osseous part and within the dorsum of the nose often coexist with lockjaw and with dacryostenosis. Their development is explained by Gray's theory of "deformed jaw" (2, 1).

Flexible bones of the skull may be pressed or deformed in various directions both inside the uterus and during the labour. If the forces act on the jaw in a symmetrical way in the frontal plane then the hard palate is arched upwards (the so called gothic palate).

When the septum is pressed towards the cranial base it results in a nose deformation in the form of "C" or "S" letters.

If the jaw is pressed more markedly on one side than the hard palate (constituting the bottom of nasal cavity) is arched on the side of the pressure while the vomer is pushed in the opposite direction (with its connection with perpendicular lamina of the palatine bone and with nasal septum cartilage) resulting in a comb- or spine shaped deviation at the height of the connection between three main elements of the septum.

There is also a theory which proposed that the deviation of nasal septum is a result of evolution. It is the result of the reduction of facial skeleton as compared to the cerebral cranium in the phylo- and onthogenetic development (17).

Nasal deformation which developed during the intrauterine phase can be recognized by the fact that a bloodless reposition in the first few days after birth is impossible (3, 6).

Most noses flattended during the passage through the birth channel tend to be extended automatically in the first few days of life because of the elasticity of cartilaginous or osseous tissue. Fracture (especially compression fracture) of nasal septum bone will straighten only exceptionally (1, 3, 6).

The consequences of deformations of walls of the nasal cavity can be divided into two groups: cosmetic and functional.

Deformations of the external nose occur seldom (4 cases per 2096 spontaneous labours, according to Gray) (2). They lead to disturbances in the symmetrical development of the external nose and it may be necessary to perform a rhinoplasty in the future. The most severe consequence of a deformation of the nasal cavity walls is the disturbance of its patency.

It can be the reason of some developmental disturbances in a newborn during the first weeks of its life; because of the high position of the larynx and immaturity of the nervous system, breathing "through the mouth" is extremely difficult. Therefore, the disturbances of nose patency are considered to be the reasons of sleep apnea and SIDS (5, 12, 16).

The epiglottis of a newborn is situated a little beneath the uvula and that enables breathing and feeding by sucking at the same time (it is not swallowing).

The sucked food flows from the oral cavity on both sides of the epiglottis to the piriform recesses whereas the air flows medially from the nasal cavity to the larynx. That is why an atretic nose hindres a correct feeding of the baby. Even one sided atresia can constitute a threat for the life of a baby because of the occurence of the so called "nasal cycle" (9, 16).

Another severe consequence of deformation of the nasal cavity walls is the occurence of chronic structural rhinitis with its known consequences as liability to infections of the airways and the middle ear, (otitis media secretoria) etc. (13).

Since there are no consistent opinions on the treatment and prophylaxis of nasal deformations at the infantile age we have undertaken our own investigations for the following purposes:

1. Analysis of frequency of occurence of nasal deformations in children during their stay at the neonatal department.

2. Observation of the dynamics of deformations in the first month of newborn's life. (Does the deformation remain unchanged? Does it get increased or decreases?)

MATERIALS AND METHOD

We have examined 306 children in the period of their stay at the neonatal department (in our country the children usually remain at the neonatal department for the first 4 days of their life). The examination was carried out by a specialist in laryngology with experience in the management of newborns.

I. The examination included:

1. Anterior rhinoscopy.

2. Tentative check-up of the patency of the nasal cavity using the method of a mirror misted over.

(A mirror was places at the level of the upper lip and the areas misted over were compared).

3. Then we checked the state of the posterior part of nasal cavity by means of a polyethylene catheter (size Ch/FG.10) and/or a narrower one.

4. We carried out "nose compression" test according to Jeppesen and Windfeld (4), (Figs. 1a, b, c).

This enables to detect the deformation of the anterior part of the nasal septum, also with the nose apex situated medially.

1a)

1b)

1c)

Figs. 1a, b, c: Compression test according to Jeppesen and Windfeld.

II. In a part of children with deformed walls of the nasal cavity the second examination was undertaken in the 3rd or 4th week after birth.

RESULTS

I. In 52 cases from the population of 306 children (17%) a deviation of the nose from its medial position was found. It occurred in 50 out of 254 newborns delivered by spontaneous labour (approx. 20%) and in 2 cases out of 52 born by caesarean section (3.9%), (Figs. 2a, b; 3a, b).

Table 1. Newborns examined during the first four days of life.

Nasal septum	straight	deformed	total
Newborns:			
born by spontaneous labor	204	50	254
born by caesarean section	50	2	52
Total number of newborns	254	52	306

II. 32 deviations (26 in the frontal section and 6 in the osseous part) were examined again in the 3rd or 4th week of life (20-32 days after birth).

Table 2. Newborns with deformations tested repeatedly.

Deformations	test	
	0-4 days od life	20-30 days of life
Deformations in the frontal part of the nasal septum	26	7
Deformations in the posterior part of the nasal septum	6	6

1. 19 out of 26 deformations of the nasal septum cartilage were straightened in the first month of life (73%!).

2. All deformations of the osseous part revealed post partem were detected by means of physical examining, also in the third and fourth week of life.

2a)

2b)

Figs. 2a, b: Asymmetry of frontal nostrils as a symptom of deformation of the nasal septum cartilage.

3a)

3b)

Figs. 3a, b: Main nose deformation in case of newborns.

CONCLUSIONS

1. The most frequent reason of nose deformations in newborns occur as a result of injury during delivery.

2. Deformations of the cartilaginous part of the nasal septum, in contrast to the deformations of its osseous part, in most cases are repositioned.

DISCUSSION

In our material it is the cartilage of the exposed part of the nose, which gets deformed most frequently.

However, this defect does not constitute any serious clinical problem, as most of these deformations straightenes automatically and the remaining cases can be corrected by a simple operation in local anaesthesia (3, 6, 8, 10).

Internal deformation within the osseous part represents a more serious problem. No deformation of the posterior section straightened spontaneously. In Gray's studies (3) only 5% of this type of deformations were straightened.

Instrumental reposition provides a chance of a normal development of the nasal bone in 72% of the cases cured by this author.

The frequency of occurence of this type of deformations in newborns ranges from 0.93% (7) up to 31% (3, 4). In our studies it was the case in 17% of newborns within the first four days of life.

These discrepancies can be explained by the subjective method of testing, where the classification of the nasal septum as straight or deformed depends on the examining doctor only. Those examiners who use Jeppesen and Windfeld's test are more successful in detecting the deformations, since this test allows to find even a slight deformations of the nasal septum cartilage.

Rhinomanometry suggested for newborns by Solow and Peitersen (16) also does not allow an objective assessment, since the patency of the nasal cavity depends on the changeable state of mucous membrane and the catheter in the frontal nostril does not allow to register the resistance at the level of the vestibule of the nose, and thus it is not possible to detect deformations in the frontal section of the walls of the nasal cavity.

REFERENCES

1. Gray, L. P.: The deviated nasal septum. J. Laryng., 79: 806-816, 1965.
2. Gray, L. P.: Septal and associated cranial birth deformities. Med. J. Aust., 1: 557-563.
3. Gray, L. P.: Septal manipulation in the neonate: method and results. Int. J. Pediatr. Otorhinolaryngol., 8: 195-209, 1985.
4. Jeppesen, F., Windfeld, I.: Dislocation of the nasal septal cartilage in the newborn. Acta Obstet. Gynec. Scand., 51: 5-15, 1972.
5. Kelly, D. H., Shanon, D. C.: Sudden infant death syndrome. A review of the literature 1964 to 1982. In on W, Ed. Pediatric Clinics of North America: Symposium on the newborns. Philadelphia, Saunders 1982, 1241-1261.
6. Kirchner, J. A.: Traumatic nasal deformity in the newborn. Arch. Otolaryng., 62: 139, 1955.
7. Korantzis, A., Eardamakis, E., Chelidonis, E.: Nasal septum deformity in the newborn infant during labor. Eur. J. Obstet. Gynecol. Reprod. Biol., 44: 41-46, 1992.
8. Metzenbaum, M.: Dislocation of the lower end of the nasal septal cartilage. Arch. Otolaryng., 24: 78, 1936.
9. Miller, M. J., Martin, R. J., Carlo, W. A.: Oral breathing in newborn infants. J. Pediatr., 107: 465-469, 1985.
10. Pirsig, W.: Die traumatisierte Nase des Neugeborenen. Ein Überblick Monatschr.-Kinderheil kd., 127: 14-19, 1979.
11. Podoshin, L., Gertner, R., Fradis, M. I.: Incidence and treatment of deviation of nasal septum in newborns. Ear Nose Throat J., 70: 485-487, 1991.
12. Rodenstein, D. O., Kahn, A., Blum, D.: Nasal occlusion during sleep in normal and near miss for sudden death syndrome infants. Bull. Eur. Physiopathol. Resp., 23: 223-226, 1987.
13. Samoliński, B.: Strategia leczenia niezytów nosa. Otolaryng. Pol., Suppl. 17: 21-24, 1994.
14. Steiner, A.: Certain aspects of nasal trauma in the prenatal - natal period. Maryland Med. J., 8: 557-563, 1959.
15. Steele, K. B., Javert, C. T.: Mechanism of labor for transverse positions of the vertex. Surg. Gynec. Obst., 75: 465-477, 1942.
16. Solow, B., Peitersen, B.: Nasal airway resistance in the newborn. Rhinology, 29: 27-33, 1991.
17. Takahashi, R.: The formation of the nasal septum and ethiology of septal deformity. The concept of evolutionary paradox. Acta Otolaryngol., Suppl. 443, 1: 160-172, Stockholm 1987.

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THE PRIMARY TREATMENT OF SEVERE BURN HAND BY FLAP PLASTIC

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SUMMARY

The author has summed up the experience from the treatment of severly burn hand. A deep burn of the hand is always a severe injury since it may be the cause of partial or full disability.

Over the last 12 years (between April 1983 and March 1995) the Prague Burn Centre hositalized altogether 182 cases of severe burn hands aged between 3 and 74 years.

In all injuries an early necrectomy was carried out and the surface was covered with temporary cover. The depths of the injury is properly treated, becomes usually obvious after 4 days after the injury and then it is possible to cover the necrectomised areas with various types of flap plastics.

The aim is the greatest possible return of the useful function and a satisfactory cosmetic result.

ZUSAMMENFASSUNG

Primäre Behandlung von schweren Verbrennungen der Hand mit Hautlappen

S. Bucek

Ein Bericht über die Erfahrungen mit der Behandlung von schweren Verbrennungen der Hand. Eine tiefe Verbrennung der Hand ist stets eine schwere Verletzung, da sie zu einer Teil, bzw. zur vollen Invalidität führen kann.

In den letzten 12 Jahren (von April 1983 bis März 1995) wurden in das Prager Zentrum für Verbrennungen insgesamt 182 Patienten im Alter von 3 bis 74 Jahren mit schweren Handverbrennungen eingeliefert.

Bei sämtlichen Patienten erfolgte eine frühe Nekrektomie und eine zeitweilige Bedeckung der Flächen. Ob die tiefen Verletzungen fachgemäss behandelt wurden, zeigte sich 4 Tage nach der Verletzung und dann war es möglich die Flächen nach der Nekrektomie mit Lappen zu bedecken, die in der plastischen Chirurgie angewandt werden. Zur Anwendung gelangten verschiedene Typen von Lappen.

Das Ziel der Behandlung war, soweit wie möglich, eine Wiederherstellung einer Funktion der Hand und ein gutes kosmetisches Ergebnis.

Key words: severe burn hand, flap plastic

Severe burn hands are even more serious injuries due to the fact that they usually affect children and individuals of active age who are then to a great extent eliminated from the society.

Over the last 12 years (between April 1983 and March 1995) the Prague Burn Centre hosipitalised altogether 182 cases of severe burn hands aged between 3 and 74. According to the cause they might be divided into three main categories:

a) burn hand by electric current,

b) hot rollers injury of the hand,

c) other contact burns of the hand.

In the group A (that is burn hand by electric current) we hospitalised altogether 119 patients, that is 65.4% out of the total number of 182 patients out of whom 43 patients, that is 36.1%, were injured by low voltage electric current lower than 1000 Volts and 76 patients, that is 63.9% were injured by high voltage electric current higher than 1000 Volts.

In the group B (that is hot rollers injuries) we admitted 37 patients (that is 20.3%).

In the group C (that is other contact burns of the hand) we hospitalized 26 patients (that is 14.3%). These patients were burnt mainly during an epileptic attack, in diabetic coma or when dealing with an explosive material.

In all cases of severe burn hands it is necessary to perform as soon as possible the releasing necrectomy or at least a release incisions including fasciotomy especially in high voltage electrical injuries and extensive compartment release must

be done as an emergency (on the day of injury). Almost always the second and third debridement are required and are repeated at intervals as needed. As soon as it is apparent that devitalised tissue has been debrided soft tissue coverage in the manner of grafts or flaps should begin. It has been demonstrated in literature (for instance by Chick et al., 1992) that free flaps can be safely used with electrical burns and also during the early period post burn. In our series free flaps were not used. There are several reasons for this. One is that this series goes back a number of years before technology afforded this option. Secondly in many cases typical donor sites for free flaps have been destroyed by the burn in patients who have suffered multiple injuries. The authors performing free flaps in electrical injuries also believed that serial debridements were not necessary but that a very extensive initial debridement was sufficient and preferable. However there are often deep muscles which may not even be visualised at the time of debridement and could develop necrosis later on. Currently our preference is usually one or two pedicle flaps or an arterial flap (most frequently vascularised at the vasa circumflexa illium superficialis). The flaps do not generally add to the length of hospitalisation, mainly because very often associated injuries are keeping the patients hospitalised anyway. These flaps are particularly useful for upper extremities burn injuries and they have typically great versatility and reliability.

CASE REPORTS

Case No. 1 (Figs. 1-5)

A 36 year electrician who suffered multiplied burns of both hands by the passage of electric current 380 Volts when fixing electrical equipment. After necrectomy, the surfaces were covered (in different localisations) by one or two pedicle flaps with a satisfactory functional and cosmetic result.

1)

2)

3)

4)

5)

Figs. 1-5 (Case No. 1): The multiplied burns of both hands by the passage of electric current 380 Volts. After necrectomy, the surfaces were covered (in different localisation) by one and two pedicle flaps.

Case No. 2 (Figs. 6-9)

A 21 year student who suffered a contact burns of the right hand after which he was amputated, in another hospital, of the second and the third fingers which were totally necrotic. Then he was transferred to the Prague Burn Centre since the originally superficial areas mainly at the fourth finger deepened to the third degree. After necrectomy, the surface was covered by one pedicle flap with satisfactory functional result.

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Figs. 6-9 (Case No. 2): The contact burns of the right hand after which the second and the third fingers were amputated (in another hospital). After necrectomy, the surface was covered by one pedicle flap.

Case No. 3 (Figs. 10-13)

A 24 year old lady was burnt at home by the 220 Volts electrical current in the first interdigital space of the right hand. After necrectomy, the surface was covered by one pedicle flap with satisfactory functional and cosmetic result.

10)

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13)

Figs. 10-13 (Case No. 3): The first interdigital space of the right hand was burnt by the passage of electric current 220 Volts. The surface was covered by one pedicle flap.

Case No. 4 (Figs. 14-17)

An 18 year old nurse suffered hot rollers injury on the left hand while ironing. After necrectomy of the third, fourth and fifth finger and the necessary amputation of the distal phalanx of the fifth finger, the surface was covered by double pedicle flap. After the separation of the fingers a very good functional and cosmetic result was achieved.

14)

15)

16)

17)

Figs. 14-17 (Case No. 4): Hot rollers injury of the left hand. After necrectomy, the surface was covered by double pedicle flap.

Case No. 5 (Figs. 18-21)

A 39 year old lady was burnt on the left hand by hot rollers. After the necrectomy of (the 2nd, 3rd, 4th and 5th) fingers and of a part of the dorsal surface of the left hand, the surface was covered by double pedicle flap. After the separation of the fingers a very good functional and cosmetic result was achieved.

18)

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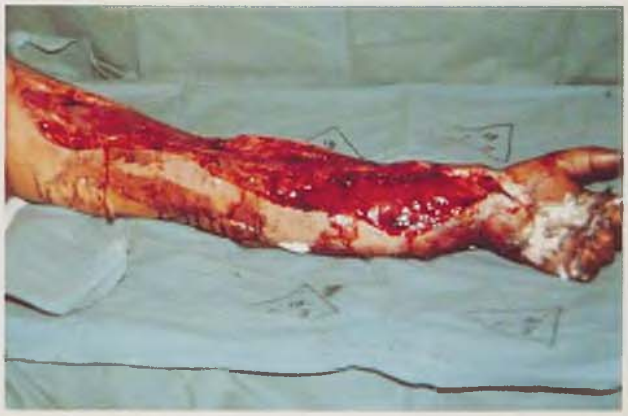
21)

Figs. 18-21 (Case No. 5): The left hand was severly burnt by hot rollers (at ironing). The surface was covered by double pedicle flap.

Case No. 6 (Figs. 22-26)

A 32 year unemployed man suffered a severe burns of both upper extremities caused by the passage of the high voltage electric current 22 000 Volts. Extensive compartment releases of both upper extremities were done. The right upper extremity was amputated above the elbow joint. The deep defect on the wrist of the left hand was covered by one pedicle flap.

22)



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Figs. 22-26 (Case No. 6): The both upper extremities were severly burnt by the passage of the high voltage electric current 22 000 Volts. Extensive compartment releases were done. The right upper extremity was amputated above the elbow joint. The deep defect on the wrist of the left upper extremity was covered by one pedicle flap.

The different types of injuries define the exclusive position of the hand surgery. The treatment of severly burn hand is considered very demanding surgical procedures since here more than in other localities, it is necessary to be very exact.

REFERENCES

1. Cheng, P.: Electrical burns on extremities: special reference to amputation. Plastic Burn Surg., 5: 146, 1989.
2. Chick, L. R., Lister, G. D., Sowder, L.: Early free flap coverage of electrical and thermal burns. Plast. Reconstr. Surg., 89: 1013-1019, 1992.
3. Demling, R. H., La Londe, C.: Burn trauma, New York, Thieme, 223-230, 1989.

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EMERGENCY CARE OF SEVERE BURN CHILDREN (AN EXPERIENCE OF PRAGUE BURN CENTRE)

L. Broz, J. Kripner, S. Bucek

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SUMMARY

The control of a shock associated with burns has marked effects on the further course of burn injuries. In spite of the steadily increasing improvement of intensive care of severe burn children sometimes are not applied essential recommended procedures which are necessary during the first aid and the transport of burn cases to a burn centre.

These procedures are determined by the assessment of a lot factors. A misinterpretation of these factors can lead to an insufficient or to an excessively aggressive therapy with their sequelae. This holds true both for a local and for a systemic therapy of severe burn children.

The most important problems are documented by 2 case reports.

ZUSAMMENFASSUNG

Notfallversorgung bei Kindern mit Verbrennungen - Erfahrungen des Prages Zentrum für verbrennungen

L. Broz, J. Kripner, S. Bucek

Die Kontrolle des Schockzustandes nach Verbrennungen beeinflust in hohem Masse den nachfolgenden Verlauf der Verbrennungskrankheit.

Trotz der ständing ansteigenden Fortschritte auf dem Gebiet der Resustitation und der intensiven Pflege werden die verordneten Massnahmen der ersten Hilfe und des Transportes in das Zentrum für Verbrennungen nicht immer eingehalten strikt.

Das theoretische Verfahren führt zu einer Bewertung der Faktoren, die den Schweregrad der Verbrennungen beeinflussen. Fehler in Interpretation dieser Faktoren können zu einer ungenügenden, oder sogar zu einer viel zu aggressiven Behandlung bis hin zur Konsequenz der Missbehandlung führen.

Dies gilt sowohl für die lokale, wie auch für die allgemeine Behandlung.

Die grundsätzlichen Probleme werden anhand einiger auf unserer Abteilung für verbrennungen aufgenommener Patienten demonstriert.

Key words: emergency care of severe burn children

The Prague Burn Centre has been responsible since 1953 for the treatment of all burned patients in Bohemia, i.e. from the western part of Czech Republic with about 7.5 million inhabitants. The burn care has been provided including care for children in the age category from three to fifteen years. In this age group there have been treated 317 children as in-patients within the last decade.

In May 1994 the Prague Burn Centre established special ICU for children aged 0 to 15 years and within first six months has been admitted 53 children to this department. Twenty nine of them were the children in the age group of 0 to 3 years. The number of patients aged 0 to 3 years in the last half a year was the same as the annualy total number of patients aged 3 to 15 years from the past decade.

The common mechanism of injury was a scald (Tab. 1, Fig. 1). All over the world scalding is a typical cause for the youngest age group of children treated in the burn centres. The extent of burns varied from 5 to 34% BSA, the depth was from superficial to deep dermal. Fig. 2 shows the most frequent localities from which patients are transported to the Prague Burn Centre. The most of mistakes before and during transport to our facility were committed from the region of Prague. We have seen the children who had returned after provided first aid to their home with recommendation to be admitted to our Centre.

Tab. 1: Cause of injury.

SCALD	
TEA	9x
COFFEE	8x
HOT WATER	6x
SOUP	4x
MILK	1x
CAMOMILE	1x

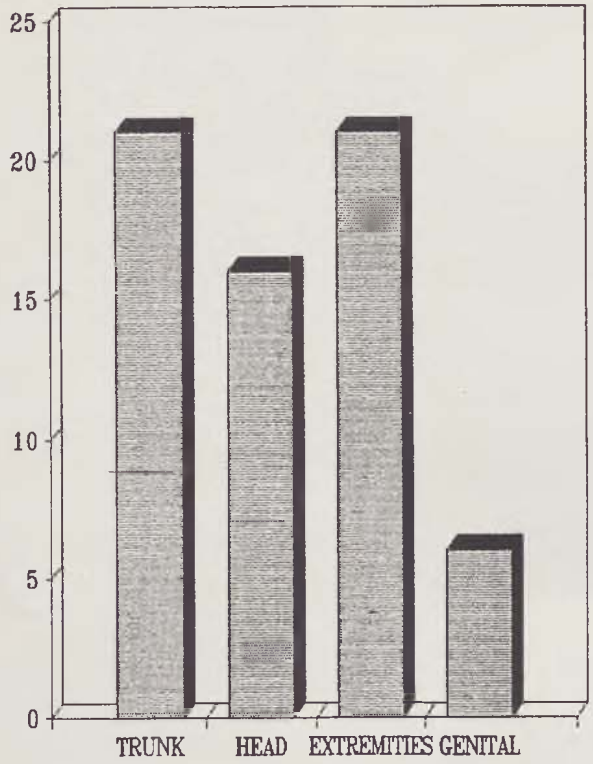

Fig. 1: Body regions affected by injury.

The indication for admission to the Burn Centre are given by factors determining the severity of a burn injury (Tab. 2).

The assessment of these factors immediately after burn injury is important for the transfer of the patient to a specialized department, i.e. to a department where the patient will be treated. An erroneous assessment of the severity of the injury can lead to an insufficient or too aggressive care. The essential point is to attain an access into the venous system with administration of infusions and to secure an adequate ventilation (Tab. 3). If possible we prefere to provide during the first stage the fluid replacement in periphery. In our option the use of the central venous cannula is indicated in extensive burns in critical situations when it is not possible to attain a satisfactory fluid supply to the periphery and when measurements of the CVP are necessary. It is always required to assess the possibility of a development of complications after the cannulation of the central venous system in burns, especially with regard to the risk of infection (cannulation through burned areas).

Tab. 2: The factors determining the severity of burn injury.

1) mechanism of injury
2) TBSA in %
3) the depth of injury
4) patients'age
5) localisation
6) previous medical history

Very often i.v. cannulas were inserted, but after admission they were not functional. In some cases i.v. cannulas were not inserted at all. Infusion therapy must take into account the require-

Fig. 2: The most frequent localities from which the patients are transported to the Prague Burn Centre.

ments of the child with burns regarding his age, weight, body surface and the extent of the burned area.

Tab. 3: The management of severe burn injury in childhood.

1) maintainance of circulation (peripheral or central venous cannula)
2) adequate fluid resuscitation (Hartman solution, fresh frozen plasma)
3) maintainance of oxygenation (by face mask or ventilator)
4) analgesia and vegetative stabilisation
5) urine catheter
6) gastric tube
7) the cooling of burn areas on the faces, neck, hands and genital
8) the wrapping of burn areas by steril towels

There is a variety of formulas for the calculation of fluid replacement therapy administred within the first 24 hours dealing with its total volume and composition. These problems were studied in the seventies and early eighties by Novak (1986) and the valuable results of his investigations have been applied in our practice. All formulas have in common the schedule of the rate of fluid administration within the first 24 hours. In spite of the need of an individual approach in each child there is frequently observed an excessive administration of crystaloids within the first hours after injury so that during his (her) transfer (it takes mostly 4 hours) the child receives an amount of fluids calculated for the first 8 hours. This approach leads mostly to development of an enormous generalized oedema. Within the scope of the management of a shock accompaning burns the problem so far has not been solved on a world wide basis and exerts an unfavourable effect on the course of subsequent therapy. A deterioration of child's condition may follow after an administration of pure glucose and albumin which, according to our experience, should not be given during the early period. An essential component of the care for the patient includes an adequate oxygenotherapy. Especially the patients with inhalation injury, severe burns on the faces, neck and circumferential burns of the chest require an endotracheal intubation and arteficial pulmonary ventilation (in our patients by ventilator Siemens Elema 300). Sometimes we observed not fully indicated endotracheal intubation in the effort "to do for patient everything in all circumstances".

The introduction of a nasogastric tube in ventilated patients is a routine procedure which is mostly not omitted and it serves as the best prevention of stress ulcer complication. The introduction of permanent urinary catheter is essential for the monitoring of diuresis per hours as one of the most important parameters for the assessment of the condition of the child and his response to the applied therapy.

The medication required for an adequate analgesia and sedation in an emergency situation is mostly respected as well (but for the frequent i.m. administration). Another medication which is sometimes observed, in our opinion, is not definitely indicated. In some cases drugs administrated in a given stage are actually contraindicated (Furosemid, Droperidol without previous completion of the circulating volume, heparin in a form of a bolus, large spectrum antibiotics).

CASE REPORTS

Case No. 1

A boy aged 14 years suffered severe burns by the passage of high voltage electric current (22 000 Vots) with 85% BSA full thickness burns. The immediate period after injury was complicated by pneumothorax on the right side due to a failure of cannulation of the subclavian vein and the necessity of repeated chest drainage through necrotic areas. An expansion of the lung occurred 30 days after injury. Necrectomy was carried out repeatedly from the 8th day with allografting and autografting, but the patient died on day 76 (Figs. 3-6) in sepsis.

3)

4)

Figs. 3-4: A patient aged 14 years on admission (case No. 1).

5)

6)

Figs. 5-6: The chest drainage through the necrotic tissue (case No. 1).

8)

9)

Figs. 8-9: A large head oedema (case No. 2, 48 hours after injury).

Case No. 2

A child aged 2 years with a scalding injury of 27% BSA. Initiation of shock therapy was delayed about 2 hours. Infusion therapy was exceeded by two times the calculated ammount of fluids for the first 24 hours. In addition there were administrated albumin and glucose leading to development of an anormous oedema which resulted in deepening of burn areas which were initially diagnosed as superficial burns. Repeated autografttings were required and the patient was discharged from the hospital on day 69 (Figs. 7-10).

Fig. 7: A patient aged 2 years after transfer from another hospital.

Fig. 10: The oedema is not visible after one week of therapy.

CONCLUSION

Since 1986 (when Klimes and Königova published "The Prague Burn Centre Communication Code for the Transfer of Severe Burn Patient") it was recorded an improvement of communication between individual surgical and pediatric departments but recently it was again possible to see a lack of correct communication during the transfer of burn cases.

Besides incomplete information on the condition of the patient, the exact time of the injury and the applied therapy (ammount of fluids, type of drug, the treatment of burned areas) and the choice and type of transport - occur very frequently diagnostic problems in patients with multiple injuries (such as different types of fracturas, intracranial bleeding, lacerations of parenchymatous organs). The priority of individual injuries is not determined and the burn is quoted automatically on the first place though an associated more severe injury can threaten in the given situation the life of the patient.

We would like to underline the fact illustrated by the above described situation that these patients require most urgently an interdisciplinary approach.

Finally, we would like to express that adequate postgraduate surgical and pediatric training can prevent and limit a number of errors in emergency care of severe burn children.

REFERENCES

1. Hudson, D. A., Jones, L., Rode, H.: Respiratory distress secondary to scalds in children. Burns, 20: 434-437, 1994.

2. Hurren, J. S., Dunn, K. W.: Spontaneous pneumothorax in association with a major burn. Burns, 20: 178-179, 1994.

3. Novák, I.: Neodkladná pomoc popálenému dítěti. Pokroky v pediatrii, 9:, 129-147, Praha, Avicenum 1986.

4. Rylah, L. T. A.: Critical care of burned patient. Cambridge Univ. press, 1993.

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BOOK REVIEW

HAIR TRANSPLANTATION, THIRD EDITION REVISED AND EXPANDED, EDITED BY WALTER P. UNGER

Marcel Dekker Inc., 270 Madison Avenue, New York, N. Y. 10016

We believe that a short review of this publication will be of interest for our readers. It was edited by the publishing house Marcel Dekker, Inc., in March 1995, and deals with Hair transplantation. In this third expanded edition participate numerous well-known authors and was edited by Walter P. Unger from the Department of Medicine (Dermatology) of the University in Toronto, Canada. The monography has 811 pages and contains many schematic illustrations and black and white photographies. It is divided into 28 chapters. It begins with an historic introduction and the present opinions on the possibilities of the treatment of baldness in males. The authors inform the readers about the classification of alopecia, the anatomy of the scalp, the diagnostic methods, and about the required equipment of the operation theather. They discuss the essential planning of an adequate surgical therapy. Attention is devoted also to the choice of a convenient anaesthesia. In the subsequent chapters are described in detail various surgical procedures from hair transplantation up to the use of the technique of reduction, inclusive of the use of expansion, as well as all currently used methods of transplantation of flaps. Further is described a tissue free flap transfer which is designated as the method of choice. To conclude provides the monography a detailed information on the surgical treatment of the avulsed scalp, as well as the new horizons of hair transplantation.

It is fully justified to state that this monography is a comprehensive compendium on the possibilities of hair transplantation. It provides a complete and very detailed review of the current possibilities of surgical treatment both in a traumatic and in a nontraumatic loss of hair. Therefore it can be most warmly recommended and it will certainly prove very useful in the treatment of various types of hair loss which are encountered in clinical daily practice.

Aleš Nejedlý M. D.

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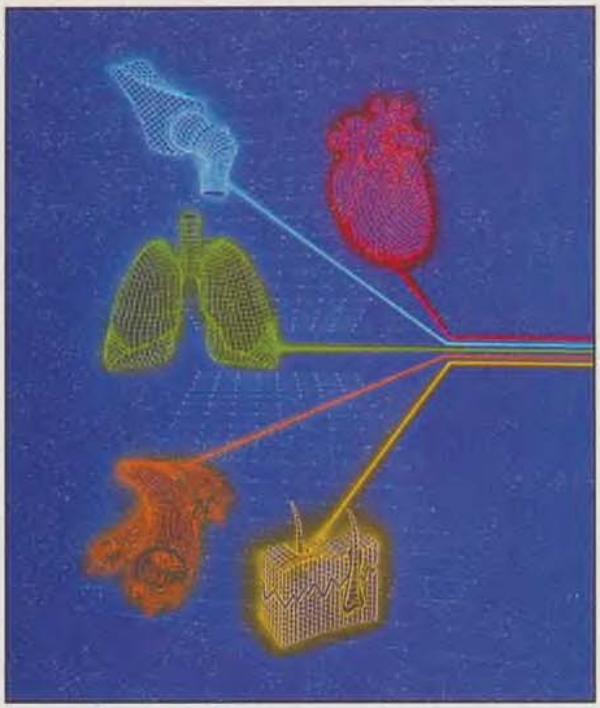

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