

LOCAL ROTATING FLAPS IN OCULOPLASTIC SURGERY

SUMMARY

Aim: In the contemporary medicine, strong emphasis is put on early closing of body surface defects, which contributes to good and early healing, but, of course, closes the entrance gate for possible infection as well. The easiest closing of the defect is the direct suture of the emerged wound. But some defects are of such an extent, so their closure is necessary to handle other way than simple suture, e.g. by rotating flap plastic surgery. In the paper are evaluated results of flap surgery technique in 56 patients.

Material and Methods: It is a retrospective overview of 56 patients operated on by the author in the years 2011–2012, in whom the rotating flap plastic surgery was used as surgery technique. In 46 patients, the reason of flap plastic surgery technique was tumor of the eyelids. In 35 patients, it was due to the basalioma of the lower eyelid, in 8 patients due to the basalioma of the upper eyelid, and in three patients due to the basalioma of the medial canthus region. In 10 patients, the reason of the surgery was ectropion of the lower eyelid, and in two of them bilaterally. The paper is supplemented by surgical procedures photographs, and by a table, with detailed analysis of the sizes of tumors and corresponding flaps as well.

Results: According to the experience with 56 rotating flap plastic surgeries, performed by author during the period of two years at the Department of Ophthalmology, Masaryk Hospital in Ústí nad Labem, Czech Republic. E.U., the results of the use of rotating skin flaps in 46 eyelids basalioma, of correcting 12 ectropions of the lower eyelid, and reliability of the tumor's excision with 2 mm surrounding healthy tissue rim were followed-up. Using the mentioned surgery technique, it was possible in all patients to secure the closing of the eyelid defect, or to return to normal and correct anatomical position of the eyelids in ectropions. In two patients with basalioma of the lower eyelid, the additional technique of lateral cantotomy was used to relieve the tension in the wound. Statistical results of recurrences number in tumors' excisions with 2 mm safety margin in to the healthy tissue confirm the relative safety of such wide excision, and our results (4.34 %) differ only slightly from the results published in the literature (4.0 %).

Key words: flap plastic surgery, basalioma, ectropion

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INTRODUCTION

What is oculoplastic surgery? The word plastic is derived from the Greek word meaning to form, or to give form to. This concept is a surgical specialisation of ophthalmology, which is engaged in the rectification of deformities and defects in the position of the eyelids, the lachrymal apparatus, the orbit and the adjacent area of the cheeks and forehead. The eyelids and their surrounding area are very complex and fine structures, whose correct function and error-free anatomical properties are of vital importance for the correct function of sight, and are important features of the normal appearance of the face. The skin of the eyelids is the thinnest skin covering on the body, and is virtually without subcutaneous fat. On the edge of the eyelids the conjunctival membrane meets the skin covering of the eyelids. The offtakes of the sebaceous glands of the eyelid are discharged in this area, approx. 100 on the upper and 50 on the lower eyelid. The structural support of the eyelids is formed by the tarsal plate (approx. 10 mm high in the upper and 4 mm in the lower eyelid). The vascular and nervous supply of the periorbital region is very abundant. This region is the location of the circular muscle *m. orbicularis oculi*, which has the function of a constrictor of the ocular aperture, as well as the elevating muscle of the upper

eyelid (*m. levator palpebrae superioris*), which together with the Müller muscle opens the ocular aperture. The face betrays a lot of information about us, and its features have an influence on the personal and social area of human life. The aesthetic value of undamaged anatomical lines of the periorbital region is highly significant, and as a result we attempt to attain the most favourable functional but also cosmetic effect of the surgical procedure through the application of appropriate surgical techniques. The flap surgical technique is one of the possible choices. In contemporary medicine a large amount of emphasis is placed on timely closure of defects on the surface of the body, which not only contributes to good and rapid healing, but naturally also closes the gateway to potential infection. The easiest closure of a defect is direct suture of the wound. This suture of the wound is possible only when it is possible to draw the edges of the wound together without the wound subsequently being exposed to excessive tension of the skin and hypodermis. However, some defects are of such a scope that it is necessary to address their closure by another method than simple suture, for example flap plastic surgery. A flap is the name given to a live tissue structure which retains its vascularisation with the help of a vascular stem. This stem is temporarily or permanently joined to the donor area, but may also be anastomosed with

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the place of entry of the flap. The location from where the flap is taken is referred to as the donor area or secondary defect. The location to where the flap is grafted is referred to as the primary defect. Planning of flap grafts covers their shape, size and evaluation of the quality and properties of the donor area from where the flap is taken. The secondary defect is subsequently closed by means of a primary suture, loose graft or another flap. The part of the flap which joins it to the donor area is entitled the flap base. The vascular supply to the flap takes place through the base. The flap may contain cutaneous tissue, subcutaneous fat, deep fascia or also muscle. Vascular supply of flaps is possible according to precisely anatomically defined vascularisation of the stem of the flap or contingently from the surrounding tissue. Flap plastic operations are therefore planned with regard to the knowledge of the specific vascular supply of the given region and use vascular stems running through the base to the flap, or are not bound to vascular stems and then the flap is nourished from the surrounding structures. In the case of these contingently vascularised flaps we proceed mainly according to the properties of the tissue and spatial layout in the sense of minimal effect of subsequent scarring on the surrounding anatomical structures. In this case the size of the flap is limited by the ratio of the width of the flap base and the length of the flap. In areas of the body with abundant blood supply (face) it is possible to use a ratio of 1:4. In areas with worse vascular supply (lower limbs) the ratio is reduced to 1:1. Careful pre-operative preparation of the flap helps us successfully resolve a compromise between the size of the flap, subsequent traction upon closure of the secondary defect and sufficient vascular supply of the flap (9).

Flaps can be divided on the basis of a number of perspectives.

1. From the perspective of the place of taking and placing of the flap we describe local flaps (these flaps are constantly connected with the place of taking and include local graft, Z-plasty, V-Y plasty, transposition flap, rotation flap, Limberg flap – rhomboid), remote flaps (these flaps are transferred to a primary defect which is however distant from the place of taking) and microvascular loose flaps (these are transferred on a prepared vascular stem to the place of the primary defect, which is also distant from the place of taking of the flap).
2. From the perspective of the content of the tissue, we distinguish between three types of flaps. The first is a cutaneous flap with an axial vascular supply through a stem or contingent vascular supply from the surrounding tissue. A further type is a musculocutaneous flap containing muscle, fascia, subcutaneous fat and skin, and the last type is a fasciocutaneous flap, which also contains deep fascia and the connected abundant vascular supply via a fascial septa.
3. According to vascular supply we distinguish between flaps with contingent or axial vascular supply. Transfer of flaps with contingent vascular supply is less reliable. Axial flaps, in which vascular supply and therefore their nutrition is ensured by a specific vascular bundle (9) is safer and more reliable.
4. Division according to the time of attachment of the flap

to the defect. In the case of post-traumatic defects we distinguish between flaps within the framework of primary treatment within 24 hours (emergency flap) and then acute (1st - 7th day after occurrence of defect) or deferred (after 7 days). The last is a secondary flap (at any time later, when the flap replaces already healed soft tissue). In the case of defects caused as a result of removal of a tumour, flaps are divided into primary, in which reconstruction takes place immediately, and secondary, in which reconstruction takes place later.

5. In classification according to the function of the flap the most frequently used flaps are local cutaneous flaps, which serve for closing defects, followed by Z-plasty for correction of contracting scars. A more complex type of flap is muscular and musculocutaneous flaps, in which grafted, very well nourished tissue improves the vascular supply in areas to which the flaps are grafted (osteomyelitis, decubitus or radio necrosis).

The most frequent reason for a flap on the face in this country is a malignant tumour or deforming scar. In the periorcular region the most common tumour is a cutaneous basalioma. Basal cell carcinoma is the most common skin cancer worldwide and represents 90-95% of all malignant ocular tumours of the eyelids. The World Health Organization has defined this pathology on the basis of histological typing of skin tumours as a locally invasive tumour with slow spreading, which rarely metastasises. A frequent localisation is in particular the lower eyelid and inner corner of the eye, followed by the upper eyelid and lateral corner of the eye (1). Basaliomas of the inner corner are very difficult to treat, and in comparison with other periorcular places of occurrence have a higher risk of recurrence (7), as well as a risk of propagation of the tumour into the orbit (4). Basaliomas are common especially in white skinned individuals, the incidence in the black and brown population is rare. The occurrence in men is 30% higher than in women, in particular concerning basaliomas with superficial spreading. The white population living close to the equator carries an approximately twice greater risk of the incidence of basalioma and the frequency of incidence also increases with age. Persons aged between 55 and 75 years have an approximately one hundred times higher incidence of basaliomas than persons aged under 20 years. A role is played here also by the continually increasing length of human life. However, in recent years it appears that the number of cases is increasing also in the population aged under 40 years, especially among women (10). The properties of the tumour, such as size, location and type, influence the choice of therapy. One of the fundamental methods of treatment of cutaneous basaliomas with a low risk of recurrence is surgical excision (6), a further option is brachytherapy, in which a radiation source is placed close to the tumour or directly into the afflicted tissue (3). The risk of recurrence is reduced with the distance of the edges of total excision from the edge of the tumour. Studies have demonstrated a probability of recurrence within 5 years of excision depending on the width of surgical excision into the healthy tissue as follows: 5 mm – 0.4%, 4 mm – 1.6%, 3 mm – 2.6%, 2 mm – 4% recurrence (5).

A further possible example of the use of rotating flap plastic surgery in the treatment of pathologies in the periocular region may be ectropion of the lower eyelid. In this case the procedure used is a flap transfer from the upper eyelid into a subciliary incision on the lower eyelid.

METHOD

This concerns a retrospective overview of 56 patients operated on by the author in 2011 and 2012, on whom the surgical technique used was local rotating flap plastic surgery. Patients on whom the used procedure was loose plastic surgery of tissue into the defect were not included in the study. The aim of the study is to evaluate the success of the use of a local rotating flap in order to resolve defects following excisions of surface tumours of the eyelids and for adjustment of ectropions of the lower eyelids. A further aim is to confirm the reliability of the edge of excision of the tumour 2 mm into the healthy tissue.

Basaliomas. In 46 patients the reason for flap plastic surgery was a tumour of the eyelids, of whom in 35 patients this concerned basalioma of the lower eyelid (fig.1), in 8 patients

basalioma of the upper eyelid (fig. 2) and in 3 patients basalioma of the inner corner (fig. 3). For basaliomas the diagnosis was confirmed by a histological examination, and no regional or remote metastasis was confirmed in any patient. In the case of all the histological findings it was stated that the edges of the tumour did not reach the edge or base of the excision. The above study cohort did not include patients who had undergone excision of a tumour in the full thickness of the tumour due to encroachment of the tumour onto the tarsal plate. In the overview this concerns only tumours of a superficial type, infiltrating only the skin covering of the eyelid, which was confirmed by the histological finding. Reconstruction of the lachrymal apparatus was not performed on any of the patients. The secondary defect after creation of the flap was closed in all cases by a primary suture. The parameters of the tumours and flaps are processed in detail in tables 1, 2 and 3. All the operations were performed under local anaesthesia, and in the basaliomas the incision was performed 2 mm from the edges of the basaliomas into the healthy tissue. The tarsal plotenka was retained in all patients due to the superficial spreading of the basalioma. The orientation and size of the rotation flap was planned according to the in-



a) sketch of edge of tumour and flap



b) excision of tumour and creation of rotation flap



c) transfer of flap into primary defect and suture of wound



d) healing of wound after 10 days

Fig. 1 a, b, c, d Basalioma of the lower eyelid



a) sketch of edge of tumour



b) excision of tumour and sketch of rotation flap



c) insertion of flap into primary defect and suture of wound



d) healing 4 weeks after procedure

Fig. 2 a, b, c, d Basalioma of upper eyelid

dividual parameters of localisation of the tumour and consideration of the properties of the surrounding tissue, and the flap was subsequently grafted into the primary defect. The secondary defect was closed by a simple suture. In case of necessity the procedure was extended by lateral canthotomy. Following the procedure the patients were observed 2x after 3 months, 1x after 6 months and 1x after 12 months, and the incidence of recurrences of the tumour within a period of up

to 2 years from the procedure was evaluated.

Ectropion of the lower eyelid. Preoperatively the through passage of the lachrymal pathways was confirmed in all patients with ectropion of the lower eyelid by means of flushing the lower lachrymal channel. This concerns a cohort of 10 patients, 8 cases were resolved by unilateral ectropion (fig. 4) and in 2 patients the lower eyelid was removed bilaterally (fig. 5). In these twelve procedures, due to ectropion of



a) excision of tumour and sketch of rotation flap



b) insertion of flap into primary defect



c) healing 4 weeks after procedure

Fig. 3 a, b, c Basalioma of the lower eyelid

Table 1

Patient no.	Year of birth	Age	Man	Wo-man	Right	Left	Upper eyelid				Supplementary procedure	Recurrence
							Excision					
							cm x cm	cm ²	cm x cm	cm ²		
1	1939	76		W		L	0.9 x 2.0	1.8	1.0 x 2.2	2.2		
2	1932	83		W		L	2.5 x 2.5	6.25	2.0 x 3	6		
3	1954	61		W	R		1.5 x 1.5	2.25	0.8 x 2.5	2		
4	1939	76	M		R		1.2 x 1.2	1.44	1.2 x 1.5	1.8		
5	1944	71	M			L	1.0 x 1.0	1	0.8 x 1.5	1.2		
6	1946	69	M		R		1.0 x 2.0	2	1.2 x 2.5	3		
7	1955	60	M		R		1.8 x 1.8	3.24	1.5 x 2.0	3		
8	1950	65	M		R		0.9 x 1.1	0.99	0.8 x 1.3	1.04		
		□	5x	3x	5x	3x		□ 2,37		□ 2,53		0

Table 2

Patient no.	Year of birth	Age	Man	Woman	Right	Left	Upper eyelid				Supplementary procedure	Recurrence
							Excize					
							cm x cm	cm ²	cm x cm	cm ²		
1	1929	86	M		R		0,8 x 1,1	0,88	1,0 x 1,5	1,5		
2	1943	72	M			L	1,0 x 1,2	1,2	1,0 x 1,7	1,7		
3	1941	74		W		L	1,0 x 3,0	3	0,8 x 3,0	2,4		
		□ 77,33	2x	1x	1x	2x		□ 1,69		□ 1,86		0

Table 3

Patient no.	Year of birth	Age	Man	Woman	Right	Left	Upper eyelid				Supplementary procedure	Recurrence
							Excize					
							cm x cm	cm ²	cm x cm	cm ²		
1	1929	86	M			L	1,0 x 0,8	0,8	1,2 x 0,8	0,96		
2	1943	72	M		R		1,0 x 3,0	3	1,0 x 3,5	3,5		
3	1941	74		W	R		0,8 x 2,0	1,6	0,8 x 2,2	1,76		
4	1939	76	M			L	0,8 x 0,5	0,4	1,2 x 0,6	0,72		
5	1939	76	M			L	0,8 x 0,6	0,48	1,0 x 0,6	0,6		
6	1927	88		W	R		0,9 x 3,0	2,7	1,0 x 3,5	3,5		
7	1939	76		W		L	0,9 x 0,9	0,81	0,8 x 1,2	0,96		
8	1944	71	M			L	2,0 x 2,5	5	2,0 x 3,0	6		
9	1938	77	M		R		1,0 x 2,0	2	1,0 x 2,1	2,1		
10	1943	72	M			L	1,0 x 1,0	1	1,2 x 1,5	1,8		
11	1934	81	M			L	1,0 x 1,1	1,1	1,0 x 1,3	1,3		
12	1942	73	M			L	0,8 x 2,0	1,6	0,8 x 2,2	1,76		
13	1966	49	M		R		0,8 x 2,2	1,76	0,8 x 2,5	2		
14	1919	96		W	R		1,2 x 1,8	2,16	1,0 x 2,3	2,3		
15	1941	74	M		R		3,0 x 3,5	10,5	3,3 x 3,5	11,55	lat.kantot.	
16	1941	74	M		R		2,5 x 2,5	6,25	2,0 x 3,0	6		+
17	1952	63	M			L	1,2 x 2,3	2,76	1,1 x 2,8	3,08		
18	1941	74	M		R		2,0 x 2,0	4	2,0 x 2,5	5		

Table 4

19	1961	54		W		L	0,5 x 0,5	0,25	0,5 x 0,7	0,35		
20	1932	83	M			L	1,7 x 1,7	2,89	1,2 x 2,0	2,4		
21	1926	89	M		R		1,7 x 1,8	3,06	1,5 x 2,2	1,8		
22	1941	74		W	R		0,8 x 1,0	0,8	0,7 x 1,2	0,84		
23	1956	59	M		R		0,8 x 2,0	1,6	0,9 x 2,5	2,25		+
24	1927	88	M			L	1,0 x 2,0	2	0,9 x 2,6	2,34		
25	1929	86		W	R		1,5 x 2,0	3	1,7 x 2,5	4,25		
26	1936	79		W		L	0,8 x 1,5	1,2	0,9 x 2,0	1,8		
27	1949	66		W		L	2,0 x 3,0	6	2,5 x 3,5	8,75	lat.kantot.	
28	1939	76		W	R		0,8 x 1,8	1,44	0,9 x 2,0	1,8		
29	1928	87		W		L	1,5 x 1,5	2,25	1,5 x 2,2	3,3		
30	1949	66		W	R		1,5 x 1,7	2,55	1,2 x 1,5	1,8		
31	1921	94	M			L	1,0 x 1,0	1	1,0 x 2,0	2		
32	1933	82		W		L	1,5 x 0,8	1,2	1,5 x 0,7	1,05		
33	1934	81		W		L	2,0 x 1,1	2,2	2,5 x 0,9	2,25		
34	1950	65		W	R		1,0 x 1,8	1,8	0,8 x 2,0	1,6		
35	1942	73	M		R		1,0 x 3,0	3	1,0 x 3,2	3,2		
		□ 75,82	20x	15x	17x	18x		□ 2,40		□ 2,76		2x

the lower eyelids a rotating skin flap from the upper eyelid transposed into a subciliary incision on the eyelid in order to adjust the anatomical relations and draw the lower eyelid toward the bulb. In 10 procedures the base of the flap was oriented nasally and in 2 procedures temporally. The choice of orientation of the base of the flap depends on whether

ectropion predominates in the temporal or nasal half of the eyelid. In this procedure both the effect of supplementing the insufficient cutaneous tissue on the lower eyelid and the drawing of the lower eyelid towards the bulb by means of a correctly oriented flap stem are combined. In the second phase, 3 months after the procedure the cord connecting



a) scarry ectropion of lower eyelid



b) transfer of rotation flap from upper eyelid into incision on lower eyelid



c) before removal of suture 7 days after procedure



d) in 2nd phase after 3 months of cutting of "cord" in area of inner corner



e) final condition 3 months after procedure

Fig. 4 a, b, c, d, e Ectropion in right eye



a) bilateral ectropion of lower eyelids, in right eye eversion in full scope, in left eye predominance of pathology in temporal half b) according to predominance of pathology positioning of eyelid planning of rotation flaps, in right eye base of flap nasally, in left eye base of flap c) transfer of rotation flaps and suture of wound

Fig. 5 a, b, c Bilateral ectropion of lower eyelid

the flap of the upper eyelid with the lower eyelid was extended in the area of the inner or outer corner, thus bringing an improvement of the aesthetic result of the procedure.

RESULTS

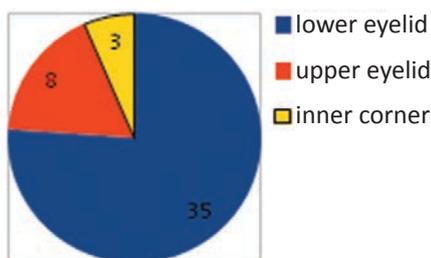
Basaliomas. The wounds of all the patients healed primarily without infectious complications. All the flaps survived within 100% scope and no necrosis of tissue occurred. In all the patients the flap was capable of ensuring closure of the defect of the eyelid after the removal of the tumour and returning the correct anatomical position of the eyelids to the norm. In 2 patients with basalioma of the lower eyelid the supplementary technique of lateral canthotomy was used in order to relieve the traction in the wound. Despite the fact that the histological findings confirmed complete excision in all tumours, recurrences of tumours occurred. During the course of observation over 24 months, recurrence of basalioma occurred in a scar on the lower eyelid in 2 patients (i.e. 4.34%). No postoperative complications such as lagophthalmos, ectropion or hypertrophic scar were observed in any of the patients.

Ectropions. In 12 cases of ectropions of lower eyelids, in which a surgical technique was used using a graft of a flap from the upper eyelid into an incision beneath the margin of the lower eyelid, there was a 100% adjustment of the position of the lower eyelid. The procedure was subjectively evaluated very positively by patients from the first days following surgery. Only in 2 patients with orientation of the

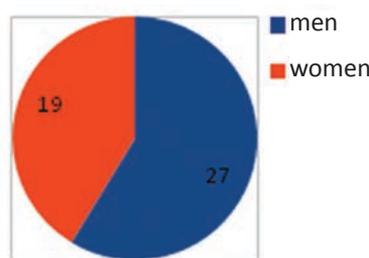
base of the flap nasally there were temporary complaints from an aesthetic perspective concerning the cord in the inner corner. After removal of the cord in the second phase of the procedure the result was corrected. No infectious or other complications were recorded in any of the patients.

DISCUSSION

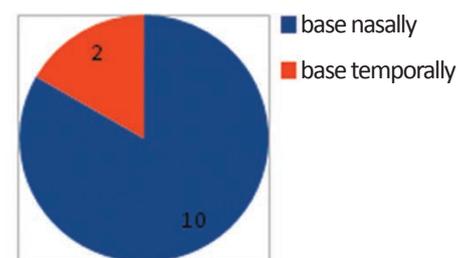
The significance of eyelids relates not only to their aesthetic but also to their functional component. The most frequent causes of loss of tissue in the periocular region are excision of tumours or injury in the area of the eyelid. Treatment of tumours of the eyelid is dependent on the character, size and localisation of the tumour (2). Our cohort included patients with basal cell carcinoma of the eyelids and ectropion of the lower eyelids, in whom the procedure of local rotation flap technique was used for reconstruction of the eyelid. In comparison with the results of the study by Furdová et al. (2), in our cohort there was a far lower incidence of tumours of the inner corner, since for the great majority of tumours within this localisation transfer by means of loose plastic surgery was used at our workplace, and these patients were not included in the cohort. During the course of two years of observation two recurrences of tumours on the lower eyelid were observed, both histopathologically indicated as nodular basal cell carcinomas, and a sample was indicated as excision not reaching the edges or base of the tumour. This is in accordance with the results of Furdová et al. (2), in which recurrences were also recorded in the case of excisions with histologically clean edges. Here it is



Graph 1 Localisation of basaliumas



Graph 2 Incidence of basaliumas



Graph 3 Orientation without flap

necessary to emphasise the importance of quality co-operation between the surgeon and pathologist with regard to the speed of assessment of the taken sample and complete information about the tumour provided by the surgeon to the pathologist. The statistical results of the calculation of recurrences in excisions performed in all cases 2 mm from the edges of the tumour into the healthy tissue confirm the relative safety of the width of this excision, and our results (4.34%) differ only imperceptibly from the results presented in the literature (4.0%) (2). In comparison with the results of recurrences in the study by Furdová et al. (5.02%) our value is lower, this result may be influenced by the selection of patients from our cohort, in whom the tumour of the inner corner was resolved by a different method than local rotation flap, for example by loose transfer of tissue (2). Localisation of basaloma confirmed more frequent affliction of the lower eyelid (35x) than the upper eyelid (8x) (3, 2). The used rotation flap was demonstrated to be a successful and safe procedure for resolving defects following excisions of tumours of the eyelids, only in the inner corner the method of transfer of tissue by loose plastic surgery of the skin covering was chosen.

The aforementioned surgical method was also demonstrated to be a suitable option for resolving ectropion of the lower eyelid in indicated patients. A fundamental prerequisite for a good result is correct orientation of the flap base in connection with the predominant pathology of the lower eyelid in the medial or temporal section. In our cohort there was predominant orientation of the flap with the base nasally above the temporal orientation within a ratio of 10 to 2. The only limitation from a cosmetic perspective was the three month cord in the inner corner, which however disappears after cutting and the aesthetic aspect is corrected. In the creation of the flap the removal of the greater part of the subcutaneous fat from the flap, leaving only a thin dermal and sub-dermal layer proved to be effective. Only this layer is responsible for the nutrition of the flap, thereby increasing

the biological-functional value of the plastic surgery.

CONCLUSION

The physiological positioning of the edges of the eyelids and folds is our goal in every oculoplastic operation.

In the case of excision of tumours, of the utmost importance is the fundamental requirement for radical removal of the tumour. The created defects may be closed directly or by other more complicated surgical procedures. One of these is a local rotation flap. In each reconstruction procedure in the region of the eyelids we should meet the following targets: 1. the upper eyelid must remain mobile; 2. we take care to preserve the three layers forming the structure of the eyelid, namely the conjunctiva, tarsus and skin covering; 3. the edges of the eyelids should remain stable and the folds in the correct positioning in relation to the bulb; 4. we attempt to attain the best possible cosmetic effect of the procedure, since any resulting asymmetry and deformities of the eyelids could be a highly disruptive aspect of the aesthetic result of the operation. The lines of the eyelids constitute one of the most visible aesthetic features of the human face. In relation to the other eye, we take care above all to ensure symmetry of the height and width of the ocular aperture, the placement of the skin fold of the upper eyelid, colour and thickness of the eyelid (8). Over the course of the last 50 years countless information has been published on the subject of flaps. This information and knowledge of the principles of physiological operation enables us to use flaps as very safe tools for closing defect in the case that it is not possible to use a primary suture. Our cohort of patients confirmed these conclusions. All the patients were subjectively satisfied with the functional and cosmetic results of the procedure. Respect for the principles of sensitive operation and knowledge of the anatomical connections ensures a good result for the patient.

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