TREATMENT OF THE MALIGNANT TUMORS OF THE SCALP
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INTRODUCTION

Malignant tumors of the scalp are special forms of tumors of the head and neck region, because the anatomical features of the scalp itself, and the proximity to the skull and brain mass. Last but not least the pathological and anatomical complexity of forms should be considered that are encountered in practice, together with local complications, which can take various forms. Among the most common we remember: plurifocale forms, with locations in different areas of the scalp, radionecrotic lesions, stretched both to skin and the underlying bone and even duramater or become infected.

Although literature data on these forms of skin cancer are relatively low, following trials, which lasted for a period of 10 years, between 1993 and 2003, we found that they accounted for approximately 23% of all skin tumors of the cephalic extremity, which in our opinion represents a significant percentage. Issues raised by the treatment of these tumors are not only those related to scalp anatomy and tumor extension, but also the reduced possibilities of reconstruction after tumor excision. Scalp is a complex anatomical structure with a low degree of extensibility, so plastic conventional means are ineffective. We believe that tissue expansion options are not effective in these cases therefore had to adapt to different types of flaps from the neighborhood with which to cover defects resulting from tumor ablation.

I thought the figure of 257 representing the number of cases included in this study is relevant both for the incidence of these tumors, as well as techniques used in reconstruction of defects viability. Not to be overlooked that these cases are generally represented by the elderly, especially from rural areas, with associated pathology, specific to the age and social condition. Therefore we considered that the method of treatment of choice is the simplest, most reduced risk for operator and with the biggest success, not so laborious compared to alternatives such as microvascular free flaps which require prolonged surgery and extended care.

Without claiming that these cases were cured, tumor recurrence low rates has made us believe that reconstruction using local flaps, with skin of the same quality and appearance, is the most viable alternative to other more sophisticated methods, which managed to clearly improve the quality of life for
these patients.
Finally we want to attract attention of all professionals interested in these pathological entities on the detection and diagnosis of these tumors as early as possible, and to taking the most appropriate treatment according to lesion extent, depth and scope of reconstruction, so in the future we will no longer face exceeded surgical lesions extended to the entire scalp, lesions associated with radioneuros, infected, which although can be solved with more sophisticated methods and although not life-threatening, are surgically resolved with major cosmetic defects.

STATE OF KNOWLEDGE

Malignant epithelial tumors, also called carcinoma in 1974, a term which includes both the notion of epithelial neoplasia as well as that of malignancy, pathology is most common on the scalp. 30% of the total incidence of skin cancers and 60-80% of all skin carcinomas, place basal cell carcinoma (CBC) first. It should be noted that the true incidence is difficult to calculate, for the following reasons:
- Many cases are undiagnosed because of slow progress, unalarming tumors;
- A significant number of skin lesions treated by radiation therapy or electrocautery, which often are not diagnosed histopathologically, or are recognized as carcinoma when relapse.

Clinical profile of basal cell carcinoma can be shaped by several features:
- Relatively low aggressiveness, reflected in slow progress, no metastases;
- Aggression "in situ", found in some endofitic forms, surprisingly invasive and recurrent;
- Histological polymorphism;
- The emergence of a large number of carcinomas in pre-existing lesions (preepiteliomatoase);
- Primary multiple forms, sometimes difficult to control treatment. during subsequent development, taking delivery very special clinical morphological types from each other.

Squamous cell carcinomas (SCC) are true carcinoma, invasive, highly malignant, developed in the mucosal or spinal layer on account of skin and mucous membranes
hence the name of squamous (Krompecher).
Clinical polymorphism already incriminated during the onset merely to stress cells are
characterized by either a higher degree of keratinization than normal cells, either by a
lack of differentiation. The clinical is the strong character of invasive and recurrent, as
well as locally metastasis that distinguish them from basal cell carcinoma.
Previously considered a rare tumor, malignant melanoma has become a common
condition, being currently the subject of numerous studies. The reasons are
represented on one hand by the increased incidence and aggressiveness of this
particular type of tumor, and on the other by the controversial response to the usual
therapeutic means.
Therapeutic attempts, successes and failures, are leading to a basic principle: early
diagnosis.
This is why big money goes to education, so that in civilized countries reporting a
decrease in lethality by melanoma lesions is due to timely diagnosis.
Malignant melanoma is a tumor of polymorphic appearance, but the main feature is
that of clinical transformation. Any pigmented lesion that changes size, configuration,
color can be considered malignant and treated as such.
In clinically, currently known several forms of malignant melanoma:
- Melanoma with surface extension;
- Nodular melanoma;
- Malignant melanoma in lentigo-;
- Acral melanoma lentiginos.

MATERIAL AND METHOD

The data in this paper under retrospective study that we conducted during 1993-2003
in the Department of Oral Maxillofacial Surgery of Central Military Emergency
Hospital. During this period 1115 skin tumors of cephalic extremity were treated of
which 257 were tumors of the scalp, of which 128 basal cell carcinomas (49.8%),
squamous cell carcinoma 62 (24.1%), malignant melanoma 12 (4.7%) , 6 cutaneous
sarcomas (2.3%) and the remaining 49 (19.1%) were the other tumors that can not
be classified in terms of clinical (folliculomas, fibroids, keratoacantoame, cysts,
trichoepithelioamas).
The data were statistically processed, taking into account the following objectives:
1. Clinical study of statistics relating to:
A. Specify the territorial distribution of skin carcinomas carriers;
B. Determination of the distribution by sex and age;
C. Follow-tumor development.

2. The trial followed:
A. Clinical typology specification;
B. Mode of onset;
C. Peculiarities of evolutionary related to location, shape and condition of the body clinical skin tumor that develops.

3. Histological study focused on the following objectives:
A. Assessment of cell differentiation degree;
B. Assessment of polymorphism compared with the clinical appearance histologically;
C. Assessment of the degree of invasion of neighboring structures.

Summarizing these data some conclusions can be drawn:
- increased incidence in the area of head and neck location;
- increased incidence of basal cell carcinomas compared with other forms;
- addressability quite important for non-surgical services - from the resulting need for more close cooperation with specialized services.

Attitude and tactics of the surgical therapy were established by clinical and paraclinical evaluation of the lesions and overall through careful planning of surgery to be as accurate assess availability of local skin and choose the best ways of covering the post-excisional defects that most of the times have been important. The treatment consisted in all cases studied in the excision of the tumor, accompanied by immediate reconstruction of the defect using conventional surgical means such as loco-regional flaps, associated in some cases with free skin grafts. In cases of malignant tumors of the scalp local reconstruction has several advantages over other methods, such as:
- fault coverage is achieved immediately, in one surgical time;
- a shorter surgery;
- ensure tissue covering of the defect with the same quality tissues, and does not require a second surgical wound, except for cases where a skin graft is needed, which however does not put the same problems as encountered in the case of remote flaps.

In all these aspects we have kept account of some features of patients with malignant
tumors of the scalp:
- Most patients are elderly (the average being between 60-80 years);
- In most cases they suffer from some general diseases (heart lung, kidney, liver);
- Many suffer injuries due to inadequate previous treatments (radiodermatitis, radionecrosis, osteoradionecrosis).

Our concern is why and find ways to rebuild that do not affect more than necessary general condition of patients with these diseases.

Techniques used were the post-excisional defect coverage by:
1. rotation-advancement flap (type Blaskovics);
2. pedicled flaps of transposition;
3. combined flaps;
4. flaps associated with free split skin grafts.

The incidence of scalp tumors, especially malignant, put in front of oro-maxillofacial surgeon a range of issues primarily anatomical peculiarities of the region and difficulties in reconstruction of postoperative defects, but also in terms of frequent relapses. The latter is explained by the relatively late presentation to the specialist, most tumors affecting large areas, often of interest for periosteal bone subjacent skull and even, but frequency and association with lesions that come with radionecrosis tumor lesions. In these cases the lesions are very complex and very difficult to differentiate tumor areas from radiodermatitis areas that give those osteo-radio necrosis bone invasion. Thus both are hampered clinical diagnosis, and decision to surgery, which can only be radical. Therapeutic attitude and tactics surgical evaluation is established by clinical and paraclinical lesions overall and by rigorous planning of the intervention for this purpose. The extension of the excision should be considered in surface and depth and the reserves of local tissues used as material for postexcisional plastic cover defects, and the general condition of the patient.

RESULTS AND DISCUSSION

The total number of interventions for skin tumors of the cephalic extremity was 1115, of which 257 were for malignant tumors of the scalp (23%). Of these 177 were male (68.9%), the remaining 80 were female (31.1%). By age group most affected was 61-80 years, 137 patients (54%), compared to 51-60 years group total of 54 cases (23%), group 41-50 years, 28 cases (12%), group 31-
40 years 10 patients (4%) and 21-30 years groups 8 (3%) and 11-20 years with 10 cases (4%).
In terms of topographic location the most common was the temporal region (32%), followed by frontal (25%) and occipital (25%) and parietal area (18%).
Basal cell carcinoma
1. Distribution of patients by age and sex
   a. Distribution of patients according to sex.
   Sex ratio is 1.13 for men. It may be noted that these tumors showed a relatively equal frequency, with a slight predominantly in males in 68 cases, 53.1% respectively, compared to females that was the 60 cases, 46.9% respectively.
   b. Distribution of patients by age
   The average age of patients was 68.16 years, range between 24 and 92 years. Distribution of patients with basal cell carcinoma of the study group according to age groups shows that CBC has a maximum frequency in the age group 70-79 years, which affects 41 patients (32%), followed by age group 60 - 69 years (36 cases - 28.1%). Groups 30-39 and 40-49 records a total of 8 cases (6.3%) and less than 30 years the number of patients is very low (0.8%).
   Distribution of cases by area of origin shows a predominantly those in rural areas representing 60.2% of cases (77 cases).
2. CBC Distribution according to clinical aspect
   For these reasons an objective of our study was the clinical research that dressed these tumors patients enrolled in our study group, and their mode of evolution. Medical history was between 5 months and 25 years. Distribution of tumors by the time elapsed since their debut is as follows:
   development of up to one year in 24 cases
   between 1 and 3 years - 73 cases
   3 to 5 years - 14 cases
   5 to 7 years - 8 cases
   between 7 and 10 years - 6 cases
   10 years - 3 cases
3. Histopathological aspects of CBC studied
   Histopathological study of the 128 basal cell carcinomas, included in a first step the classification of these tumors in different histological subtypes according to the pattern of tumor growth.
Histological subtype Number of cases
Solid basal cell carcinoma 48 37.5
Multiforme cell carcinoma 25 19.5
Adenoid basal cell carcinoma 17 13.3
Keratosis basal cell carcinoma 15 11.7
Superficial basal cell carcinoma 9 7.0
Cystic basal cell carcinoma 5 3.9
Pigmented basal cell carcinoma 4 3.1
Sclerodermiform basal cell carcinoma (fibrosis, morfeiform) 3 2.3
Basal cell carcinoma in situ 2 1.7
TOTAL 128 100.0

Squamous cell carcinoma
1. Distribution of patients by age and sex
a. Squamous cell carcinoma is clearly predominant in males (58.1%) than women who fall by 41.9%.

Distribution by sex of patients with CCS
b. Distribution by age
The average age of patients was 67.4 years, range between 33 years and 92 years.

Distribution of cases by area of origin as if CBC shows a net predominantly those from rural areas, representing nearly two thirds of all cases (41 cases).

2. Distribution of CCS based on clinical appearance
Squamous cell carcinoma is characterized by an increase much faster than the CBC, its history stretching to four years, with considerable local invasiveness, and clinical polymorphism is much lower than bazaliomul.

History tumor formation was between 4 months and 4 years. Most patients, 49 cases (79.0%) had tumors between 1-2 years development.

Distribution of tumors by the time elapsed since their debut is as follows:
development of up to one year in 8 cases
  1 to 2 years - 49 cases
  2 to 3 years - 3 cases
  3 to 4 years - 2 cases

As noted clinical forms of tumor found predominantly forms ulcerovegetante with broad-based, infiltrated, followed by prominent nodular forms between 0.5 to 1.5 cm in diameter.
3. Histopathological aspects of CCS studied

Histopathological study included a group of 62 squamous cell carcinomas invasive selected in a period of 10 years.

Invasive squamous carcinomas were classified according to the degree of differentiation in one of the following:

- well differentiated squamous cell carcinoma (G1);
- moderately differentiated squamous cell carcinoma (G2);
- poorly differentiated squamous cell carcinoma (G3).

Invasive squamous carcinomas present the distribution depending on the degree of differentiation.

Malignant melanoma is a tumor of polymorphic appearance, but the main feature is that of clinical transformation. Any pigmented lesion that changes size, configuration, color can be considered malignant and treated as such.

1. Distribution of patients by age and sex

   a. Melanoma is clearly predominant in females (58.3%) than men with 41.7% fall

   b. Distribution by age

   The average age of patients was 59.2 years, range between 42 years and 66 years.

   Distribution of patients with melanoma of the study group according to age groups shows a maximum frequency in the age group 50-59 years, which affects 5 patients (41.7%).

   Distribution of cases by area of origin show a net predominantly those from urban areas, representing nearly two thirds of all cases (8 cases).

2. Distribution of CCS based on clinical appearance

   Common clinical forms were:

   - Nodular melanoma - 6 cases;
   - Melanoma with extension area - 4 cases;
   - Malignant melanoma in lentigo-- 2 cases.

   All patients were operated, the intervention consisting of tumor excision with oncological safety margin, followed by immediate reconstruction using flaps defect loco-regional rotation or transposition, single, double or even triple in some cases associated with free skin grafts split to cover the secondary defect.
CONCLUSIONS

1. I think that the theme chosen for the work that we have developed a particularly important both in theoretical and especially practical, because on one hand the fact that malignant tumors of the scalp are found quite frequently, and on the other hand that clinical entities sometimes make these difficult problems of diagnosis and treatment for surgery, some of them falling in the borderline pathology dermatology.

2. A significant number of cases as those in our study presented late to the doctor with extensive tumors representing real management challenges aesthetic reconstruction after tumor excision.

3. Polymorphism increased the most malignant tumors located in the scalp, especially basal cell carcinomas, makes it impossible to undertake clinical diagnosis and histopathology to specify the diagnosis.

4. Numerous pathological examinations iconography presented in this paper shows great variability histological appearance consistent with clinical or not.

5. Our study comprising 257 cases, representing 23% of all malignant tumors of the cephalic extremity, confirming data from literature highlight difficulties encountered and new on physiognomic reconstruction after tumor ablation, especially in elderly people is great majority of patients included in the group studied.

6. Batch composition is 58.8% of patients older than 60 years who had an associated pathology (large areas of atrophic skin, elastic degeneration, actinic keratoses, skin atrophy or lichenification contrary, abnormal vascularity and / or pigmentation, eczema seborrhoeic, etc.), which constituted as many difficulties in surgical removal and aesthetic restoration of skin defects.

7. From experience we believe that surgical treatment of choice is still the rattan mmit only provide satisfactory postoperative results both aesthetically and that of earlier or later occurrence of relapses.

8. It is noteworthy that the skin defect after excision recostrucţia depending on scope and location require local flaps varied in type and scale.

9. Experience has shown that most local pedicle flaps indicated are superior in terms of chance of cure skin flaps open at least four reasons:
   a. Use the same type of skin (the same color, pigment, thickness);
   b. Movement of the flap is ensured by removing risk from the first moment ischemia and / or secondary necrosis;
c. The combined techniques of translation and / or rotation flaps can cover large skin defects with good aesthetic results;

d. The intervention itself is much simpler, while viability is assured.

10. Finally, the data we obtained in the study presented shows that our results fall within the limits specified in the literature indicating that some features related to our geographical area of addressability population habits on protection from exposure to radiation Actinic, the level of sanitary culture, etc.. This partly explains the increased incidence of malignant skin tumors of the cephalic extremity and hence the scalp, often presenting late to the doctor which includes interventions for dealing laborious and inefficient education on sun protection.

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- Date and place of birth : 18th of September 1959, Bucuresti
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