

THE POSITION OF ANTHROPOLOGY FROM THE VIEWPOINT OF PLASTIC SURGERY

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The anthropologist with his working methods fills an important gap in the activity of the plastic surgeon. The anthropologist's help is particularly welcomed, as a branch is concerned where an accurate diagnosis of the morphological changes of the body surface is of primary importance from the viewpoint of the choice of surgical treatment.

The help of anthropologists is reckoned with especially in the case of:

1. the objective appraisal of morphological changes of the body surface, which is very important for the working out of an exact clinical status (Burian, Farkaš, Hajniš, 1964; Hajniš, Farkaš, 1965);

2. the determination of the operation time in certain visible congenital defects with regard to the rate of growth of the respective part of the body or organ, and from the point of view of functional needs (Farkaš, Dobisíková, Hajniš, 1966; Hajniš, Hajnišová, 1966).;

3. the determination of the size and shape standards of various parts of the body, which is of primary importance in reconstructive interventions; after loss of organs, or when the latter are evolutionarily impaired;

4. the determination of the presence of such bodily characters that a layman does not notice, but that are dominantly or recessively inherited and can affect the result of a surgical performance done at child's age.

Modern documentation must be based upon objective foundations. The united health service system enables to make large sets of individuals affected with a certain disease or defect. The sick persons may come from various medical institutions. In order to be able to treat concurrently such a large clinical material, we need a united clinical documentation, in the first place the status of a certain type of disease or an inborn defect (Farkaš, Link, 1963; Farkaš, 1965; Farkaš, Hajniš, Kliment, 1966).

The plastic surgeon has, in the description of morphological changes of the body surface, been so far following mostly subjective criteria which are uncontrollable, varying, and therefore inaccurate. By taking the anthropologist at hand and by introducing the measurement methods current for this field, the description of the morphological condition becomes

more accurate. The observance and measurement of certain other characters not used so far has even been introduced, called for by the surgeon's practice (Hajniš, Farkaš, 1964). The possibility of objective registration of certain changes of the body surface was necessitated by the determination of size and shape standards of the respective parts of the body from birth to the end of puberty. These data are available already from some organs, and are being gathered from others (Jägerová, Křečková and Šimůnková, 1966; Dobisíková, 1965).

The knowledge of growth norms in a healthy population will enable their comparison with the data obtained in our patients injured by an accident or by evolution. This will enable the patient to be placed into the scale of sizes in a normal population, and thus it will be found whether the patient is in his development below normal or averaging. In this way we would obtain an exact picture of what is normal and what is hypoplastic (Hajniš, Farkaš, 1966; Hajniš, Farkaš, Hajnišová, 1966).

We need growth norms for various parts of the body. We miss, for example, data on developmental norms of the mammary glands in women, we are interested in the growth rate of the ribs, which are a valuable supporting material in various plastic operations. We are short of records concerning the postnatal development of orbits as well as of the appended eye organs. We expect the establishment of growth norms for the lower extremities. The plastic surgeon, however, is also lacking some more detailed data, e.g. about the formation of Cupid's arch of the upper lip. With the development of gerontological research records will be required about the origin of folds and their location in the face, neck, about the deposition of subcutaneous fat, or about its disappearance from the places where it irritates aesthetically.

The anthropologist may contribute towards discovering the so-called microforms of inborn defects in a healthy population. An increased frequency of microforms of a definite congenital basic defect in the line of the person examined who exhibits a developed form of this inborn defect, will be of great help to genetic research, and will enable the estimation of hereditary transfer of defects.

A surgeon will, however, make full use also of

anthropological research specializing in genetics. Morphological anomalies found to be repeating often in one line will enable to predict the probable shaping of the body of the examined person. The surgeon will have an idea of what the direction of development in his little patient will be, whether an operative medical help will impair this development, or whether the result of the surgeon's help will remain unaffected. The result of the surgeon's work and the postnatal development of the person operated upon will be able to be judged separately in an objective manner. Surgical treatment will become more planned and thus also more economical. A more objective appreciation of the result of an operation will be possible inducing the time of the treatment onset, as well as the employed methods of repair.

The anthropologist finds new possibilities of application. Objects of his investigation will be not only the sound population of to-day or that of ancient times disturbed from its century-long sleep, but also the suffering person. Not every clinic is in such a lucky situation as the Clinic of Plastic Surgery in Prague. We expect that anthropological institutes from other places of this country will similarly assist the surgeon. Czechoslovakia enjoys a rather great advance in this branch which she should not lose.

SUMMARY

Firstly, the plastic surgeon expects help from the anthropologist in the objective evaluation of changes of the body surface, which is very important for working out an exact clinical status of the disease.

Uniform clinical papers based on objective criteria will enable to get sets capable of statistical treatment in a relatively short time, provided they are accepted by a number of medical institutions. A uniform clinical document allows an objective appreciation of the results of the physician's work.

Secondly, the anthropologist will assist in fixing of surgical interventions in the case of various inborn defects in that he will estimate the growth rate of the particular part of body, and the surgeon will choose for his performance the time of relative rest of development.

Thirdly, cooperation with the anthropologist is to result in determining the size and shape standards of various parts of the body which the surgeon will use when restoring the organs after their loss or developmental impairment.

A detailed anthropometric examination of a normal population will uncover the "microforms" of the inborn defects, i.e., the concealed or little developed forms of congenital anomalies of various body parts. Microforms of the congenital defects are a useful help in determining heredity.

From the knowledge of anthropological research focusing on genetics, the surgeon can predict in what way the organ is going to develop, which is being treated at child's age. Thus, anthropology will contribute to a dissociation of the influence of surgical help from the course of development, which is important for the critical evaluation of surgical treatment.

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