COMPARATIVE ANALYSIS OF METHODS OF INCREASING KERATINIZED ATTACHED GINGIVA AROUND IMPLANTS

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Key words: *gingiva, epithelization, dentistry, implantation*

Background and Aim. The lack of keratinized attached gingiva around the implans is a reason of mobility soft tissue, the pocket forming what may cause implant failure. The aim of study is improving the efficiency of surgical treatment patients with insufficient width of keratinized attached gingiva in the implant.

Material and Methods. Our study included 58 patients, aged from 18 to 75 years, with insufficient width of keratinized attached gingiva in the implant, who had dental implantation surgery. Patients were divided into 3 groups by random sampling: apically positioned flap (group 1), free gingival graft (FGG) transplantation (group 2), collagen matrix (CM) transplantation (group 3). The number of patients by gender and age, was comparable in all groups.

Results and Discussion. In postoperative period the increase of keratinized attached gingiva, the severity of pain, edema and hyperemia, the wound epithelisation were observed. The increase of keratinized attached gingiva was observed in patients from 1 group (2.0±0.3 mm), 2 group (4.8±0.3 mm), 3 group (3.0±0.3 mm). Retraction of FGG was 31%; CM — 42% from initial on 28 day post. op. The largest edema and hyperemia were in patients with CM. The most painful post operative period fived in patient with FGG. The period of wound epithelisation in patients from 1 group (13.75±0.65), 2 group (12.5±0.6 mm), 3 group (16.8±0.7 mm). Morphological study of biopsies gingival mucosa after different plastic operations showed that all methods of plastics cause regeneration of stratified squamous keratinized epithelium and subepithelial mucosal own lamina.

Conclusions. Surgical techniques increasing keratinized attached gingiva improve the effectiveness of patient care. The use of collagen matrix can be recommended as a method of choice to increase the width of keratinized attached gingiva.

PROGESTERONE INDUCES DIFFERENTIATION OF ADIPOSE DERIVED STEM CELLS TO SCHWANN CELLS

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Key words: *differentiation, progesterone, Schwann cell, peripheral nerve*

Progesterone plays a significant function in myelination of peripheral nerves and improves the formation of new myelin sheaths subsequent to damage of the mouse sciatic nerve. In addition progesterone has promoted myelination of axons when added to explanted cultures of rat dorsal root ganglia accelerate the time of beginning of myelination and to increase the amount of myelin synthesis in cocultures of Schwann cells and sensory neurons. It has shown that progesterone expands activity of the gene's promoters coding the peripheral myelin protein-22 (PMP-22), and the protein zero (P0). Furthermore Progesterone and its 5α-reduced metabolites drastically increased P0 mRNA levels in Schwann cell cultures. Also, PMP-22, myelin basic protein (MBP), and P0 protein levels were greatly improved by progesterone in co-cultures of dorsal root ganglion neurons and Schwann cells. Progesterone can improve myelination through increasing the expression of transcription factors that are concerned in Schwann cell differentiation and myelination. Recently, two transcription factors have been detected to be essential for promyelinating-to-myelinating alteration including SCIP (Oct-6/Tst-1) and Krox-20 (Egr-2). Krox-20 is expressed by promyelinating cells and its expression is continued during the procedure of myelination. Krox-20 is considered as a key element of the transduction cascade relating axonal signals to myelination. Block of Krox-20 stops the differentiation of Schwann cells at the promyelinating phase and led to lack of myelination.

Understanding the consequence actions of progesterone in the myelination process and MSC_s differentiation to Schwann cells inspired us to propose that progesterone will be differentiate adipose tissue-derived stem cells to the Schwann cell.

MORPHOLOGY OF HUMAN CORPUS CALLOSUM IN IRANIAN POPULATION — AN IMAGING ANATOMICAL STUDY

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Key words: *morphology, corpus callosum, retrospective study*

Background. Topography of the human corpus callosum has occasionally studied in different populations.

Aim. The purpose of this study was to evaluation the morphology of human corpus callosum in Iranian population via magnetic resonance imaging.

Material and Methods. Retrospective cross-sectional study. Design of the study was retrospective cross-sectional study. Seven hundred and seven normal magnetic resonance imaging (MRI) were enrolled to our study. The shape, anterior-posterior length and area of corpus callosum as well as their

relationship with gender, age, and handedness were assessed.

Results and Discussion. The most common and uncommon form of corpus callosum were splenial bulbosity form (35.6%) and arch mid-body form (7.2%) respectively. Maximum anterior — posterior (AP) distance of corpus callosum was longer in male and older age individuals compared to female and younger ones respectively. No significant differences were seen in AP distance of corpus callosum between right and left handers. Area of corpus callosum was widened in male and younger age individuals compared to female and older ones respectively.

Conclusions. The findings of this study show morphology of corpus callosum in Iranian population. Morphometric parameters of AP and area of corpus callosum are related to sex and age but no to handedness.

VARIABILITY OF RAMIFICATION AND CONNECTIONS OF THE CERVICAL BRANCH OF THE FACIAL NERVE

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Key words: *facial nerve, cervical branch, connections*

Background. Superficial location of the cervical branch (CB) of the facial nerve makes it vulnerable to injures in surgery of the neck and might result in weakening of the platysma muscle with lip motion impairment and asymmetric smile.

Aim. The purpose of our study was to establish ramification and connections of the CB of the facial nerve.

Material and Methods. Thirty-two adult cadaveric semiheads 18 right and 12 left ones, fixed in formaldehyde solution were dissected at the Chair of Human anatomy of Nicolae Testemitanu SUMPh and variations of ramification and connections of the CB of the facial nerve were marked out.

Results and Discussion. Both sides of the head have been dissected on the 20 of those samples. Similar ramifications of the CB on both sides in the same individual were marked out, only in 3 cases. In 5 cases CB was double and in one case multiple. In 4 cases — there were double connections with the transverse cervical nerve. In 8 cases there were connections with the greater auricular nerve and 2 of those connections were double. In 19 cases there was a single connection with the ramus marginalis mandibulae, in one case — double connections, and in 12 cases there were no connections between those branches.

Conclusions. The CB of the facial nerve is variable both in number of ramifications and ways of connections.

PECULIARITIES OF SOMATHOMETRIC CHARACTERISTICS IN EARLY ADOLESCENCE LIVING IN THE KRASNODAR TERRITORY AND KABARDINO-BALKARIAN REPUBLIC

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Key words: *somathometric characteristics, stress resistance index, early adolescence, Krasnodar Territory, Kabardino-Balkarian Republic*

Aim. To find out peculiarities of somathometric characteristics, in early adolescence living in the Krasnodar territory and Kabardino-Balkarian Republic (KBR).

Material and Methods. Data of body height, weight, arterial blood pressure and pulse in 140 children (70 girls and 70 boys) at the age of 13.2±1.6 years living in Kabardino-Balkarian Republic and also 137 children (70 boys and 67 girls) at the age of 13.4±0.1 years living in the Krasnodar territory are collected and subjected to the statistical analysis. The due number of cardia contraction, body surface, level of the stress were started by the formula developed by Yu. R. Sheykh-Zade. Statistical material was processed by method of variation statistics within the StatSoft Statistica 10.0 program.

Results and Discussion. The carried-out statistical analysis has proved that in the thirteen-year old boys living in KBR in comparison with inhabitants of various districts the Krasnodar territory lower anthropometric parameters were revealed: body weight (respectively, 47.63±1.75 and 52.56±1.02 kg), body surface (respectively, 14279.54±176.54 and 15109.95±181.67 cm^2), index of body weight (respectively, 19.12±0.21 and 20.43±0.30 c.u.). In the thirteen-year old girls living in KBR in comparison with inhabitants of the Krasnodar territory lower physiological parameters were revealed: appropriate heart rate (respectively, 68.31±0.54 and 70.78±0.39 min^{-1}), stress resistance index (respectively, 1.14±0.23 and 1.28±0.05 c.u.).

Conclusions. Gender differences of anthropometric and physiological parameters in early adolescence were stated comparing the regions (the Krasnodar territory and KBR).

ULTRASONIC METHOD OF INVESTIGATION OF THE LOWER ALVEOLAR ARTERIES

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Background. The lower alveolar arteries are located in the canal of the jaw and are difficult