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TYPE II OSTEOPOROSIS PATHOGENESIS AS A RESULT OF SECONDARY EDENTULOUS

Diachenko O., Trejtiak I.
Scientific adviser: Kuzenko Y.
Sumy State University, Department of Pathology, Ukraine

Aim: Osteoporosis is one of the main problems of women after menopause and of old people. The main reason of it is diminution of bone mass in the result of disbalance between osteogenesis and resorption of bones. Two types of osteoporosis are defined according to the reason of its appearance. Type I appears because of lack of estrogens in the woman's body after menopause. Type II is senile osteoporosis that appears because of decrease of concentration of calcium, vitamin D and minerals on the process of aging or as a result of some diseases that influence the process of bones mineralization. Obesity and overweight are the main risk factors of osteoporosis appearance and quarter of the population of developing countries is suffering from it. It's still unknown what changes are taking place in alveolar bone after loss of teeth. That's why the aim of our investigation is studying of changes in alveolar bone of old people with secondary adentia.

Material and Methods: Biopsy material of dead patients was taken at the Center of Pathological Studies of the Sumy Medical University to study morphological changes in teeth segments. Patients were divided into 2 groups, each included N=7. Patients who died of different somatic diseases and didn't have atherosclerotic lesions entered the first group. Second group included patients that died of atherosclerotic complications. The following methods were used in the investigation:

- Histological study;
- Fluorescence microscopy;
- Immunohistochemistry;
- Microphotography and image analysis;
- Mathematical calculations.

***Results*:** Based on the statistical analysis we can see a downward trend in the number of osteocytes in trabeculae of the periapical third part of the tooth at atherosclerosis 26.85±7.44; P=0.05. We can also see the dependence of trabecular thinning of toothless area of the alveolar bone 226.57±70.53; P=0.02 from losing of teeth against the background of atherosclerosis with hypertension. The osteopontin expression and fluorescencetion of toothless bone area also tend to decrease in atherosclerosis and hypertension 42.81±16.24; P=0.048.

Conclusion: It's difficult to define precisely the reason of teeth loss because it can be connected not only with osteoporosis but also with periodontits. Patients with atherosclerosis can also get bone resorption under the influence of active oxygen forms. During our research it was discovered that to reduce changes in the toothless bone it's necessary to reduce the pressure on chewing toothless alveolar sprout by dental implants.

THE PRIMARY CANCER MORPHOLOGY OF FALLOPIAN TUBES

GyryavenkoN., DiachenkoO.
Supervisor: A. M. Romaniuk, prof., doctor of medical sciences
Sumy State University, Department of Pathology, Ukraine

Introduction. Despite significant progress in the study of malignant tumors, the primary cancer of the fallopian tubes (PCFT) is not fully studied yet. According to different authors its incidence accounts from 0.14% to 1.8% of all female genital malignancies. The modern oncomorphology is in search of the criteria that will allow to verify the degree of biological malignancy and to predict the course of the disease with maximum objectivity. The study of molecular markers will allow to provide the adequate treatment of the patients with advanced processes and to improve the assessment of vulnerability to certain therapies.

The objective of this study is to determine the receptor status of PCFT tissue (ER, PR, Ki-67, HER2/neu).

Materials and methods: histological, immunohistochemical, statistics. The study was conducted on 71 samples of fallopian tubes tumor tissue.

Results and discussions. PCFT more commonly affect the postmenopausal women, aged 60-69 years, mainly in early stages of the disease (I-II) (60.8%) and in most cases is represented as serous adenocarcinoma (92.96%).It was determined that most of them are receptor-positive for both steroid receptors (ER – 83.33%, PR – 62.12%). But the receptor profile of the tumor of the fallopian tubes did not depend on the age. When the tumor differentiation grade becomes lower the number of receptors for steroid hormones also reduces.High level of proliferative activity is typical for this type of neoplasia and it doesn't depend on the age, stage of the disease and tumor differentiation grade. Ki-67 expression is independent marker for N-status and helps to determine the patients who are in the "risk" group.HER-2/neu expression is not typical for PCFT, taking into account almost complete lack of it (only 9% – doubtful reaction) in tumor tissue.

Conclusions. Study of immunohistochemical status showed relatively high expression of steroid hormone receptors, high expression of Ki-67, that can give rise to offer patients with this type of neoplasia destination targeted therapy that blocks the growth and spread of cancer cells by affecting the specific molecules involved in the growth and the development of a tumor cell.

SYNDROME MERMAID - SEVERE SYNDROME OF CAUDAL REGRESSION

Nikolaenko E.U., Gargin V.V.
Kharkiv National Medical University

Congenital limb malformations rank behind congenital heart disease as the most common birth defects observed in infants. The term «sirenomelia» («mermaid syndrome») is derived from the physical similarity of the affected fetus to mythical creatures mermaids - charming women with the lower part of the body in the form of a fish tail, where there is a fusion of the lower extremities and partial or complete fusion of the feet.

The aim of the present study is to assess the significance of the study of museum specimens allowing to tracemermaid syndrome in part of the museum collection of the Department of Pathological Anatomy of Kharkiv National Medical University devoted to prenatal and perinatal pathology as one of the most representative among the academic collections in the world.

Subjects and Methods. The study implied literature search and the assessment of macroscopic preparations of the museum of Department of Pathological Anatomy at KhNMU dedicated to pre- and perinatal pathology with congenital malformations.

Results. The syndrome of the mermaid is a very severe form of the syndrome of caudal regression (complex malformation the caudal portion of the embryo), which, in turn, is a rare severe congenital malformation of the distal spine and spinal cord (his clinical picture is accompanied by hypoplasia of the lower half of the trunk and extremities, fusion of the lower limbs). Fusion can be within the bone or soft tissues only. There are renal agenesis, blindly ending colon, the lack of external and internal genitalia, single umbilical artery atresia of the anus in most cases of sirenomelia. Sirenomelia is almost always a fatal disease because birth defects named above. Approximately 50% of infants with this diagnosis are stillborn. Violation of the blood supply leads to the disturbance of tissue differentiation in that area and so severe defects. Prognosis is very poor because of the condition involves variable major anomalies, including bilateral renal agenesis, sacral agenesis and imperforate anus. Only four cases of a surviving infant with sirenomelia have been reported. The death of a child usually occurs during the first hours and days of life. The cause of death is lung hypoplasia and renal failure.