

lished data this may indicate a presence of indirect immune component in a mechanism of PE-PM action. Immunotherapeutic approaches are well known to be tightly dependent on a step of tumour-host interactions and, therefore, to be beneficial for recipients only within distinct period of time. Consequently, immunotherapy would not be worthwhile to apply before or later, as it is appeared here with PE-PM application. In conclusion, both local and systemic effect of multiple PE-PM local applications to advanced mammary tumours by mounting dosages with tumour diameter increasing was detected in fast growing lag⁻ spontaneous BLRB model (morphologically resembling cystic papillary and/or medullary carcinoma of the human and veterinary patients).

“Point” experiment approach proposed here during initial steps of anti-cancer PE-PM efficacy testing procedure *in vivo* revealed mono-directed effect, i.e. tumour growth delay and survival prolongation in all mouse models (CBRB, BLRB and BALB/cJCitMoise). And the amount of used animals is sufficiently decreased.

Finally, our data permit to recommend PE-PM for extensive anti-cancer drug testing and to hope that this kind of therapy would be of benefit for local application after radical mastectomy.

The work was submitted to V international scientific conference «Present-day problems of experimental and clinical medicine», Thailand, February, 20-28, 2008, came to the editorial office 20.12.2007.

METABOLIC DISORDERS IN ELDERLY DIABETES PATIENTS

Tukin V.N., Lipunova Ye.A.
Belgorod State University
Belgorod, Russia

The purpose of the work is studying biochemical factors of blood against metabolic syndrome in diabetes patients – elderly men and women.

The object of the investigation was the blood of 20 diabetes patients (the average age of the men was 61, 7±1, 5 years; women - 63, 1±1, 3 years), the disease duration was from 7 to 34 years. As the control the blood of 20 practically healthy donors matching in sex and age was used.

The quantity of leucocytes, the concentration of glucose, total protein, cholesterol (CL), triacylglycerols (TG), low density lipoproteins (LDLP), high density lipoproteins (HDLP), urea, creatinine, also amylase, alanine aminotransferase (ALT), aspartate aminotransferase (AST) were determined in the blood by the unified methods applied in clinical laboratory diagnostics. The concentration of Na⁺, K⁺, Cl⁻, Ca²⁺, Mg²⁺ was determined by the method of flame atomic absorption spectroscopy (Quantum-2A, Russia). The WBC differential was developed; the intoxication leukocytic index (ILI) and allergization index (AI) were calculated.

In diabetes men-patients the glucose concentration in blood made 11, 6±1, 3 mmol/l⁻¹, women-patients - 9, 4±0, 7 mmol/l⁻¹, that is authentically higher than in the control group donors. In the diabetes men-patients' blood the concentration of CL (by 72, 7%), TG (by 43, 1%), LDLP (by 55, 4%) and K⁺ (by 19, 4%) is authentically higher and the concentration of HDLP (by 14, 2%), Na⁺ (by 6, 5%), Cl⁻ (by 5, 5%), Mg²⁺ (by 20, 6%) and Ca²⁺ (by 57, 6%) is lower. In the diabetes women-patients the content of CL (by 70, 1%), TG (by 44, 4%), LDLP (by 63, 0%) and K⁺ (by 8, 7%) is also authentically higher, and that of HDLP (by 17, 4%), Na⁺ (by 5, 9%), Cl⁻ (by 4, 2%), Mg²⁺ (by 17, 6%) and Ca²⁺ (by 68, 9%) is lower.

As a tendency one can consider the amount decrease of amylase, ALT and the increase of creatinine, AST by 16, 0% and 6, 3%; 5, 4 and 15, 7; 6, 3 and 13, 1; 14, 9% and 54, 5% accordingly in men and women, in the blood of diabetes patients.

In the examined healthy people and diabetes men- and women-patients the average ILI values correspond to a light form of endointoxication, the AI values in the diabetes patients are authentically higher and reflect the presence of an allergic process in them.

Thus, hyperglycemia, provoking serious metabolic disorders, retains against the insulinic therapy in elderly men and women suffering from diabetes; a light form of endointoxication and the presence of allergic process have been detected.

The work was submitted to VII international scientific conference «Scientific potential development of higher school», UAE, March, 4-11, 2008, came to the editorial office 14.01.2008.

Short reports

**REVIEW OF "WHAT BUGGED THE
DINOSAURS? INSECTS, DISEASE AND DEATH
IN THE CRETACEOUS" BY POINAR G. JR.
AND POINAR R.**

Jacobson Raymond L.

*Department of Parasitology, The Hebrew University -
Hadassah Medical School, Jerusalem*

Book details

Poinar G Jr, Poinar R: What bugged the dinosaurs? In *Insects, Disease and Death in the Cretaceous* Princeton University Press; 2008. 264 pages. ISBN 978-0691124310

Review

Have you ever wondered whatever happened to the dinosaurs? George and Roberta Poinar have put forward some evidence that maybe it was not just cataclysmic events, such as meteorites falling on the earth. They surmise that perhaps insects transmitted diseases that contributed to the extinction of the dinosaurs. By studying the arthropods trapped in amber during the Cretaceous (65.5 –145.5 million years ago) period, they have revealed some extraordinary micro-organisms concomitant with the ensnared invertebrates.

The period is well described in the opening chapters, showing that fossil evidence and especially amber tells us a great deal about the animal and plant kingdoms during those millions of years. Some chapters start with a speculative scene, painting a picture of life in the Cretaceous, the dinosaurs, the plants they feed from and the insects that breed around them, while others discuss in detail the known scientific facts. Herbivory, both by the dinosaurs and the insects is described in detail and the possibility that insects introduced plant viruses and fungi into the food supply, which may have led to the depletion in resources for the large animals. The dinosaurs did benefit from insects, like the dung beetles that removed the vast waste voided by 55–100 ton dinosaurs, and arthropods were part of the diet of the omnivores.

The authors describe how they believe that arthropods were able to acquire blood meals from the dinosaurs in antiquity. By studying the mouth parts of the insects trapped in amber, they have shown that regardless of the outer skin, whether cold or warm blooded, the micro-predators had found a way to obtain the necessary food for survival. Chapters 12 – 18 describe those blood-sucking arthropods that were extant during the Cretaceous, including, important Nematocera and Tabanids, fleas, lice, ticks and mites. For each group the method of haematophagy is discussed and which organisms could have been transmitted with a few examples of ancient parasites observed in amber. There are separate chapters on the worms, cretaceous diseases, and another on the evolution of pathogens, (erroneously Rickettsia are given as

the cause of human plague). The numerous color plates illustrate the diversity of arthropods in the Cretaceous, while the original line drawings embellish the theory. This is an assiduously written book for entomologists and parasitologists who would like to learn more on the time-encapsulated data from the Cretaceous, and perhaps stimulate the search for more "leoparasites".

**MUSCULO-ELASTIC COMPLEX IN THE
VALVES OF HUMAN FEMORAL VEIN**

Petrenko V.M.

*I.I. Mechnikov State Medical Academy
St-Petersburg, Russia*

Condition of the problem

Venous valves are often become an object of researches in normal conditions, in experiments and in pathology [2, 3, 5]. The absence of myocytes in cusps of the venous valves is accepted as correct until now. Therefore they are opening and closing only passively. Solitary muscular elements may occur in thickened subendothelial layer of cusp during the intima proliferation [1]. However, last years the data that valvar cusps contain the smooth myocytes were observed [4].

Material and methods

The work was carried out on both sexes human cadaveres of 20-78 years old. Valves were choosed from the walls of human femoral vein isolately or with the adjacent part of venous wall. Serial histologic sections of 5-7 mkm in thickness in sagittal (from base to tip of the valve) and transverse planes (in plane of the stretched cusp). Sections were stained by picrofuxine, azane, hematoxilin-Fe, orseinum, impregnated by Argentum. The stained by hallocianinum and hematoxilin-Fe total preparations were made from the part of material.

Results

The femoral vein contains 1-5 valves, constant valve situates under the entry of deep femoral vein. Valves constitute the circular folds of inner layers of the venous wall. Internal elastic membrane from the distal segment of vein continues to the axial sector of valvar cusp where it gives branches of different thickness to the parietal sector of cusp. Internal elastic membrane from the proximal segment of vein are loosening in the base of valve, its fragments are determined in the parietal sector of cusp. Thransverse muscular bundles and folded bundels of thick collagen fibers prevale here as in the whole cusp. The bulge of the external coat pushes the circular muscular layer of middle coat inside. It conflues with the longitudinal muscular layer of intima. The compact accumulation of myocytes arises in the base of valve – multi-layer circular muscle of valvar cuff. It has the configu-