



particular, of the left gastric artery, contributes to the qualitative justification of tactics and techniques preference of operative intervention on the stomach.

At this time, the priority task is a comprehensive study of variant anatomy of the structures of arterial stream of the stomach and contiguous organs and systems including the fact that in practical surgery a doctor faces not separate structures variations but their combinations.

**Garazdiuk M.S., Bachynskiy V.T., Vanchuliak O.Ya., Bezhenar I.L.**

### **SPECTROPHOTOMETRY IN THE ULTRAVIOLET RANGE AS A METHOD OF TIME SINCE DEATH ESTIMATION**

*Department of Forensic Medicine and Medical Law  
Higher State Educational Establishment of Ukraine  
"Bukovinian State Medical University"*

Time since death (TSD) estimation is an important and not completely resolved issues of forensic practice. The analysis of cerebrospinal fluid (CSF), as a stable and separated from the action of environmental medium factors, can be used for solving of this problem.

Purpose: to investigate the interconnections between the temporal changes of the spectral density of CSF samples and the TSD. Objects of investigation were liquid samples of CSF, taken in 30 corpses of both sexes aged 33 to 78 year with accurately known time of death which ranged from 1 to 6 hours (the main research group), and 20 healthy volunteers (comparison group). The selection of CSF was carried out by suboccipital puncture from great occipital tank of corpse and during spinal anesthesia performing for surgery preparation in healthy volunteers. In main group CSF was selected from cadavers who died because of cardiovascular disease. Spectral dependences of the post-mortem temporal changes in the optical density of samples of CSF in the ultraviolet spectrum of electromagnetic radiation in the range of wavelengths from 280 to 400 nm were studied. The choice of spectral range of wavelengths from 280 nm to 400 nm provides a separate possibility to study changes in the concentration of protein compounds under the influence of biochemical changes in the CSF of the deceased during various intervals after death. The analysis of the obtained results of spectrophotometric studies of the CSF protein fraction optical density in deceased has found the following: the spectral range from 280 nm to 310 nm is diagnostically sensitive to changes in the concentration of protein fraction for each value of the TSD; there is an individual dynamics of the spectral decrease of the CSF optical density in this band for each interval of the TSD; the optical density varies from 0.61 (280 nm) to 0.19 (310 nm) for TSD 2 hours; the optical density varies from 0.34 (280 nm) to 0.13 (310 nm) for TSD 4 hours; the optical density varies from 0.14 (280 nm) to 0.105 (310 nm) for TSD 6 hours. The change in the optical density of the protein fraction of the cerebrospinal fluid in the range of wavelengths from 280 to 310 nm is interrelated with the time since death. The spectrophotometric method is suitable for time since death diagnosing with an accuracy of 2 hours.

**Garvasiuk O.V.**

### **IMMUNOHISTOCHEMICAL EXAMINATION OF VIMENTIN IN ENDOTHELIOCYTES AND FIBROBLASTS OF THE PLACENTAL VILLI OF GRAVIDAS WITH IRON-DEFICIENCY ANEMIA**

*Department of Pathological Anatomy  
Higher State Educational Establishment of Ukraine  
"Bukovinian State Medical University"*

Disorders of the chorial placental tree formation very often underlie pathogenesis of this organ failure. The diagnostics of preterm maturation of the chorial tree is based on finding the fact of its preterm structure as compared to the parameters of a certain gestation period, which can be calculated on the percentage of various types of chorial villi.

The objective of our study was to investigate quantitative parameters of vimentin in endotheliocytes and fibroblasts of the chorionic villi by means of immunohistochemical examination of placenta with preterm maturation of the chorionic tree with iron-deficiency anemia of pregnancy in two different terms of gestation – 29-32 weeks and 33-36 weeks.

66 placentas were examined. The study design assumed isolation of two main groups of investigation of the above terms of gestation and two groups of comparison. Quantitative parameters of vimentin in the cytoplasm of endotheliocytes and fibroblasts of the placenta intermediate and terminal villi were considered on the basis of staining optic density measured by means of computer microdensitometry method.

Immunohistochemical staining on vimentin was determined in the cytoplasm of endotheliocytes and fibroblasts of the placenta intermediate and terminal villi in all the groups of the study. Vimentin concentration (optic density of immunohistochemical staining) in the cytoplasm of endotheliocytes and fibroblasts of the placenta intermediate and terminal villi was found to be a criterion to determine maturation of the placenta chorionic tree. Iron-deficiency anemia paradoxically causes immaturity of endotheliocytes and fibroblasts of the placenta intermediate and terminal villi even in those placentas where preterm maturation of the chorionic tree is determined.