



older generation fluoroquinolones. Thus, the newer-generation fluoroquinolones are reported to retain efficacy in the treatment of ofloxacin-resistant cases.

Aim. To explore the association between resistance levels to fluoroquinolones and different mutations in *M. tuberculosis*, we determined the MICs of ofloxacin, moxifloxacin and gatifloxacin on 80 ofloxacin-resistant isolates and identified the mutations in *gyrA/B*.

Material and methods. The identification of these *M. tuberculosis* isolates was performed by conventional biochemical and polymerase chain reaction (PCR) tests. Among the isolates, 458 were identified as phenotypically resistant to at least one first-line anti-TB drug (isoniazid, rifampicin, ethambutol or streptomycin) by the proportion method on Lowenstein–Jensen medium with the following concentrations: isoniazid (0.2 mg/L), rifampin (40 mg/L), ethambutol (2 mg/L) and streptomycin (4 mg/L). The susceptibility of these 458 isolates to ofloxacin was further tested at a breakpoint concentration of 2 mg/L on Lowenstein–Jensen medium. From these analyses, 80 ofloxacin-resistant isolates were identified and selected for further study.

Results. The MICs of ofloxacin, moxifloxacin and gatifloxacin for the 80 isolates were determined using the microscopic observation drug susceptibility assay. In total, 68 isolates had mutations in *gyrA*, three isolates had mutations in *gyrB*, six isolates had mutations in both *gyrA* and *gyrB*, and three isolates had no mutations. Two common mutations in *gyrA*, the D94G and D94N mutations, were associated with higher-level resistance to all three fluoroquinolones than two other common mutations (A90V and D94A).

Conclusion. Understanding the relationship between MICs and mutations in ofloxacin-resistant isolates will facilitate the optimization of the use of new-generation fluoroquinolones to treat patients with ofloxacin-resistant tuberculosis (TB).

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SOME ASPECTS OF ANATOMICAL VARIABILITY OF THE NERVES OF THE SUPRAHYOID MUSCLES OF THE NECK

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The purpose of our investigation was study of the innervation of the neck's muscles considering an individual variability of their neuromuscular apparatus. This research has an important role in the clinical practice.

Material and methods. In order to study an individual anatomical variability of nerves of the suprahyoid muscles of the neck we've examined 58 corpses of people of different age groups (at the juvenile, mature and old age). In our present studies we used macromicroscopic, histological and morphometric methods.

Results. Our research revealed some regularities in the extraorganic and intraorganic innervations of the muscles and the character of their intratruncal structure were found. Special emphasis was given to the study of the relations between metric indications of the given group of muscles and quantitative characteristics of the myeloarchitectonic of their nerves. Myeloarchitectonic of the nerves of the suprahyoid muscles of the neck is characterized by presence of myelin fibres of four size groups: thin, middle, thick and very thick. The correlation between individual peculiarities of the structure of the lower jaw and the configuration of the nerve branching in the mylohyoid muscle was determined. In a dolichomorphic lower jaw mainly the magistral type of the branching is observed, in a



brachymorphic one the scattered type is observed and in a mesomorphic the mixed or scattered types are present. We found that extraorganic nerves of the suprahyoid muscles of the neck form connections with hypoglossal and glossopharyngeal nerves and periarterial sympathetic plexuses of some branches of the external carotid artery. In the depth of mylohyoid and geniohyoid muscles relation was revealed between nerve branches of the left and right sides. Extraorganic nerves enter suprahyoid muscles of the neck mainly from side of their internal surface. Quantity of myelin fibres in nerves, entering suprahyoid muscles of the neck has significant individual variability in studied age groups. We found that the greatest quantity of myelin fibres was in nerve of mylohyoid muscle. According our data this muscle has the most complicated structure of intraorganic nerve plexuses. The investigation has shown that size and volume of muscles depend on the shape of a lower jaw and a neck. Individual variability in the topography and in the amount of nervous branches which come to the muscles was observed in the innervation of the studied muscles. Constant sources of innervation have been determined and additional sources of innervation have been identified. Intermuscular nervous connections were found between the nerves of the muscles of the right and left sides. Peculiarities of the intramuscular nerve branching and the regions of their peak concentration for each of the nerves have been determined. The statistical analysis of the myeloarchitectonics showed quantitative differences in the composition of the myelin component of each studied nerve, while the information analysis revealed uniformity in their structure as communication channels. Innervation of the studied muscles revealed individual variability in the topography and number of the nerve branches supplying the muscles.

Conclusion. Findings of research were confirmed by statistical analysis. Our results may utilize for clinical purposes.

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EXPERIMENTAL PERIODONTITIS IN RATS

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Aim: The purpose of this study was to assess periodontal destruction following experimentally induced marginal periodontitis in rats by allowing them to freely soft homogenous food over a 30-days observation period. The extent to which the histological changes were examined. In addition, the distances between different junctions in the defleshed jaw were compared.

Material and methods: 10 white male rats were divided into two groups. Only five rats were as a control group, marginal periodontitis was induced by soft homogenous food which doesnot need any chewing pressure. Rats were killed after 30 days. Block of the defleshed jaw of rats (Premolar and buccal periodontal tissues) processed for light microscopic examination, followed by formalin fixed species were demineralization 5% Nitric acid and then embedded in paraffin, sectioned (5-7 μm) in the bucco-palatal dierction, parallel to the long axis of the tooth. Finally stained with hematoxylin and eosin. First method, histomorphometric analysis was carried out at x 150 magnification to determine distance at different sites: 1. From bifurcation of roots to top of interseptum bone. 2. Between the level of the enamel-cement junction to the top edge of the papilla 3. Between