CORRELATION OF HISTOMORPHOMETRICAL PARAMETERS IN RAM TESTES

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Abstract. A lot of research work has been carried out on the spermatogenic process of animals, however, few data on testis morphometry in rams are available in literature. The aim of the present study was to determine histomorphometrical parameters and to analyse the correlation between the parameters in Lithuanian local coarse wool ram testes. Testis of Lithuanian local coarse wool rams (n=12) aged 13 months and weighing 54.50 ± 1,504 kg were investigated. All the animals under investigation were kept in the same conditions. The specimens of testes were selected after slaughter of rams. Bouin´s solution was used as fixative for 24 hours. Paraffin blocks were cut into 4 μm thick sections and were stained with HæE. The morphometrical analysis was carried out during which the diameter of tubules, the height of the seminiferous epithelium, spermatogenic index (SI) developed by Grocock and Clarke (1974), the number of Leydig cells and the ductal epithelium height of the epididymis were measured It was established in the present study that the number of Leydig cells correlated significantly positively with the diameter of testicular tubules and spermatogenesis index ($P<0.05$). The germinal epithelium height of testes revealed the negative correlation with the epididymal height of the epithelium ($P<0.01$) and positive correlation with spermatogenesis index ($P<0.001$). The epididymal height of the epithelium negatively correlated with spermatogenesis index ($P<0.001$). The number of the degenerated tubules negatively correlated with the number of Leydig cells, the diameter of testicular tubules ($P<0.05$), the germinal epithelium height of testes ($P<0.001$) and spermatogenesis index ($P<0.01$), and correlated positively with the epididymal height of the epithelium ($P<0.01$). Diameter of testicular tubules, germinal epithelium height and spermatogenesis index and number of Leydig cells have positive correlations.

Keywords: ram, testes, histopathology, histomorphometry