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DEVELOPMENT AND AGE-RELATED FEATURES OF MALE REPRODUCTIVE SYSTEM

Mogileva A., Karpanina O.

Scientific Supervisors: PhD, Dr. Sc. (Medicine), Professor Karelina N.R., PhD,
Associate Professor Toropkova E.V., Senior Lecturer Zhukovskaya N.V.
Department of Human Anatomy
Department of Foreign Languages
Saint Petersburg State Pediatric Medical University

Research relevance: disorders of male reproductive system being widely spread in modern global world require good knowledge of its development sources and mechanism algorithm. Genital swelling that occurs on 3–4 w. of gestation is the source of male reproductive system development. Primary reproductive cells appear earlier.

Objective: to analyze the period and age-related features of male reproductive system differentiation paying special attention to its characteristic organs.

Materials and Methods: the literature data give the information that genital cords in which there are reproductive cells grow into mesenchymal stroma of primary kidney from genital swelling. Paramesonephral sulcus is parallel to mesonephral sulcus and chips off. This period is the most crucial and meaningful.

Results: the indifferent stage of reproductive system development observed in both genders is over on the 6 week of embryogenesis. Since this period the differentiation of males and females starts to develop. The male reproductive system development is characterized by a return development of paramesonephral channel. Genital cords are transformed into wavy seminiferous tubules of the testis, while distal ends of genital cords are connected with primary kidney tubules that form appendage tubules. The upper part of mesonephral channel forms epididymis, and the seminiferous channel is formed by the bottom part. Prostate and seminal vesicles develop as parts of urinogenital sine. Seminiferous tubules are not wavy in newborns and look like continuous genital cords.

Conclusion: at the age of 7–8 the tubules start to have a lumen, genocytes produce spermatogenetic epithelium. Seminiferous tubules become wavier at 10–15, and spermatocytes of 1–2 t. appear in their lumina. Supporting cells reach a complete maturity by 12–16, there is an increase of glandulocytes, sperm and testosterone start to be formed. The number of smooth muscle cells increases at 20–35, this is the period of testis functional activity. The gradual atrophy of ending sections in connective tissue begins after 35. Age involution is observed at 50–80 being characterized by spermatogenetic epithelium reduction, spermatogenesis decrease and growth of connective tissue coat that leads to lumina closing.

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