Histological study of the volumetric changes in post natal development of renal structures of rabbit

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To study the volumetric postnatal developmentof the renal corpuscle, and the proximal and distaltubules, the kidneys of 30 male. Newziland rabbitswere used in the present work. Ages of one day, oneweek, one month, 3 months, 6 months and one yearwere chosen, and five animals from each age wereexamined. Paraffin sections were made and the sectionswere stained with haematoxylin and eosin. Thediameters of the renal corpuscles and proximal anddistal tubules were measured by an eye piece micrometer.The statistical analysis of the measurementsshowed the following:”* The diameter of the renal corpuscles increasedsignificantly from one day up to one month then theincrease was insignificant from one month up to 6months age then the di ameters tended to be constantfrom 6 month to one year.* The diameter of the proximal tubules increasesignificantly from one day up to 6 months then it44became nearly constant from 6 months to one year.* The diameter of the distal tubules increasedsignificantly from one day up to one month, a lapsewas noted between one month and three months, anothersignificant increase was noticed up to the matureage (6 months), then the diameters became nearlyconstant from 6 months to one year.from these results, it can be concluded thatthe maturi ty of renal functions, as evidenced by theresults of the other investigations, go hand in handwith the volumetric structural development. A linearincrease in the volume of the structures forming thenephron might indicate a linear maturity of thefunctions from the neonatal period up to the matureage.