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JOURNAL ARTICLE

Ultrastructural studies on the development of the blood-epididymis barrier in immature rats

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The development of the blood-epididymis barrier in immature rats (8, 11, 14, 18, and 21 days old) was examined with an electron microscope using lanthanum nitrate as an electron dense tracer. A gradual increase in the development of the blood-epididymis barrier was noted with age. On Day 8, lanthanum was frequently detected in both the intercellular spaces and the lumen. On day 14, no lanthanum penetration into the lumen was observed in 75% of the junctions in the caput, 40.3% in corpus, and 30% in cauda epididymidis. On Day 18, only 7.5%, 9%, and 15%, of the junctions in the caput, corpus, and cauda epididymidis, respectively, remained permeable to lanthanum. No lanthanum was observed in the lumen of any tubules in the 21-day-old rat epididymis. These findings indicate that the postnatal development of the blood-epididymis barrier is gradual, and that its formation is virtually completed by Day 21. As with adult rats, the zonula occludens is the ultimate structural component of the blood-epididymis barrier in immature rats (Agarwal and Hoffer, 1985).

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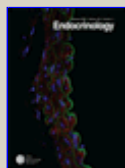
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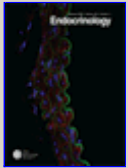


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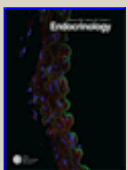


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