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JOURNAL ARTICLE

Human chorionic gonadotropin but not the calcitonin gene-related peptide induces postnatal testicular descent in mice

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The androgen-regulated paracrine factor, calcitonin gene-related peptide (CGRP), has been proposed as a possible mediator of testicular descent. This peptide has been found to increase rhythmic contractions of gubernaculae and is known to be released by the genitofemoral nerve. We have investigated the ability of CGRP to induce premature testicular descent. CGRP was administered alone, or in combination with human chorionic gonadotropin (hCG) to C57BL/6 male mice postnatally. The extent of testicular descent at 18 days postpartum was then ascertained. The potential relationship between testicular weight and descent was also examined. Our results show that testes of mice treated with either hCG alone, or in combination with 500 ng CGRP, were at a significantly lower position than those of controls by 16% and 17%, respectively. In contrast, mice treated with 500 ng of CGRP alone had testes at a higher position when compared to those of controls, by 19%. In mice treated with 50 ng of CGRP alone or in combination with hCG, testes were at a position similar to those in controls. Furthermore, testicular descent was analyzed in relation to testicular weight, and we found that significantly smaller testes per gram of body weight than those of controls were at a significantly lower position compared to those of controls. Our data demonstrate that CGRP had no effect on postnatal testicular descent and that there is no relationship between postnatal descent and testicular weight.

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