

Association of the renin-angiotensin system components in human follicular fluid with age, ovarian function and IVF outcome

Lun Wei¹, Chao Luo¹, Anwen Zhou¹, Le Bo¹, Zhinan Wu¹, Xuanping Lu¹, Lei Zhan¹, Shasha Gao¹, Fei Qian¹, and Caiping Mao¹

¹First Affiliated Hospital of Soochow University

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Abstract

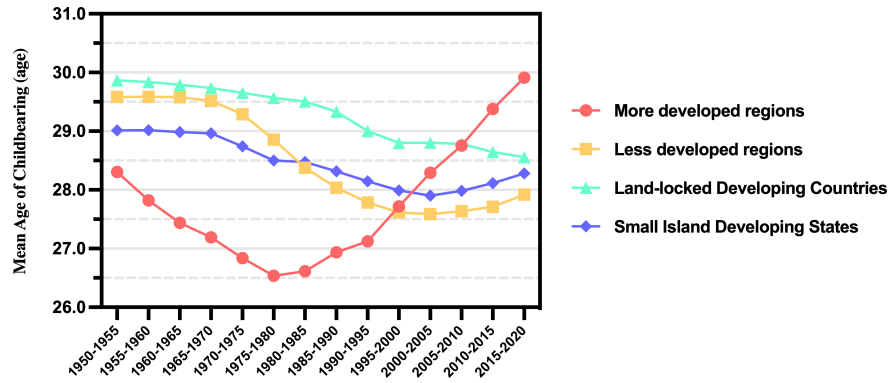
Objective: To investigate the association between the local renin-angiotensin system (RAS) in human follicular fluid (hFF) and age, ovarian function, in vitro fertilization (IVF) outcome. **Design:** Study on the correlation of non-intervention. **Setting:** Reproductive Medicine Center, First Affiliated Hospital of Soochow University. **Sample:** hFF of 139 women who received IVF simply because of their husband's factors from January 2021 to February 2022. **Methods:** The correlation between age and RAS in hFF was analyzed by simple linear regression, and multivariate linear regression was used to further analyze the correlation between the RAS and IVF outcome. **Main Outcome Measures:** The levels of RAS components in hFF were measured, including Renin, ACE, ACE2, AngII and Ang(1-7). **Results:** The influence of age on ACE-AngII-AT1/2R axis was more significant than that on ACE2-Ang(1-7)-MAS axis in hFF; Provides evidence that gonadotropins mediate RAS activation of local ovarian follicles; It is still impossible to prove the effect of RAS on steroid hormone production, at least in ovarian follicles RAS cannot affect steroid hormones in the systemic circulation; Age and the level of RAS components in hFF have certain clinical value in predicting the number of oocyte retrieval and the rate of MII maturation. **Conclusions:** The local RAS in ovarian follicles is affected by age and correlated with ovarian function and IVF outcome.

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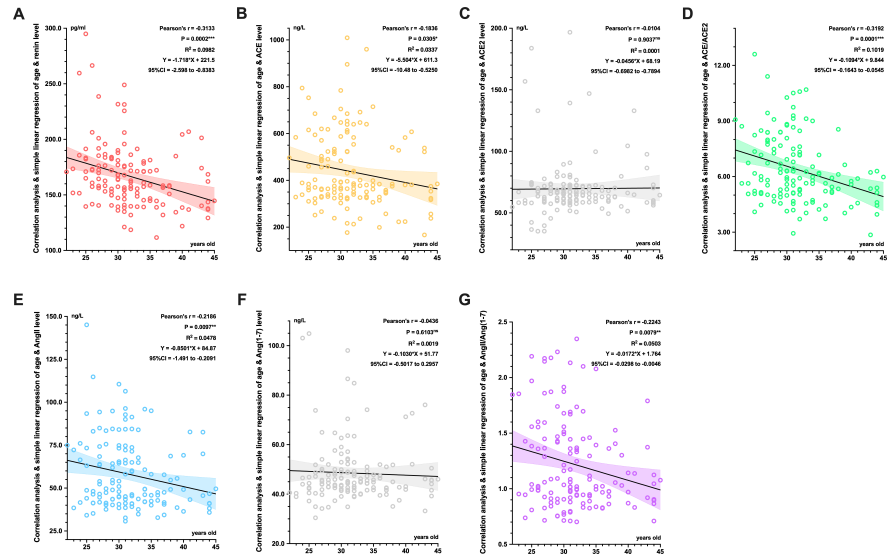
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