39: INCREASED EXPRESSION OF YAP IS ASSOCIATED WITH THE DECREASED CELL AUTOPHAGY IN THE EUTOPIC ENDOMETRIAL STROMAL CELLS OF WOMEN WITH ENDOMETRIOSIS

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Objective
To explore the role of Yes-associated protein (YAP) in the regulation of cell autophagy in the eutopic endometrial stromal cells (ESCs) from a subset of women with endometriosis.

Design
Biochemical and molecular study in primary endometrial stromal cells.

Materials and Methods
The expressions of YAP pathway and cell autophagy markers (mTOR, LC-3) in ESCs of women with or without endometriosis were validated by quantitative real-time PCR and Western blotting. The protein levels of autophagy markers were detected in the eutopic ESCs after the transfection with YAP-knockdown vector and Verteporfin treatment in ESCs, respectively.

Result(s)
The mRNA levels of YAP, TEAD, mTOR were all increased in the eutopic ECSs of women with endometriosis compared with controls ($P > 0.05$). Similarly, the protein levels of YAP ($P < 0.05$) and mTOR($P < 0.05$) were significantly increased in the eutopic ECSs of women with endometriosis compared with controls, whereas the ratio of the autophagy marker protein LC3-II/LC3-I ($P < 0.05$) was significantly decreased in the eutopic ECSs of women with endometriosis compared with controls. Furthermore, YAP knockdown and Verteporfin treatment in the eutopic ESCs increased the level of cell autophagy with an increased ratio of the autophagy marker protein LC3-II/LC3-I ($P < 0.05$).

Conclusions
Our study demonstrates that the decreased cell autophagy level is associated with the increased expression of YAP in the eutopic ESCs and it may be negatively regulated by YAP. YAP should present a novel therapeutic method against endometriosis.

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