Influence of bisphenol A on morphology and β-HCG secretion of human villi during early pregnancy

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View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To explore the correlations between bisphenol A (BPA) and the secretion function of the morphology and β-HCG of early human placental villi. Methods: Human villi collected from 40 cases of early pregnancy (6-8 weeks) were in vitro cultured as group A, B and C, and treated with BPA at $1000 \times 10^{-6}$, $500 \times 10^{-6}$, $1 \times 10^{-6}$ g/L separately. Group D was assigned as control group. Culture media were detected for β-HCG level on the 2nd and 4th day of culture. The cultured villi were used for pathological examination on 4th day. Results: As culture time prolonged, β-HCG levels of group A, B and C showed a gradual increase, and the increasing level was positively correlated with β-HCG level ($P=0.002$). β-HCG level of group D showed reducing tendency, and was significant different from that of other groups ($P<0.01$). Conclusions: BPA can enhance β-HCG secretion of early villus.

[KEY WORDS] Bisphenol A; β-HCG; human early villus; culture in vitro