

113. Glucocorticoid Receptor in the Rabbit Fetal Lung: Cytoplasmic to Nuclear Translocation at Different Stages of Development

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Dexamethasone, administered to rabbit fetuses earlier than 25 days of gestation, caused precocious appearance of pulmonary surfactant in amniotic fluid. But dexamethasone, administered after 25 days of gestation, had no effect on accelerated appearance of surfactant.

The concentration of cytoplasmic glucocorticoid receptor in the lungs of developing rabbit fetuses remained at constant level from 23 days of gestation to the end of gestation. And the amount of nuclear receptor in the lungs of developing rabbit fetuses increased gradually from 23 days to term. Dexamethasone, administered to rabbit fetuses earlier than 26 days of gestation, could cause a depletion of cytoplasmic glucocorticoid binding sites in the lungs followed by the movement of sites to the nucleus. But when dexamethasone was administered after 26 days of gestation, dexamethasone cytosol receptor complexes did not move to the nucleus.

These data indicate that the amount of glucocorticoid cytoplasmic and nuclear receptor in the lung is not the limiting factor in the development of fetal-lung responsiveness to administered glucocorticoids and that after 26 days of gestation, fetal-lung responsiveness to glucocorticoids may be limited by the disturbance of translocation of glucocorticoid cytosol receptor complexes to the nucleus.

114. Autoradiographic Studies on Cellular Uptake of Exogenous L-DOPA and its Fate in Foetal, Newborn and Adult Mice

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Fifty $\mu\text{Ci/gbw}$ of the $^3\text{H-DOPA}$ was injected intraperitoneally in one female mouse of the 15th day of pregnancy, one newborn mouse of the 2nd day old and five adult mice. They were perfusion-fixed with 2.5% glutaraldehyde from 30 min. to 24 hrs. after injection.

And the visceral organs, placenta and fetuses are sliced according to the usual procedure in electron microscopy.

Sectins were processed for autoradiography using dipping method. Cells of fetuses and newborns which incorporate considerable amount of DOPA could be classified into 4 groups as follows;

- i) Endocrine cells which belong to paraneuron,
- ii) Neurogenic cells,
- iii) Cells actively synthesizing protein, but neither neural nor endocrine, and
- iv) Cells, incorporating small amount of DOPA when they become adult.

The isotope distribution showed almost similar pattern between fetuses and mother.

So it was supposed that DOPA passed through the placenta without modified.

115. Chromosomal Anomalies in Induced and Spontaneous Abortion

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The karyotype of 1000 induced abortuses and 340 spontaneous abortuses were determined. Chromosomal anomalies were detected in induced abortuses (4.9%). Among the former, 71.4% of abnormal karyotypes were trisomic, 10.2% X-monosomic, 8.2% double trisomic, 8.2% polyploid and 2.0% mosaic.

In the latter, 50.6% were trisomic, 23.8% polyploid, 17.5% X-monosomic, 0.6% 21-monosomic and 0.6% mosaic.

Examples of autosomal trisomy except 1-, 6-, and 12-trisomy were identified with Giemsa banding technique in both induced and spontaneous cases.

The frequency of chromosomal abnormality among induced abortuses tended to be high when maternal age was 35 years and over.

116. Etiological Observation of the