Stage 9  Advanced Endometrial Reaction
6 1/2 Days

By 6 1/2 days, the structure of the uterine mucosa is not much different from what it was on the 6th day. By 7 days, it still may not have changed, mainly because of the variation in the degree of development of specimens having the same copulation age. The uterine reaction was examined in detail in a specimen of 6 days 20 hours, which was somewhat retarded in development. The specimen is regarded as typical of 6 1/2 days. The structure of the implantation site, rather than the structure of the embryo, was chosen by Streeter [6] to define the comparable human age.

Uterine Reaction

After the disintegration of the uterine epithelium, the ectoplacental cone is invaded by blood (Fig. 51). The original lumen of the uterine crypt has disappeared. In this way, the developing placenta gains a solid contact with its environment and with the mesometrial blood vessels. The deciduous cells are manifold in appearance (Fig. 55). Deciduous glycogen cells with coarse droplets are seen near the periphery of the deciduous transformation zone, predominantly in the mesometrial direction. At the same time, large capillaries invade this area. Probably the capillary invasion is necessary for the rapid production of glycogen. The other deciduous cells contain only fine, diffusely distributed glycogen. Many mitoses can be found, sometimes irregular in appearance, and they resemble those in malignant tumors. This impression is enhanced by the appearance of several multinucleated giant cells (Fig. 55).

Embryonic Axis

During this stage of development, the embryonic axis is determined. A limiting furrow, F (Fig. 56) is situated cranially, at the front end of the embryo. Later on it deepens (Fig. 66). In the mouse, no clearly prominent primitive knot appears, and a defined primitive groove does not form until later.

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Figs. 52–56: Advanced endometrial reaction: 6 days 20 h

Fig. 52. Implantation site, low magnification.
An artificial cleft is seen between egg cylinder and ectoplacental cone.
KT 654. 100:1

Fig. 53. Deciduous boundary zone, low magnification.
KT 654. 100:1

Fig. 54. Detail of Fig. 52.
T = primary, trophoblastic giant cell with clear spherical nucleus containing a large nucleolus, N, and coarse chromatin, which is partially attached to the nucleolus. 700:1

Fig. 55. Detail of Fig. 53.
Boundary zone of deciduous expansion.
Irregular mitosis (Mi) and multinucleate deciduous cells (D). 700:1

Fig. 56. Egg cylinder with proamniotic cavity.
The boundary between embryonic and extraembryonic area is marked with arrows. F is the cranial limiting furrow of the embryo. The entoblastic cells become flattened at the free end of egg cylinder (En).
KT 654. 270:1