

Some aspects of the amniotic epithelium in polyhydramnios revealed by the scanning ultra microscope

by

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Our studies of the amniotic epithelium with the scanning microscope have shown some apparently very characteristic aspects of hydramnios, deserving of a preliminary note.

The JEOL JSM-US scanning microscope was used for our studies.

The surfaces of the amniotic cells are more convex and smooth, and show a reduction in microvilli.

A reduction in the size of the intercellular spaces is often found, and sometimes the cells are in close contact with each other. This occurrence appears to be related to an increase in cell volume.

The presence of cells with a much reduced volume and consequent development of markedly large intercellular spaces is characteristic of many areas.

It would seem that these observations represent various functional aspects of the same cell type, where moments of distention alternate with moments of contraction, leading to greater permeability of some intercellular spaces.

These aspects appear to be characteristic of hydramnios, and agree, in fact, with those obtained by one of our group in a preceding study with the transmission electron microscope ⁽¹⁾.

SUMMARY

Some characteristic aspects of the amniotic epithelium in hydramnios, as revealed by the scanning microscope, are reported.

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BIBLIOGRAPHY

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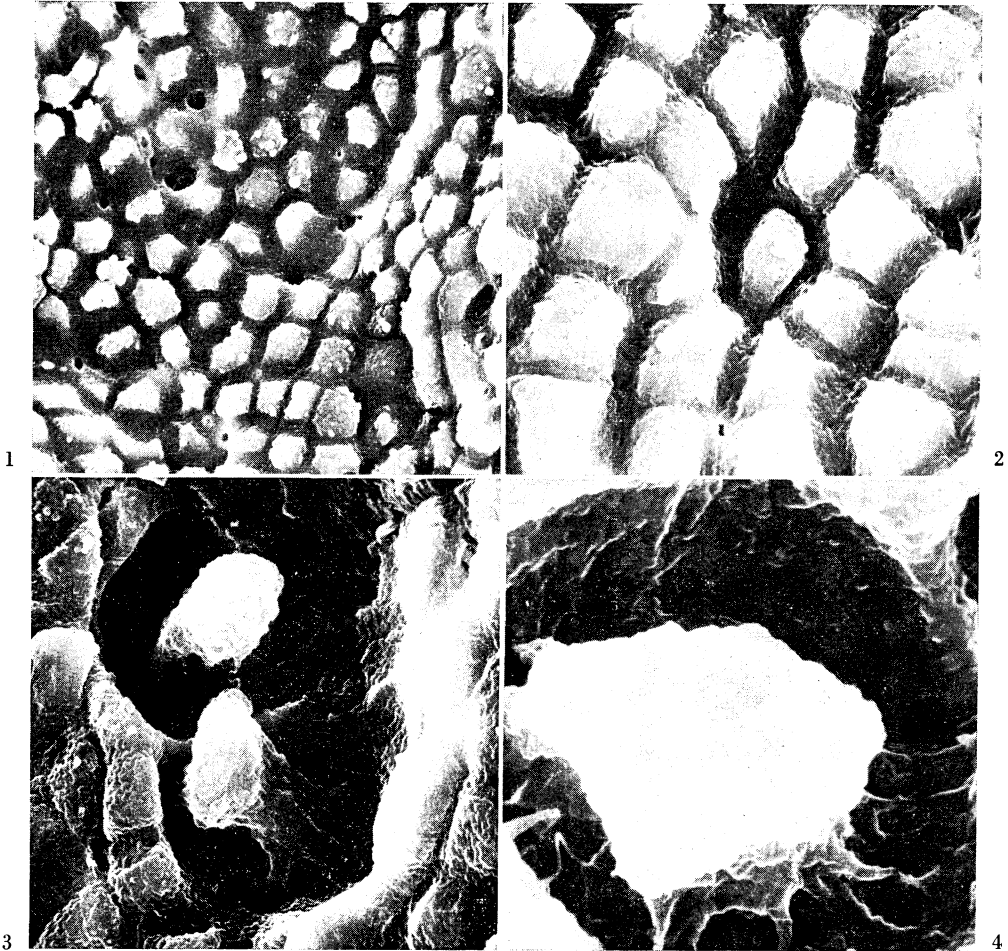


FIG. 1 - Hydramnios. The amniotic cells are largely in close contact with each other, with much reduced intercellular spaces at some points. (SEM 1000 x).

FIG. 2 - Hydramnios. The cells, closely joined, show a convex and projecting surface with very few microvilli. At the centre there is smaller cell, producing a larger intercellular space. (SEM 3000 x).

FIG. 3 - Hydramnios. Two amniotic cells of much reduced volume have led to the development of a large surrounding space. (SEM 3400 x).

FIG. 4 - Hydramnios. A cell in the process of reduction; a large intercellular space is created, intersected by many protoplasmic bridges. (SEM 6000 x).