a 20% solution of sucrose for 8–10 days (*2*). These plants have the mechanism for starch formation but do not form it under natural conditions, apparently because of the presence of an inhibitor.

Members of the lily, iris, amaryllis, and gentian families do not store starch in the leaves following photosynthesis, apparently because of the presence of a starch synthesis inhibitor. Onion, a member of the lily family, has the inhibitor.

References

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The Isthmic Mucous Membrane of the Human Uterus

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The purpose of this report is to present preliminary findings in a study of the mucous membrane lining the isthmic segment of the human uterus. These findings indicate that the isthmic mucosa is not peculiar, as it has been extensively described, but that, rather, it is an integral part of the corporeal andometrium.

According to current understanding, the isthmic mucosa is an entity in itself, separate and distinct from that of the cervix and corpus. A similarity with the endometrium is recognized, however, with the following exceptions: the isthmic mucosa is described as being thinner, poorer in glands, and richer in supporting tissue. Also, its glands are said to react poorly to the ovarian hormones, and to contain no glycogen during the secretory phase. A further difference is the reported absence of coiled arterioles, which are a prominent feature of the endometrium. The conclusion from these observations is that although the two tissues casually resemble one another, nevertheless they are fundamentally dissimilar.

Preliminary studies have been made of the mucous membrane of 38 human uteri removed at operation. The endometrial cycles were distributed as follows:

Early proliferative	6
Late proliferative	12
Early secretory	6
Late secretory	10
Post-menopausal	4

In each of these cases, similar blocks of the isthmic mucous membrane were prepared for comparison with the endometrial specimens.

Comparison of the endometrial functionalis with the isthmic mucosa confirms the observations noted above. However, when the endometrial basalis is examined in routine hematoxylin and eosin sections, it is found to be essentially similar to the isthmic mucosa. The basalis is of the same thickness. The general appearance of the glands, and their cyclic changes in response to the ovarian hormones, are the same. The characteristics of the stroma, and the vascular distribution, are similar. Special staining technics show further evidences of similarity. One concludes from these observations that the isthmic mucosa is in fact a continuation of the endometrial basalis and that it differs from the endometrium proper only in that the functional layer is lacking.

These observations cast serious doubt upon the propriety of designating the isthmus uteri as an entity of equal importance with the cervix and corpus. They suggest, rather, that this zone is part of the corpus uteri. Details of this study will be presented elsewhere.

Physical Studies on Corneal Tissues

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Improvements in the technique of corneal grafting have increased the interest in the proper preservation of corneal donor tissue. Many investigations have dealt with corneal metabolism (*6, 11*), permeability (*4*), transparency (*1, 8*), hydration properties (*8, 10, 12*), X-ray diffraction (*9*), birefringence (*8*), and elasticity (*13*). A number of investigators (*2, 3, 5, 7, 14*) have reported on methods for preserving corneal tissue but of these only three (*3, 5, 7*) have applied biological methods for determining the viability of the aging cornea. No attempts were made in the past to correlate physical properties of the aging cornea with the transplantability of the tissue. For this brief review only the most pertinent references have been selected from a large bibliography.

The object of our brief investigation was to find some physical properties of corneal tissue which would measurably change during aging to indicate suitability for subsequent successful transplants. The experiments were made with bovine corneas and comprised 1) quantitative light transmission measurements as well as 2) X-ray diffraction studies. The eyes were removed immediately after death of the animal, rinsed with a 0.025% isotonic buffered thyrothricin solution, transported into a sterile moist chamber, and processed at the laboratory within 1 hr. During aging, the corneal tissues were kept in a refrigerator at a temperature of 5° C.

1) *Light transmission.* Experiments were made to determine the light transmission of corneal tissue with aging under different conditions. Periodic light transmssion measurements were performed on several corneas set up for simultaneous aging. A disk-shaped cellulose acetate sponge with a round opening in the center served as the

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