PRODUCTION OF DECIDUAL CELLS IN AN OVARY ABOUT A PRIMARY CHORIO-EPITHELIOMA*

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WHILE studying a case of primary chorio-epithelioma of the ovary we noticed the presence of decidual cells in the ovarian stroma. Decidual differentiation co-existing with a chorio-epithelioma has not been reported so far, yet it appears to be of great importance. A discussion on the origin of the chorio-epithelioma will be published later; we shall confine ourselves in this paper merely to a description of the tumour zones surrounded by grayish strands. At the lower part was found a little white nodule which microscopically was shown to be ovarian stroma, with Berger’s sympathicotrope cells. The remnants of ovary included in the tumour showed clearly that the latter arose from the ovary itself. The tube and the uterus were examined and found to be completely intact.

Histologically, most of the tumour shows areas

and the decidual cells, and only a few facts relating to the nature and genesis of these will be considered.

The chorio-epithelioma appeared in a woman aged 42, whose last confinement occurred six years ago. The tumour, surgically removed (by Dr. A. M'agnan), was of the size of a grape-fruit, and showed on section large hemorrhagic

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plasm, mostly vacuolated, and contain several nuclei. On their surface there are numerous, very fine, short projections which produce a brush-like appearance. These are best seen after staining with Mallory's phosphotungstic hematoxylin. Beneath the syncytial layer are cells of a different kind. These cells are polygonal from mutual pressure; their cytoplasm is clear but not homogeneous; their nuclei are uniform in size and contain a finely granular chromatin. In a word, they are similar to the Langhans cells.

The tumour cells have destroyed by their contact the ovarian stroma and the blood vessels. The resulting hemorrhage infiltrates the normal and neoplastic tissues, and compresses and dissociates the latter. As a result there is an increasing amount of blood in the tumour.

To summarize, the tumour is a typical chorio-epithelioma.

In the ovarian tissue, but outside the invaded zones, are sheaths of multistratified cells around capillaries or small vessels. These cells are large, pleomorphic, oval, elongated, or club-shaped. Each of them is surrounded by a thin collagen layer. The pale cytoplasm contains granulations, and the nucleus, faintly stained, is oval and occupies the centre of the cells. They are characteristic decidual cells (Fig. 2).

The appearance of decidual cells around vessels, during normal pregnancy, has been noted in the deciduates by Hubrecht (quoted by Gerard). Pol Gerard has studied the phenomenon especially in a little African insectivorous animal, *Nasilio brachyrhynchus*. Our findings are identical with his. The connective tissue surrounding the vessel becomes edematous, and the anastomosed fibroblasts form a loose network.

In the meantime, these fibroblasts grow in size, break away from their anastomoses, multiply, form a multistratified sheath around vessels, whilst the protoplasm becomes loaded with fine granules.

What is the cause of that decidual differentiation? Some hold that the hormone of the corpus luteum or oestrin is responsible; others, the follicular hormone; while still others believe in a placental hormone action.

In our case, where there are neither follicles nor corpus luteum, we have to deal with a tumour of pure chorio-placental elements, therefore with elements which represent the fetal placenta solely. Then it is not illogical to believe that the appearance of decidual cells is caused by a secretion of the chorio-epithelioma elements. If the perivascular decidual cells of our tumour have been differentiated under the hormonal action of the chorio-epithelioma it seems that the hormone which gives rise to the appearance and multiplication of the decidual cells in normal pregnancy may come exclusively from chorio-placental elements. In other words, if our interpretation is correct, it suggests the existence of an hormone which, secreted by the elements of the fetal placenta, determines the production of the characteristic cells of the maternal placenta.

**Reference**

1. **Gerard, Arch. de Biologie, 1923, 33: 197.**

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**IS THE COMPLEMENT FIXATION REACTION RELIABLE IN SHOWING WHETHER GONORRHEA IS CURED?**—The value of the complement fixation reaction in gonorrhea would be greatly increased if it could be used not only in diagnosis but in determining whether a case is cured. Before it can be used for this purpose, it is necessary to determine whether it becomes negative immediately after cure or not for a considerable period after. Opinions are divided as to the length of time the reaction persists. The author examined 136 cases with a view to answering this question. Examinations were made twice a week. He used gonargin as an antigen, and found it as useful as gonococcus antigen. He not only determined the reaction but titrated the positive sera to determine the antibody content. He found that the complement fixation reaction in gonorrhea is, with a few exceptions, a specific reaction, which is often present in uncomplicated cases, and practically always positive in complications with changes in the deeper tissues. In uncomplicated gonorrhea the reaction is less strongly positive and therefore does not persist so long. It disappears after an average period of four to eight weeks, often even before clinical recovery.

In complications that cause deeper tissue changes, the reaction is more intense, but its degree of positivity does not always correspond to the severity of clinical symptoms. The disappearance of the reaction also shows different types and it is not always in direct proportion to the retrogression of the symptoms.

Generally in inflammations of the prostate and seminal vesicles the reaction is long-continued and its intensity decreases slowly. Clinical restoration to normal is also often slow in these cases, and most of the recurrences are in cases with complications in the seminal vesicles and prostate. Often they occur after the complement fixation reactions become negative, but sometimes it is still fully positive. In complications that can be cured quickly and leave no traces, the reaction also quickly becomes negative. From these facts the author concludes that a stubborn positive reaction is always caused by a focus of gonococci somewhere in the body, and if a reaction is positive three months after cure, it does not mean that the patient has had the disease, but that he still has it. Such individuals are not cured and consent to marriage should not be given.—Ludwig v. Heiner, *Dermat. Wochsnchr.,* 1930, 91: 1308.