

after oophorectomy, but also to the normal functioning of other organs and the general system.

Born and Fraenkel found that an internal secretion enters the circulation from the ovaries and furnishes the impetus for changes incident to menstruation and pregnancy; but whether this secretion is elaborated by the interstitial cells of the gland or emanates from the corpus luteum has not yet been clearly demonstrated.

Experiments with the Roentgen ray seem to indicate that the functioning portion of the ovary lies in the cortex, for Bonin and others find the interstitial substance of the gland unaffected by such treatment, while the primordial and Graafian follicles atrophy and give rise, not only to a diminution or cessation of the menstrual flow, but also to an atrophy of the entire genital system and the breasts.

Further, following hysterectomy, the ovaries remaining—although Mandl and Burger saw degenerative processes and cystic changes in the ovarian follicles, which would at least retard ovular ripening if not preclude development—Felner has shown that in such follicles the theca interna is converted into lutean tissue, and from this, as many suppose, the internal secretion is derived.

On the other hand, Carmichael and Marshall in accord with Holzbach and others, find that "the removal of the uterus in an adult animal (rabbit) does not give rise to any degenerative changes in the ovaries if the vascular connections of the latter remain intact."

It is interesting to note in this connection that, in the case of third ovary reported by me before the American Gynecological Society in 1905, cystic degeneration seems to have started in the supernumerary gland as the result of the removal of the paired organs, possibly, as above suggested, the result of interference with the vascular connections. Reference to the now almost voluminous literature of this subject will indicate the interest taken in the elucidation of the problem, and will show that, notwithstanding the discrepancies in the conclusions arrived at by various observers, it is generally conceded as an established fact that an internal secretion from the ovaries positively exists, that its effect on the economy is marked, especially as regards psychic symptoms, and that it is essential to the well-being of woman during, and possibly before and after, menstrual, that is to say, reproductive life.

In a less settled stage is the question of an internal secretion from the uterus and the correlation of the functions of this organ to those of the ovaries. Abel and Zweifel found that in cases of hysterectomy in which a portion of the uterine mucosa was left behind, menstruation persisted and menopausal symptoms did not appear. Doran is inclined to support this theory after the analysis of 60 cases of sub-total operation. From his experiments Blair Bell is of the opinion that