

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXVII.

TORONTO, JULY, 1911.

No. 1

Original Articles

THE RELATIONSHIP BETWEEN THE DUCTLESS GLANDS AND CARBOHYDRATE METABOLISM.*

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In accepting the kind invitation of the Chairman of the Medical Section to address this Association, it seemed that it might be profitable to review a field which has been made fertile by the researches of many workers in an effort to throw light on a problem which, as yet, is only partially solved. It occurred to the writer that a review of the subject of carbohydrate metabolism, with especial reference to its bearing on the etiology of diabetes mellitus, would be of interest not only to the physician, surgeon, and obstetrician, but also to the physiologist and pathologist. As the subject is such an enormous one, I have decided to confine myself to a consideration of the influence of the ductless glands on the warehousing of the ingested carbohydrates. Since the scope of such a paper must necessarily be limited, a review of the investigations carried out along these lines must consequently be brief and rather fragmentary.

The glands that I have considered are the pancreas, adrenals, thyroid and pituitary. At this point an explanation is necessary. The pancreas in the ordinary sense is not a ductless gland, but, as we shall see later, it contains innumerable small groups of cells, which are really ductless glands, whose function is entirely different from the ordinary acini of the pancreas, and whose secretion passes directly into the surrounding vessels. Further, it remains to be

*Address in Medicine, Ontario Medical Association, May 30, 1911.