

practically said all. We are brought back to the old story of a cancer "diathesis" or what is much the same thing the supposition of multiple regions of predisposition. We are as far as ever from comprehending the ultimate cause of tumour formation.

The association of active tuberculosis and advanced carcinoma is worthy of more than passing reference, as it is a subject of ever present interest to clinicians and has an important pathological bearing. The interest in this question dates back almost fifty years to the days of Rokitsansky who stated that "an antagonism prevails between tubercle and carcinoma. Whenever their general correlation is susceptible of proof, cancer has succeeded to tuberculosis." Owing to the perfection of the microscope and the discovery of the specific bacillus of tuberculosis, any confusion between the lesions of the two diseases has long since been done away with, and the general result of later observations has been on the whole to strengthen the position taken by the great Viennese pathologist.

The most recent writer, MacCaskey (*Amer. Journ. Med. Scien.*, July, 1902), concludes that "apparently some antagonism existed between the presence of the toxins of tuberculosis and the conditions favourable to the development of cancer," and my own observations lead me also to a belief in some such antagonism.

In 685 autopsies at the Royal Victoria Hospital of which I have notes, tuberculosis occurred 234 times. It is of course well known that tuberculosis is a disease of the early part of life while carcinoma is found after middle age. Taking forty years as the age limit between the two diseases, in 60 persons who reached the cancer age of 40, who had active or latent tuberculosis, 10% developed carcinoma. In 243 non-tuberculous persons of the cancer age of forty or over, 22.22% were found to have carcinoma. In 65 persons over forty who had carcinoma 9% developed active or latent tuberculosis. Of 279 non-cancerous persons over forty 19% had active or latent tuberculosis. This would appear to be conclusive as to a mutual antagonism between the two diseases. Full-blown tuberculosis and carcinoma were found associated in 4.88% of carcinoma cases, a considerably larger proportion than the figures given by Williams (1.45%) in his article on the pathology of cancer in volume XVII, *Twentieth Century Practice*. Combining the figures given by Lubarsch, Zahn, Moak and myself, in 4,791 autopsies in which active tuberculosis was found carcinoma was present in 23 instances, a proportion of about 4.23%. It will thus be seen that the association of the two diseases in the early stages is much less frequent than the combination of carcinoma with latent and obsolescent tuberculosis, and this is in general accord with the published observations.