

tion. Trepannation, laryngo fissure, external urethrotomy, forcible dilation of the rectum and urethra, and laparotomy were preliminary operations for diagnostic purposes that were either permissible or demanded in many cases. He considered it to be the surgeon's duty in the case of tumor of the larynx giving rise to a suspicion of cancer that could not be extirpated from the mouth, to at once split the larynx in order to be able to ascertain with certainty the nature of the malady. The abdominal cavity was opened without hesitation when it was a question of the diagnosis of a disease dangerous to life.

In cases in which repeated examinations gave a negative result, a suspicion of syphilis was justifiable, and in such cases anti-syphilitic treatment could be introduced. He had seen many cases of muscular sarcoma disappear, and had become convinced that in most cases, perhaps in all cases, of sarcoma of muscle, the tumor was really syphiloma; anti-syphilitic treatment would decide the diagnosis, but it must be steadily persevered in for months. In many cases in which potassium iodide was not efficient, inunction, infusions, arsenic would effect removal of the supposed sarcoma. He had proposed the following method in all tumors of the tongue and lips: Where the microscope showed epithelial cancer in the part scraped and excised, to proceed at once to extirpate the tongue and the parts around; if tubercle bacilli were found embedded in the connective tissue, to scrape out the accompanying tissue and apply the cautery; if the fungus of actinomycosis were found, to scrape out and apply sublimate gauze; if spindle cells were found, to first suspect a syphiloma and commence energetic anti-syphilitic treatment. The microscope should also be used from time to time, as a syphiloma could be converted into cancer. If a syphiloma were excised by mistake, it would quickly recur, and finally general marasmus would terminate the scene. The distinguishing characteristics of malignancy were, the disposition to rapid growth, the recurrence of the tumor, the accompanying affection of the lymphatics, metastases, and finally incurability; but the anatomical appearances did not allow a certain conclusion as to the malignancy; the course of cases of tuber-

culosis was extraordinarily various; sometimes they remain superficial for years, and in others, even after careful clearance of the diseased parts, great destruction of tissue took place, and rapid return. Tuberculosis of the peritoneum was often cured by removal after laparotomy.

Respecting ætiology, all investigations into the final cause came back upon the assumption of a predisposition, a diminished power of resistance, weakness of the tissues (Virchow, Paget, Thiersch, Billroth, Cohnheim). Winiwarter could only demonstrate heredity in six per cent. of cases. Sarcoma originated in extreme growth of the connective tissue, especially of the walls of vessels, carcinoma in growth of the epithelium. It was not impossible that occasionally the penetration into the neighboring tissue by the exuberant tissue was due to weakness of the former. The origin of sarcoma from syphilis was suggestive as to the origin of malignant tumors generally. Syphilis, especially the old, which was imperfectly treated, uncured, apparently extinguished, left behind a disposition to growths from the groups of connective tissue (gummatous inflammations), gummata which occasionally after injury and irritation of any kind gave rise to tumors of the connective tissue groups (sarcoma, fibroma, myoma, neuroma); these were often curable by internal remedies, and sometimes disappeared of themselves with suppuration or erysipelas. If such were removed, they sometimes did not return, but they generally did return with the greatest persistence and at constantly lessening intervals. Like the most malignant tumors, they could give rise to the formation of general metastasis through the lymph and blood-vessels. Many syphilomata were disposed to fatty degeneration, caseation and ulceration; in others the cell formation was massive and always remained at the earliest stage. He remarked that want of evidence of syphilis did not exclude it, as it might be hereditary, and originating in earlier generations, just as gout, diseases of the blood and skin and others were handed down, and such inherited diseases sometimes showed themselves for the first time in apparently perfectly healthy individuals, and late in life, leaping over several generations and again distinctly recurring. The inheritance of syphilis had been indisputably proved. That generations could escape