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Criticism and News.

Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address, DR. J. L. DAVISON, 12 Charles St., Toronto.

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THE BACILLUS OF CANCER.

Since the great majority of contagious and infectious diseases have been shown to be due to the presence in the tissues of a micro-organism, the medical world has been expecting some explanation as to the cause of malignant growths, and especially of cancer. The question of the contagiousness of cancer, antedates the discovery of disease germs, numerous writers having remarked on cases which came under their notice, where there was apparently a fair probability that the virus of cancer had been introduced into the tissues of healthy persons, and had produced its specific results. Some recent writers laugh at the idea of the possibility of such infection, notwithstanding numerous cases which have recently been published, apparently not so much with the idea of supporting the theory of contagiousness, as of placing before the profession facts which, other things being equal, would cause careful men to pause before delivering snap judgments on matters, which from want of sufficient scientific training they are incapable of comprehending. Thus cases of cancer of the penis in men whose wives suffered from malignant disease of the womb; of cancer growing upon a limb opposite to one on which a malignant growth already existed; of a nurse acquiring cancer after having washed for a length of time the dressings of a cancerous os, and others too numerous to recite, seem to point in a direction opposite to that of mere accidental occurrence. Till within

a very short period of time, all such cases were ruled out of court as infectious by scientists, because no specific organism had been found which would in any way account for such transmissions as we have referred to above. Because Koch was unable to discover a *bacillus* in cancerous growths, not a few were ready to declare that no such bacillus could exist. But he did not find the coccus of erysipelas, yet to-day no one doubts that Fehliesen did. The discovery of a cancer bacillus was left for Scheurlen, of Berlin, who in a late communication to the Verein für inner Medecin, gave the result of his investigations in this subject. He made experiments with about forty specimens of cancer of the breast; from every specimen he inoculated twenty culture tubes, thus giving in all 800 specimens. The tumors were washed in a sublimate solution, and the "cancer-juice" scraped from the freshly-cut surface by means of a sterilized knife. He used as cultivating media, serum from a case of pleurisy, gelatine, potato and agar-agar. The growth of organisms was rapid and luxuriant, forming colorless films upon the surface of the fluid, which films afterwards became brownish yellow. At first there were found only bacilli, but later, spores made their appearance. He found the same spores in the cancer-juice, but in smaller numbers than the bacillus, whilst in sections of the tumors no bacilli were found. He had no difficulty in staining the bacillus, but the spores did not respond so easily; no method having been found successful, except Erlich's process for staining the tubercle bacillus. The spores were found both within and without the cells. For nearly two months (since Oct. 1st) Scheurlen has been experimenting with the products of his cultures. He inoculated six bitches in one of the mammary glands, and found in two, which died swellings had formed at the seat of inoculation. The swellings were not conclusive as to the theory of transmission, though they point strongly in that direction; they consist of granulation cells, epithelioid cells, together with bacilli. Scheurlen does not doubt that the results obtained are due to chronic inflammation with cancerous degeneration. It may be mentioned that in medical circles in Berlin, no decided belief in the specificity of the bacillus discovered is held, though the communication and subsequent discussion has attracted a good deal of attention. Virchow and Von Bergman have ap-