

The trigonal prevalence and causation of aniline tumors have been related also to the chronic inflammatory processes which frequently occur in this part of the bladder, on the assumption that exposure to aromatic amines results in chronic cystitis. The further course of events is then readily explainable by the application of Virchow's theory of chronic irritation. The histological observations which the author made on dogs, and those reported by Perlmann and Staehler (1932 and 1933) on rabbits, indicate that Virchow's theory cannot be applied to aniline tumors. Whenever chronic inflammatory changes were present in association with preneoplastic or neoplastic lesions, they were secondary and coincidental but not causative. In consideration of the absence of tumor formation in the great majority of cases of chronic chemical occupational dermatoses and pulmonary conditions, chronic nonspecific irritation appears to be highly overrated as a carcinogenic factor (Oppenheim). Aniline tumors are not phenomena of secondary epithelial growth on the basis of a chronically inflamed and impaired supporting tissue. Neither symptomatic nor morphologic evidence supports such a conception.

XII. TREATMENT

It may suffice to state here that the indications for therapy and the methods used in the management of aniline tumors are identical with those for bladder tumors in general. Surgical excision, electrocoagulation, irradiation with roentgen-rays and treatment with radium emanation have been employed. According to the experiences of Simon (1932), Mueller (1936), Ferguson (1937) and Washburn, these tumors respond to irradiation. Mueller stated, however, that the metastatic tumors react more readily to this therapy than the primary growths in the bladder. In view of the frequent multiplicity of aniline tumors, therapeutic measures which affect the entire viscus, without causing functional impairment, deserve special consideration.

A new and still experimental method of therapeutic attack has been proposed by Henschen. Following the thoughts of Bauer in regard to the therapeutic effect of the application of minute amounts of 3.4-benzpyrene to skin cancers, Henschen has administered, during the last two years to his patients, with bladder tumors, small amounts of naphthylamine by mouth. He believes that the contact of the naphthylamine with the carcinogenic agent in the wall of the bladder, partially or totally, inactivates the carcinogen. The preliminary results obtained with this method are, according to its author, promising.

XIII. PROGNOSIS

The final outcome of any neoplastic disease depends on various factors, such as the degree of malignancy (local and metastatic activity of growth), the extent and location of the tumor, the age and general condition of the patient, and the type and quality of the therapeutic procedures. An accurate prognostication of bladder tumors, especially those of chemical etiology, is