

contain aromatic amines as impurities, or may decompose in the body into carcinogenic degradation products of aromatic amine character, or exhibit a neoplastic action upon the urogenous tract in experimental animals.

6. Tumors which develop under the above stated conditions may occur in the kidney, renal pelvis, ureter, urinary bladder or posterior urethra. The time of occupational exposure to these aromatic amines and dyes should not be less than one year. The latency period may be up to forty years.

#### XVIII. SOCIAL ASPECTS

Aniline tumors of the urogenous organs are of distinct social significance for several reasons.

1. It is of definite and direct social importance that members of a certain occupational group are affected by neoplastic conditions which may cause prolonged disability and which may result not infrequently in death. Apart from the moral and mental effects produced by such an industrial disease upon the person involved and his dependents, disorders of this type will affect seriously the economical status of these persons. While these financial effects are somewhat mitigated in states with adequate compensation laws, the absence of such legal provisions removes, as a rule, the last protective barrier from a severe economical calamity, as the persons affected in the great majority of instances belong to the financially weak laboring class. The diseased worker and members of his family are apt to become public charges. The existence of this industrial neoplastic disease is a public financial and moral liability, which a community should be anxious to keep as low as possible.

2. The social interest in this industrial disease should be especially keen in those communities which have in their midst chemical factories producing or handling aromatic amines, in view of the possibility that even persons not employed in these establishments, but living within their environmental fume zone, may be affected by aniline tumors, if the methods of production are controlled inadequately. It is necessary that local health authorities devote proper attention to these possibilities and take the necessary steps to protect the population wherever plants are negligent in the proper disposal of fumes and dust containing carcinogenic aromatic amines.

3. In an editorial, *Industrial Medicine* (1933) emphasizes that the manufacture of aniline dyes requires careful technical and medical supervision so as to guard the health of workers exposed to hazards connected with the various manufacturing processes involved. It seems desirable that the introduction and observation of pertinent technical and medical preventive and protective measures is not left to a large extent to individual initiative and discretion, but that certain minimum requirements be fixed by law and enforced by governmental factory inspectors. Such laws would protect the legitimate interests of the community. This special factory supervision should be ex-