

Also conducive to the reduction in number of aniline tumors correctly diagnosed is the usual unavoidable turnover of labor in chemical plants. Neoplasms of this type may develop many years after a workman has left a hazardous occupation. He may therefore forget about this occupation or may not mention it to his physician, as he does not appreciate the existence of a causative relation between work engaged in many years previously and his present ailment.

There is the distinct possibility that not all cases, recognized or suspected of having occupational origin, have been reported in scientific journals or governmental records. All the American cases, for instance, were observed in the plants of one chemical company. It is reasonable to think that similar conditions may exist in other chemical manufacturing concerns producing or handling the same or similar chemicals of the aromatic series. This contention is supported by a remark, made by Schwartz, in one of his papers on the industrial cutaneous hazards of organic chemicals. Schwartz stated upon this occasion that the workers of an American plant, engaged in the production of aromatic nitro-compounds (dinitrophenol), seemed to be affected by bladder tumors. Inasmuch as aniline tumors have occurred, according to published reports and on the basis of personal knowledge of this matter, only in operations handling aromatic amines, the information supplied by Schwartz must refer to an additional source of aniline tumors in the United States.

Similar conditions apparently have existed in former years in Germany. When Rehn, in 1905, reported the results of a general survey of German chemical plants where aromatic amines were manufactured or handled, he noted that tumors were recorded in only seven of the eighteen factories investigated, while in the remaining eleven which had been engaged also in the production of aniline and its derivatives for many years, no such neoplasms, allegedly, had been seen. Rehn attributed this discrepancy to a defective study of workers employed in these factories.

In a discussion of this aspect many years ago Oppenheimer complained that German factories had a tendency to have their workers treated by factory physicians and in their own hospitals. He added that the statements of the workers, among whom such tumors had occurred, differed, according to his experience, widely from those made by the factory physicians. While the information obtained from the workers without any doubt is unreliable as far as the actual figures are concerned, it cannot be entirely disregarded, since it is supported to a certain extent by the observations of Nassauer. This author found 28 cases of tumor of the bladder among 105 workers with a yearly transient index of 15 per cent during the years 1892 to 1904. His statements received confirmation from the report of Leuenberger, who noted that such tumors were 33 times as frequent among dye workers as in the male population of Basel. Similar data were published recently by Mueller (1933) from Basel.