

III. INCIDENCE OF ARSENICAL CANCER

The recorded number of occupational arsenical cancers of the skin is relatively small in comparison to the numerous cases of industrial arsenico-dermia, as the claim of Bayet and Slosse concerning the arsenical etiology of all tar and pitch cancers has been disproven definitely. The first mention and description of occupational arsenical cancer of the skin was made by Paris in 1822. This physician practised medicine in Cornwall, where at that time copper smelters and tin foundries were operated. During his professional work, Paris noticed the high incidence of cutaneous malignancy among the men employed in these factories. His description of these observations was as follows: "It may, however, be of interest and useful to record an account of the pernicious influence of arsenical fumes upon organized beings, as I have been enabled to ascertain in the copper smelting works and tin-burning houses in Cornwall and Wales. This influence is very apparent in the condition of both the animals and vegetables in the vicinity; horses and cows commonly lose their hoofs, and the latter are often seen in the neighboring pastures crawling on their knees and not infrequently suffering from a cancerous affection of their rumps. . . . It deserves notice that the smelters are occasionally affected with cancerous disease in the scrotum, similar to that which infests chimney sweeps. . . ." (Haagensen). Inasmuch as these works have been closed for many decades, this source of occupational cancer has become extinguished. The observations made by Paris, therefore, have remained unconfirmed by later investigators.

After Paris' original communication, it was many years before occupational arsenical cancer was mentioned again in the medical literature. The majority of cases thus far reported from Europe were observed in England. In 1913 Nutt, Beattie and Pye-Smith, reviewing the literature, found only two cases, both occurring in English workers; one individual had carried tins of arsenic powder on his shoulder for a number of years and developed a cancer of the neck below the external ear; the second cancer was present in a man working in a sheep-dip factory (Eve, F. S., 1913, and Porter, C. R., 1913). The report of the Medical Chief Inspector of England and Wales, which had noted in 1902 the presence of respiratory symptoms, melanosis and hyperkeratoses of the skin among 20 men employed in making sheep-dip, mentioned in 1923 that three of these workers had developed, during the intervening years, epitheliomas of the skin. Four additional cases of arsenical cancer came to observation during the period covered by this report. One of these tumors occurred in a dye worker (Brezina). There were four fatalities among the seven cases recorded. When O'Donovan reported three new cases of arsenical malignancy of the skin in 1924, present in workers of English sheep-dip plants, he mentioned that Legge had seen three additional cases among the same class of workers. The annual report of the chief inspector for the year 1930 listed a new case found in a man engaged in the manufacture of emerald green (aceto-arsenite of copper). Henry, who examined 14 men with an