

tile and pipe pressers, while four were found in creosoters of wood. The most recent report of neoplastic, papillomatous reactions to creosote came from Haldin-Davis in 1935.

After Hudelo, Rabut, Cailliau and Mornet noted in 1929 the occurrence of melanosis in a railroad worker who had handled creosoted sleepers, Laborde, Huguenin and Boucabeille reported three cases of creosote carcinoma and a second case of creosote hyperkeratosis in brick pressers in France (1935). Similar observations were made in recent years in Germany. In 1930 Epstein listed creosote cancer among the professional malignancies of the hands and, during the following year, a case of creosote cancer in a man who treated railroad ties with carbolineum was placed on record by Jacoby. McCafferty, in 1927, mentioned the presence of melanoderma in creosote workers in the United States. Heller, however, did not find any tumors, but only burns in twenty men employed in a plant creosoting railroad ties in Pennsylvania (1930). Of the twenty creosote epitheliomas of industrial origin placed on record, sixteen were observed in England, three in France, and one in Germany. It is important to note in this connection that Laborde, Huguenin and Boucabeille stressed the high incidence of this type of occupational cancer about which there is so little information.

Prolonged contact with creosote causes, first, the development of a dermatosis characterized by the appearance of roseous macules and papules, verrucous hyperkeratoses and warts, scattered telangiectases and pigmentary disturbances. While White stated that melanosis was associated rarely with these cutaneous manifestations, other investigators mentioned melanotic spots as well as localized leucoderma as rather regularly observed lesions. The hyperpigmentations are often circumscribed and perifollicular, sometimes deep brown black in color and located in the face, volar aspects of the forearms, scrotal region and knees. The warts are usually multiple and develop after a prolonged period of exposure. Many of the warts regress spontaneously, fall off and leave scars. Some of these lesions, however, progress into epitheliomatous growths which ulcerate, proliferate slowly into neoplasms of large dimensions and, ultimately, may form metastases in the regional lymphnodes and remote organs, thus causing death. The carcinomas are histologically cornified spinous cell cancers. Multiplicity of the neoplastic reactions was noted in two instances (Jacoby; O'Donovan) (scrotum, penis, arms and knees; face and forearm). The majority of the cancers affected the scrotum (16); two were found involving the penis; three the forearm and one the face. The age of the workers was stated in six cases (4 cases: 51 to 60 years; 2 cases: 61 to 70 years). The relatively high age observed (55 to 65 years—Cookson; Epstein) is attributed to the long exposure time necessary for eliciting a cancerous response to creosote. Of seven cases, three had been exposed for 15 to 20 years, two cases for 21 to 30 years and two cases for 31 to 40 years.