

1922 that pendulous pitch warts with slender pedicles are frequently observed on the eyelids, especially the upper ones, of pitch workers in the Cardiff region. In a series of 80 cases with occupational epithelioma due to pitch, tar, or paraffin, twelve tumors were located on the eyelids (pitch 9, tar 2, and paraffin 1). Hessberg and Bär reported the occurrence of a cornifying squamous-cell carcinoma on the lower lid of a briquette worker, who was 69 years old and had been in contact with pitch for 7 years as a mixer. A similar case of multiple papillomata and carcinomas of the face, especially involving the eyelids, of a pitch worker only 19 years of age was recorded by Zweig (1909). Leclercq and Cordonnier cited the occurrence of an epithelioma in the inner corner of the eye extending to the upper lid in a French soldier, who was employed as prisoner during the war for a period of three years in a briquette plant, and was injured by fragments of pitch in the region of the internal corner of the eye, the lower lid, and in the skin below the eyebrows. The resulting lesions did not heal but grew into ulcers, which were diagnosed histologically as epitheliomas of the spinous-cell type. In a study of the anatomical distribution of occupational cancers, Kennaway listed among 110 pitch cancers 12 as situated on the eyelids or affecting the eyes, and among 34 tar cancers 2 as located on the eyelids. Nicolas, Lacassagne, and Rousset mentioned the presence of pedunculated soft papillomas on the eyelids of a tar worker. In a survey of the cutaneous papillomas among patent fuel workers in England, Downing found that among 107 cases of pitch papillomas and epitheliomas studied, 5 papillomas and one epithelioma affected the orbit and 13 papillomas the eyelids. The epithelioma started in the cornea of the eye. The occurrence of a rapidly growing warty tumor in the region of the left inner angle of the orbit in a tar and pitch worker, 33 years old, was recorded by Goulden and Stallard. Seven years later the same individual developed a small wart on the left upper eyelid, which was shown to be a squamous-cell carcinoma. A traumatic type of pitch cancer of the eye was observed by von Berger, who reported the development of a nodule on the limbus of the cornea together with iritis in a coal porter, who had been injured in the eye by a splinter of tar which was lodged in the cornea. The neoplasm was a cornified squamous-cell carcinoma. A somewhat similar case was placed on record by Milan and Garnier, who noted the appearance of a spinous-cell carcinoma of the lower lid in a gas house worker several weeks after he had sustained a burn with tar in this location. Blum and Bralez found an ulcerated cornified squamous-cell carcinoma in the inner corner of the eye near the nose in a gas plant worker, 33 years old, after having been burned at this site by hot tar. O'Flynn and Twigg observed the development of a melanocarcinoma in the conjunctiva of a sailor, 19 years old, two months after liquid pitch had splashed into his face, and into the lower and outer part of the conjunctival sac. Whereas the pitch was removed from the eye soon after the accident, an ulcer remained, which assumed malignant qualities.