

Brucellosis

Brucellosis (undulant fever) has long been known as an infection produced by drinking unpasteurized milk from cows suffering from Bang's disease (infectious abortion). Since it can also be contracted by handling the animals or their flesh and is also transmitted by swine and goats, it is an occupational ailment of slaughterhouse workers as well as of farmers, although more common among the latter. Here also, preventive measures are primarily proper testing and control of the animals to eradicate the disease.

Erysipelas

The other major bacterial infection to which slaughterhouse workers and fish handlers are subject is erysipelas, which seems to be especially virulent when contracted from the slime of fish.

Upper respiratory tract infections

Workers exposed to dusts from vegetable fibers such as cotton, bagasse (sugar cane residues), hemp, flax, or grain may develop upper respiratory tract infections ranging from chronic irritation of the nose and throat to bronchitis, complicated by asthma, emphysema or pneumonia, or a combination.

Dusts from many of these fibers may also be a source of allergens, histamine, and toxic metabolic products of microorganisms. However, most of the cases of illness arising from handling these fibers have been reported in the foreign literature. (See Kenneth F. Maxy in "References.")

Occupational Skin Diseases

Industrial skin diseases account for about one half to two thirds of all compensation claims for occupational diseases. These claims are scattered throughout all types of industry and sometimes appear where occupational skin diseases may be least expected.

Types of dermatitis

There are two general types of dermatitis: primary irritation and sensitization.

Nearly all persons will suffer primary irritation dermatitis from mechanical agents such as friction, from physical agents such as heat or cold, and from chemical agents such as

acids, alkalis, irritant gases, and vapors. Brief contact with a high concentration of a primary irritant or prolonged exposure to a low concentration will cause inflammation. Allergy is not a factor in these conditions.

Sensitization dermatitis, on the other hand, is the result of an allergic reaction to a given substance. The sensitivity becomes established over a relatively long induction period which may be a few days to a few months. In most cases, it is ten days to a month. After the sensitivity has become established, exposure to even a small amount of the sensitizing material is likely to produce a severe reaction. There are various grades of sensitivity, and many people who are sensitized to the materials they are handling can continue to work with them without trouble if they simply take precautions against direct contact. With severe sensitization, however, it may be difficult or impossible to control the exposure sufficiently to permit the individual to go on working with the material, or even allow the individual to be in the room where the material is handled.

Some substances can produce both primary irritation dermatitis and sensitization dermatitis. Among them are organic solvents, formaldehyde, chromic acid, and epoxy resin systems.

Causes of dermatitis

Causes of occupational dermatitis are classified under these main headings: chemical agents, mechanical agents, physical agents, plant poisons, and biological agents.

Chemical agents are the predominant causes of dermatoses in manufacturing industries. Table 41-C, therefore, is concerned only with these agents. The information given includes the action of the listed chemicals on the skin as either primary irritants or sensitizers. The table is not, of course, exhaustive in any respect, but can provide quick reference data on some of the more common chemical irritants.

Cutting oils and similar substances are especially important chemical agents because the oil dermatitis which they cause is probably of interest to a larger proportion of industrial concerns than is any other single type of dermatitis.

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