Skin Hazards in Industry

By

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"For marks descried in men's nativity
Are nature's faults, nor their own infamy"

—SHAKESPEARE

Industry has two important social functions—to produce goods and to provide employment. Both, of these functions are intimately related. *"Labour is not a commodity"* (I.L.O., 1944). The ninteenth century was the age of the machine but today is the day of the individual. This shift in emphasis has brought a shift in the outlook of industry which has been further augmented by legislation. Obvious results are investigation, analysis and understanding of hazards and the treatment of their effects.

"Whatever is human is medical, therefore, to my mind, in industrial medicine, wisely guided, lies in no small measure the responsibility for this strange, and unstable system which we call modern civilization" (Lockhart 1932). Industrial Medical Service have three important objects:—

1. Pre-employment medical examination.

Questions to be decided are (*a*) whether the patient is fit for a particular job (*b*) whether he will come to harm when so employed, (*c*) whether he will do harm to others.

2. Treat accidents and illness at work. Facilities should be available in the out-patients department of a good hospital.

3. Promotion and maintenance of health by education, periodic medical check-up; and a study of environment to fit work to man and man to his work.

With the above back-ground, let me tell you something about the skin hazards in industry and discuss them from the viewpoint of the nurse.

Different cutaneous affections produced in industry can be classified as follows:

A. Infection

Erysipaloid—Fish packers, fishermen, cooks and butchers. It is caused by *erysipelothrix rhusiopathiae.*

Anthrax—Wool workers and Dockers. It produces Malignant Pustule.

Orf—in shepherds.

Milker's Nodules in Milkmen.

Septic wounds in any industry where traumata are common.

Farmers — Actinomycosis
Sporotrichosis
Favus
Grain itch
Harvest mite
Cattle ringworm

Tea plantation workers—Water mite produces itching on feet.

Cutaneous tuberculosis—Butchers and Pathologists.

Acute pemphigus—Butchers. It is caused by virus.

Warts—Common in card-board makers; glue is the carrying agent.

Glanders (Farcy)—Cutaneous type. Transmitted from infected horses.

Guinea worm infestation—Water suppliers (*mashkis*).

B. Dermatitis and Eczema

Schwartz stated that more than 80 p.c. of all occupational dermatoses are

caused by primary skin irritants and not allergens. Green workers are more susceptible; with the natural process of hardening, the incidence goes down increasing again in the older age group of workers due to aging of the skin and thus lowered resistance. Here only a short summary is given:—

Tar workers: Dermatitis and Tar acne.

Coal miners: Mechanical injuries, dust.

Gardeners: Fertilizers, plants and insecticides.

Cement workers: Cement dermatitis.

Cutting oils: Oil acne.

Tanners: Arsenic dermatitis.

Nurses: Iodine, streptomycin, largactil, sulphonamide, spirit, and cocaine derivatives.

Explosive factories: T.N.T., tetryl, mercury fulminate.

Pharmaceutical factories—Chemicals and pharmaceuticals.

Shellac workers—Turpentine and Arsenic.

Plastic factories—Resins and hardeners.

Occupational dermatitis usually affects the exposed parts of the skin and the flexures—face, neck, hands, wrists, forearms, antecubital and popliteal fossae. Since in industry, irritants, sensitisers and traumata are all at play along with infections and psychogenic factors, their relative importance in an individual case should be determined. Few cases of dermatitis have one origin; the multiplicity of causes is too stressed. Correct history and patch tests are helpful.

Pre-employment medical examination helps to recruit suitable workers and eliminate ones with constitutional eczematous peredisposition and ichthyotic or seborrheic or hyperiderotic diathesis, since they are bad risks in industry.

Personal cleanliness, proper designing of industries to eliminate contact with irritants, proper cleaning at the end of day, use of barrier creams help to reduce the incidence of skin hazards.

C. Malignant cutaneous growths

Tar workers, X-ray workers, Mule spinners and Chimney sweepers.

The cases of industrial dermatasos are first seen by the nurse in the factory dispensary, where they report with their problems. By their early detection and their quick treatment with the help of an expert dermatologist or industrial medical officer, she can help to save distress to the workers, money to the management and time to the industry. An alert nurse should sort the cases scientifically. Two or more cases of the same type should arouse suspicion; she should bring this to the notice of the seniors—medical officer as well as management. She should also make an attempt to familiarise herself with the industrial techniques of that particular industry, acquaint herself with new methods introduced from time to time and see if any cor-relation exists between the cutaneous problems and industrial process. Last of all, she should help to educate the workers in the prevention of skin hazards. It is very important that she should refrain from loose talk, and making loose pseudo scientific statements bearing in mind her dual responsibility to industrial workers and management.

Special points to remember

1. Dermatoses form a big hazard in industrial and occupational medicine.

2. Proper selection of workers, least contact with irritants and sensitisers and proper cleansing at the end of day help to keep the incidence of dermatoses down.

3. Barrier creams are useful protective agents.

4. Nurse should be familiar with industrial processes in the industry she is working in. Two or more cases of the same type should be brought to the notice of her medical officer.

5. Avoid the use of sensitisers like sulphonamide powder and penicillin ointment in dressing a patient.

Bland dressing should be the rule till instructions are received from the medical officer.