

Dermatology for Nurses

By

Pran Nath Behl, M.B., M.R.C.P. (EDIN)

Erythematous, Urticarial and Purpuric Rashes

The previous article in this series will have supplied you with some fundamental facts about Dermatology. I now intend to discuss with you three important primary cutaneous lesions.

Erythema (redness) is one of the commonest primary lesions of the skin. It is produced by dilatation of the cutaneous blood vessels. If the dilatation is accompanied by increased permeability, redness and oedema of skin are produced; these features of urticarial eruption, as in Nettle Rash, are familiar to every one. At times, the cutaneous blood vessels are so irritated and damaged that they permit whole blood to seep through as in the Purpuras (hæmorrhagic rashes). Thus it will be seen that these three lesions, Erythema, Urticaria and Purpura, depend upon the degree of stimulation or damage to the cutaneous vascular system.

Erythema may be in the form of localised or generalised macules or sheets. Asymmetrical localised redness is usually due to local external causes. Injury produces redness; pressure may result in bed-sores. Chemical and thermal burns, insect bites and bacterial infections produce erythema at least in early stages. From the nurse's point of view, generalised erythematous eruptions are more important. Bilateral and symmetrical wide-spread lesions are usually due to an internal cause. Infectious fevers and syphilis provide important examples; since both are contagious, the importance of early diagnosis and isolation is essential.

Exanthemata is a group name for infectious fevers with cutaneous

eruption. A generalised eruption accompanied by fever should make one think of one. In such cases eruption usually develops within the first seven days of the onset of fever and follows a constant course. In chicken-pox, the eruption develops on the first day; scarlet fever second day; small-pox third day; measles fourth day; typhus fifth day and typhoid seventh day. In measles, scarlet and typhoid fevers, the rash stays erythematous throughout. Rash of measles (Morbilliform) is spotted erythematous with a rather darkish tinge in comparison with rash of scarlet fever which is a diffuse bright redness. Measles starts with coryzal symptoms, fever, and minute bluish-white spots on the gums and mucous membranes known as Koplik's Spots. The eruption is more profuse on the face than on the trunk. Scarlet fever is caused by a hæmolytic-streptococcus infection usually of the throat. Examination of the tonsils helps to settle the diagnosis. Rose spots of typhoid fever are usually seen on the abdomen and chest as split pea-sized macules.

Syphilitic skin rashes are varied. The earliest one is the macular erythema, accompanied by enlargement of lymph glands all over the body and patches in the mouth. On interrogation, a history of exposure and a primary lesion on the genitalia is usual. Blood serology confirms the diagnosis.

Besides exanthemata and syphilis, there are two other causes of diffuse erythematous eruptions viz: drugs, and toxins from intestines or focal sepsis. Drug eruptions are termed **Dermatitis Medicamentosa** which means eruptions only due to internal

administration of medicaments. The common culprits are Salicylates, Barbiturates, Penicillin, Belladonna, Heavy metals, Quinine, Sulphonamides etc. To this list should be added Ayurvedic and Homœopathic medicines. These rashes appear after the administration of medicament and generally start disappearing on their withdrawal. So circumstantial evidence is helpful in deciding the diagnosis. More often than not, individual idiosyncrasy rather than toxicity of the drug is responsible for its development. Toxic erythematous eruptions are usually of a transient nature.

Besides the above examples of generalised erythematous eruptions due to non-specific causes. **Chilblains** of hands and feet is one common example with which anyone living in cold climates is familiar. **Erythema nodosum** is seen as hot tender, red nodules on the front of the legs; it is accompanied by aches and pains and low grade fever. Usual cause is either a tuberculous or staphylococcal lesion with or without the administration of such drugs as sulphonamide. **Erythema Muliforme** is rare in this country.

I would strongly recommend that a nurse should try to feel an erythematous lesion for induration or infiltration. Simple redness has no resistance or thickening of underlying tissues while infective granulomas—leprosy and tuberculosis etc., have erythema plus infiltration. Generalised erythema and infiltration of the whole integument is termed **Erythrodermia**. It is a common experience with me that nurses and doctors alike keep on treating these chronic diseases as simple erythemas just because they do not feel these lesions.

Treatment.

Exanthemata and Syphilis are contagious. Temperature should be taken in all cases of generalised

erythematous eruptions, and the mouth examined. It would be a safe principle to treat all fevers with rashes as contagious until declared otherwise by the health officer or a physician who should be immediately consulted. These cases should be isolated and barrier precautions adopted.

If there is a suspicion of syphilis, gloves should be worn for all manipulations.

Since the generalised erythemas are due to such internal agents as toxins, staphylococci, drugs, *spirochaeta pallida* of syphilis, virus of measles, typhoid bacilli of typhoid fever, treatment is mostly systemic rather than local. The nurse should preferably be guided by the attending physician. Causative agent should be eliminated. Measles cures itself; the only precaution to be taken is to guard against respiratory complications. Penicillin and latest broad spectrum antibiotics have now reduced scarlet fever to a comparatively simple condition. Cases of syphilis should be referred to the V.D. Clinics where they can be properly treated with penicillin, bismuth and arsenic under the expert supervision. Drug eruptions start clearing up on withdrawal of the causative drug.

Urticaria.

The Hindustani equivalent for urticaria is "Dhapar" or "Chhapaki". To see a typical lesion, one should watch the "bite" of a nettle; the name Nettle rash is a lay term. The lesions start as rosy red erythema on which flesh-coloured or rather light oedematous wheals soon develop; the erythema is ill-defined and fades on pressure. The rash is accompanied by severe annoying itching, burning and stinging. Eruption comes on suddenly and usually subsides within a few hours. The skin is usually so sensitive that one can write on it by scratching which produces wheals (Dermographism).

Urticaria is a very common and annoying malady. Local urticaria is produced by stings of stinging nettles and such insect bites as mosquito, body lice, caterpillar, weaver; also jelly fish and trauma by a whip lash etc.

Generalised urticarias are due to internal causes—Allergy to food and its digestive products, drugs especially Penicillin and sera, toxins from focal sepsis, and last of all emotional stresses. In acute urticaria the cause is usually obvious. Chronic urticaria needs systemic examination and thorough investigation before the cause can be definitely established.

Treatment is usually difficult. Elimination of cause demands the most emphasis. It is the problem of the Dermatologist who should be relied upon in all cases. Antihistamines like Anthisan and Phanergan are very useful in controlling the symptoms. Injections of Adrenaline and Calcium Gluconate are also useful stand-bys in acute cases.

Purpuras.

Purpura implies an hæmorrhagic eruption. To begin with the eruption is bright red, but differing from erythema in the respect that it does not disappear on pressure. It changes its colour as a bruise. Purpuric eruption signifies severe damage to the blood vessels by internal toxins and so should be viewed with concern. Such a case warrants immediate reference to a physician.

I would conclude the present discussion with the comment that these three lesions may mark the advent or feature of a serious systemic disease and the nurse should be on her guard, and must seek medical advice immediately.

[To be Continued]

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