Proceedings S.Z.P.G.M.I vol: 12(3-4) 1998, pp. 88-91.

Kindler's Syndrome Case Report and Review of the Literature

Atiya Mahboob, Farrukh Iqbal, Zafar Iqbal
Department of Medicine, Shaikh Zayed Medical Complex, Lahore.

SUMMARY

Two cases of Kindler's Syndrome are described in a family. The patients were sister and brother and presented with a history of bullae formation at trauma site since birth. They developed photosensitivity at the age of two years. Poikilodermâ of neck, upper chest and teeth defects were seen in the girl only, although eyes and nails were normal in both patients. Histopathology of the bullae showed sub-epidermal split.

CASE REPORT

Seven years old sister and 3 years old brother presented to Skin Outpatient Department of Shaikh Zayed Hospital, Lahore, in December 1998 with history of formation of blisters on the skin after trivial trauma (Fig. 1). The blistering was episodic and persisted throughout infancy but became less frequent and less severe as they grew up. At two years of age, they developed photosensitivity (Fig. 2). At the age of three the girl developed hypopigmented and hyper-pigmented areas in a lacy pattern on her neck and upper chest (Fig. 3). She also had bleeding from her gums.

The parents were first cousins. Another child died with gastroenteritis at the age of one year. He also had similar skin lesions since birth.

General physical growth and mental development of both children were normal. Systemic examination revealed no abnormality. Examination of the skin revealed photosensitivity, telangiectatic erythema on butterfly area of face and traumatic hemorrhagic bullae on limbs, hands and feet in both patients. Multiple atrophic scars at the site of previous bullae were present. There was poikiloderma of the skin on the neck of the girl, along with webbing of the fingers and toes, mild palmo-plantar keratoderma and loss of palmo-plantar dermatoglyphic pattern. She also had bleeding from gums and malformed teeth. There was no formation of milia. Eyes, nails and hair were normal in both patients. Other investigations including hemoglobin, TLC, DLC, LFTs, blood urea, serum creatinine and urine complete examinations were all normal. Blood, urine and stool were negative for porphyrins. Histopathology of the bullae showed sub-epidermal split with occasional inflammatory cells.

DISCUSSION

Kindler, in 1954[1] described a 14 years old girl with a history of bullae formation at site of trauma since birth, progressive poikilodermatous changes and macular atrophy of skin. In addition, there was nail dystrophy, webbing of the fingers and toes, palmo-plantar hyperkeratosis and severe photosensitivity. Histopathology of the lesion revealed proliferation of capillaries and gradual atrophy and loss of elastic tissue of upper dermis. Kindler suggested that his case was either a co-incidence of two rare congenital diseases i.e., epidermolysis bullosa dystrophica and poikiloderma congenitale or a disease entity showing features of these two. Since then many such cases with additional features have been reported from different countries[2]. Three cases of this disease from Pakistan were described in 1992[3]. There may be possibility of association of the disease with malignancies but long term follow-up is required for its confirmation. The disease is managed

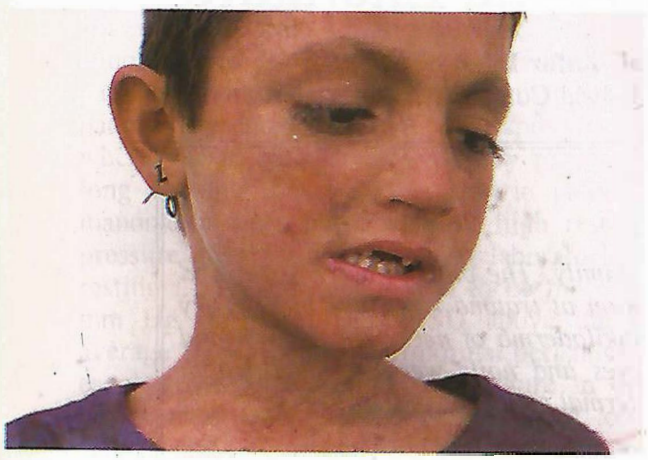

Fig. 1: Traumatic bullae formation.

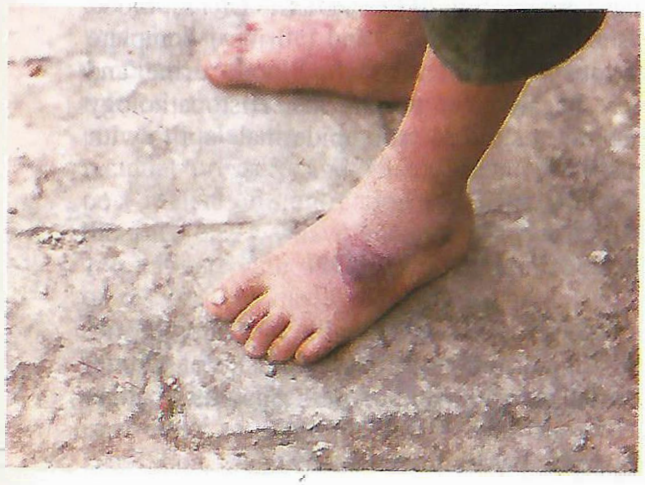

Fig. 2: Photosensitivity of exposed parts.

symptomatically. Present cases also provide evidence of the disease to be congenitally determined perhaps an autosomal recessive mode of inheritance. This disease needs to be differentiated from the following diseases.

1. **Epidermolysis bullosa**[4] - This is a group of genodermatoses inherited as autosomal dominant or recessive traits. Basic fault lies in dermo-epidermal cohesion, which results in blister formation at the site of friction or trauma. In the simple form, the disease is mild, bullae form on hands and feet when the child begins to crawl. Healing occurs without scarring. Hair, teeth and nails are normal, as also is overall development. Some cases improve with age. In the severe dystrophic form, hemorrhagic blisters may be present at birth. These heal to leave scars and milia. Mucosal involvement leads to esophageal or laryngeal narrowing. Prevention against trauma and secondary infection is important. Systemic steroid may be life saving in dystrophic type.

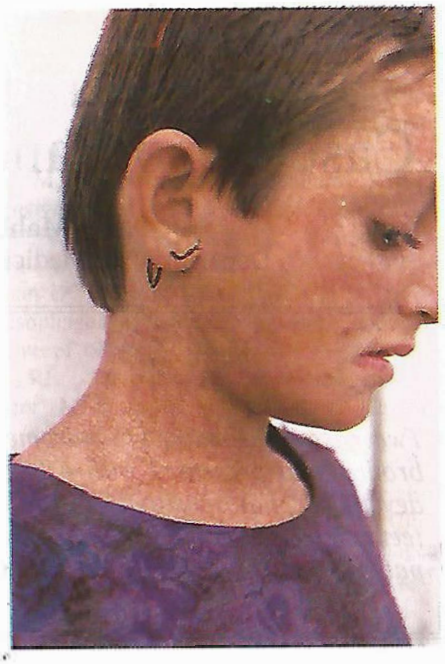

Fig. 3: Hypo and hyper-pigmented areas in reticulate pattern appeared on the neck.

2. **Porphyrias**[5] - This is a group of disorders characterized by inborn errors of porphyrin metabolism and photosensitivity. Porphyrias are either hepatic or erythropoietic in origin. Patients suffering from congenital erythropoietic porphyria (Gunther's disease) look like wolves. It is inherited as autosomal recessive trait with severe photosensitivity in early childhood leading to extensive blistering, ulceration and mutilation. Hypertrichosis, erythrodontia, milia and alopecia are other prominent features. Uro- and coproporphyrins are raised in RBCs and urine and coproporphyrins in faeces. Hepatic porphyrias are inherited as autosomal dominant and may not manifest till late in life. Drugs like

barbiturates, sulphonamides, estrogens, grisofulvin, chloroquine and alcohol are responsible for aggravation of cutaneous lesions, which are comprised, of indolent bullae, scars, milia and pigmentation on the light exposed areas. Faecal excretion of coproporphyrin are raised but urinary excretion of porphyrins are increased intermittently. Erythropoietic protoporphyria is characterized by burning, urticaria or eczema of the exposed parts leading to pock-like scarring inherited as an autosomal dominant. Red cells show excessive protoporphyrins and fluorescence under ultraviolet light.

3. **Xeroderma pigmentosum**[6] - A disorder inherited as autosomal recessive trait and characterized by dryness, pigmentation, keratotic and neoplastic changes in the skin, mainly on the exposed areas. It is caused by defective repair of the damage to DNA by ultraviolet light. Symptoms first appear after six months of birth but sometimes later. Freckling and dryness on exposed sites followed by telangiectasia and white atrophic macules. Indolent ulcers appear resulting in scars. Malignant changes may appear in early childhood or later, in the form of basal cell carcinoma, squamous cell carcinoma or melanoma. Death in majority of cases occurs before the age of twenty. Treatment is only palliative and consists of protection against sunlight and early surgery for all malignant lesions.

4. **Bloom's syndrome**[7] - The syndrome is characterized by telangiectatic facial erythema, short stature, a distinctive facies, abnormal immune response and predisposition to malignancy. An autosomal recessive gene determines the disease. The patient has a narrow, delicate facies with relatively prominent nose. The facial telangiectatic erythema develops during infancy or early childhood as red macules or plaques. These are more numerous on the butterfly area of the nose and cheeks. Exacerbation after sun exposure is usual. Light may provoke bullae, bleeding and crusting of the lips. Other associated abnormalities include low birth weight, slender built, dolichocephalic skull, café-au-lait patches, clinodactyly, syndactyly, congenital heart disease, annular pancreas, high pitched voice, and testicular atrophy. The mortality from neoplastic disease, particularly acute leukemia during second or third decade is significantly increased.

5. **Rothmund - Thomson Syndrome**[8] - A rare hereditary disorder mainly affecting females and is determined by an autosomal recessive gene. The skin appears normal at birth. The earliest lesions usually develop between the third and six months. Plaques of erythema and edema are succeeded by varying combinations of atrophy, telangiectasia, hyperpigmentation and depigmentation. The affected parts are cheeks, forehead, chin, ears, hands, forearms, lower legs, buttocks and thighs. Increased sensitivity to light is a feature and it may be so severe that a bullous response is elicited. In many cases keratoses develop on exposed skin, hands, wrists, feet and ankles. Squamous cell carcinoma may develop in the keratoses or in the surrounding atrophic skin. Other features of the disease are alopecia of scalp, eyebrows, eyelashes, pubic and axillary hair, bilateral cataracts, hypogonadism and increased incidence of hyperparathyroidism. Physical development is frequently retarded and mental development is usually normal. Expectation of life appears to be normal.

6. **Dyskeratosis congenita**[9] - A rare but widely distributed disease, mostly affects males. It is usually determined by an X-linked recessive gene, autosomal dominant inheritance is also present. The essential features of the syndrome are atrophy and pigmentation of the skin, nail dystrophy and oral leukoplakia. Between the ages of 5 and 13 the nails become dystrophic and are shed off. The pigmentary changes are in the form of fine, reticulate grey brown pigmentation and are most conspicuous on the neck and thighs and may affect the greater part of the trunk. The skin is atrophic and telangiecteses give rise a poikilodermatous appearance. The skin of face is red and atrophic with irregular pigmentation. Small blisters and erosions of the lingual and buccal mucous membranes are succeeded by irregular patches of leukoplakia. Similar mucosal

changes may effect tarsal conjunctiva, anus, rectum, urethra and gastrointestinal tract. The incidence of carcinoma in the areas of leukoplakia is high and proves fatal between 30-50 years. General physical and mental growth is some time retarded. Various immunological defects have reported. Many cases heave shown blood dyscrasias, myeloid aplasia, refractory anemia or pancytopenia. The prognosis is usually poor for either the blood dyscrasia or carcinoma, which may prove fatal.

Therefore, in a patient who develops blisters on the skin with trivial trauma since birth followed by scaring, depigmentation with increased sensitivity to the sunlight, we should remember "Kindler's Syndrome". Although a rare condition but nevertheless worth remembering in the differential diagnosis of bullous lesions.

REFERENCES

1. Kindler T. Congenital poikiloderma with traumatic bullae formation and progressive cutaneous atrophy Br J Dermatol 1954; 66: 104-11.
2. Hovananian A, Blanchet - Bardon C, de Prost Y. Poikiloderma of Theresa Kindler: Report of a case with ultra-structural study and review of literature. Pediatric Dermatol 1989; 6: 82-90.
3. Jamil T, Hussain M, Aman S. et al. Kindler's syndrome, JPAD 1992; 2: 23-25.
4. Pye RJ. Bullous eruptions. In: Champion RH, Burton JH, Ebling FJG, eds. Rook/Wilkinson/Ebling, textbook of Dermatology, London: Oxford Blackwell Scientific Publications, 1998: 1623-36.
5. Black MM, Gawkrodge DJ, Seymour CA, et al. Metabolic and Nutritional disorders. In Champion: RH, Burton JH, Ebling FJG, eds. Rook/Wilkinson/Ebling, textbook of Dermatology, London: Oxford Blackwell Scientific Publications, 1998: 2295-2313.
6. Kraemer KH, Lee MM, Scotto J. Xeroderma pigmentosum, cutaneous, ocular and neurolgoic abnormality in 830 published cases. Arch Dermatol 1987; 123: 241-50.
7. Gretzula JC, Oscar Hevia BS, Weber PJ. Bloom's syndrome J. Am Acad Dermatol 1987; 17: 479-88.
8. Berg E, Chuang TY, Cripps D. Rothmund - Thomson Syndrome. A case report, phototesting and literature review. J Am Acad Dermatol 1987; 17: 332-8.
9. Tchou PK, Kohn T. Dyskeratosis congenita: an autosomal dominant disorder. J Am Acad Dermatol 1982; 6: 1034-9.

The Authors:

Atiya Mahboob,
Assistant Professor
Department of Dermatology
Division of Medicine,
Shaikh Zayed Medical Complex,
Lahore.

Farrukh Iqbal,
Associate Professor
Department of Medicine,
Shaikh Zayed Medical Complex,
Lahore.

Zafar Iqbal
Professor and Head of
Department of Medicine
Shaikh Zayed Medical Complex,
Lahore.

Address for Correspondence:

Atiya Mahboob,
Assistant Professor
Department of Dermatology
Division of Medicine,
Shaikh Zayed Medical Complex,
Lahore.