Hypokalemic Paralysis in Leptospirosis

Sir,

Having gone through the interesting article “Hypokalemic Paralysis in Leptospirosis”, I would like to seek certain clarifications from the authors.

1. The line mentioned in introductory paragraph “Renal manifestations include an oliguric renal failure due to acute tubular necrosis or tubulo interstitial damage leading to non-oliguric renal failure” is not understood. How can an oliguric renal failure due to acute tubular necrosis or tubule interstitial damage lead to non-oliguric failure?

2. Why was Mannitol chosen as medium for supplementing KCL in a patient who had non-oliguric renal failure? Mannitol is indicated for promotion of diuresis, in the prevention and/or treatment of the oliguric phase of acute renal failure before irreversible renal failure becomes established. The concentration of Mannitol solution used has also not been mentioned. High dose of hypertonic Mannitol may cause hyperkalemia and lower concentrations may lead to hypokalemia, further accentuating the already low potassium levels.

3. Mannitol has not been shown to be compatible with KCL.

4. Serum magnesium and calcium levels have been done though they would not have changed management much but sometimes hypokalemia doesn’t appear to improve unless hypomagnesima is corrected simultaneously.

References


P Baburaj
Department of Medicine, JMMC and RI, Thrissur
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Inflammatory Linear Verrucous Epidermal Nevus

Sir,

Inflammatory Linear Verrucous Epidermal Nevus (ILVEN) describes a distinct variety of keratinocytic epidermal nevus. It presents as linear, pruritic, erythematous, and hyperkeratotic papules that often coalesce into plaque with a raised scaly surface, occurring unilaterally in narrow linear patterns following the lines of Blaschko. The abnormality arises from a defect in the ectoderm. This is the outer layer of the embryo that gives rise to epidermis and neural tissue. The defect causing skin lesion may also result in disorders of other internal organs such as the brain, eyes and skeleton. It appears clinically as inflammatory but histologically demonstrates ortho-hyperkeratosis alternating with parakeratotic hyperkeratosis. Affected patients are generally normal but there have been reports of ILVEN associated with ipsilateral skeletal abnormalities, nervous system malformation and neurological dysfunction.1,3

We report a case of inflammatory linear verrucous epidermal nevus. The patient was a 23 years old female presented with hyperpigmented lesion on right leg. It was detected at the age of 6 years and had been slowly growing. There was no history of seizers and MRI of brain was unremarkable. She had Intelligent Quotient (I.Q.) 40 with mental age of 6 years. On examination the lesion was hyperpigmented, hyperkeratotic, verrucous plaque seen extending from dorsum of the right foot to popliteal fossa. USG skin revealed thickened epidermis, with sub epidermal infiltrations. Hematological investigations were within normal limits. Specimen of excised plaque with surrounding uninvolved skin was received measuring 35cm x 6 cm, showed hyperpigmentation, and whitish, roughened firm areas at places. Underlying subcutaneous tissue was unremarkable. Histology revealed papillomatosis, acanthosis with elongation of rete ridges; psoriasiform configuration with neutrophils in stratum corneum, ortho-hyperkeratosis alternating with parakeratotic hyperkeratosis and underlying dermis was unremarkable.
Visceral anomalies of the eye, heart, kidney, arteries and nonfunctioning major cerebral venous sinuses have been reported. Vascular anomalies such as angiomas, a - v malformation, cerebral vessel aneurysm, hypoplastic, dysplastic or occluded cerebral arteries and nonfunctioning major cerebral venous sinuses have been reported. Visceral anomalies of the eye, heart, kidney, skeletal system are common and may evolve over a period of time. Hemihypertrophy of the limb, bone, and vitamin D resistant rickets are some of the rare presentations.

Clinically ILVEN should be distinguished from other epidermal nevi, nevoid psoriasis, and lichen striatus. Contrary to linear epidermal nevus, ILVEN lesions are erythematous, and pruriginous. The absence of pruritus and spontaneous regression, are pathognomonic of lichen striatus. ILVEN is often difficult to distinguish from psoriasis. Psoriasis can occur in a nevoid field following line of Blaschko. The lines of Blaschko in contrast to dermatomes form a V- shape over spine and S- shaped over lateral and anterior aspect of trunk, run perpendicularly on limbs and form whorl on abdomen. They represent a form of ‘Mosaicism’, and are distinct form other linear patterns of the skin, do not relate any vascular or lymphatic structures and represent developmental growth pattern of skin. Many nevoid and acquired condition may follow these lines including pigmenti, focal dermal, hypoplasia, epidermal nevus, sebaceous nevus, lichen nitidus, lichen planus, lichen striatus, lips erythematosus, vitiligo, psoriasis. Surgical excision may be attempted but often result in keloid or hypertrophied scars.

To conclude inflammatory linear verrucous epidermal nevus is a linear, persistent, pruritic, plaque, usually first noted on a limb in early childhood. It is characterized by tiny discrete, erythematous, slightly warty papules, which tend to coalesce in a linear formation. It needs to be distinguished from other nevoid, verrucoid, lichenoid and psoriasiform dermatoses. Correct diagnosis is necessary as it has been reported to be associated with various neoplastic, non neoplastic systemic conditions and is known to be familial. Hence it can be a cutaneous marker to indicate further diagnostic evaluation in selected cases.

**References**


**Ramesh Waghmare**, **Vikas S Kavishwar**

Assistant Professor, *Associate Professor, T.N. Medical College and BYL Nair Ch. Hospital, Mumbai 400008, Maharashtra

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