An Update on Exanthems with Suspected Viral Aetiologies

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Introduction

The viral aetiology of SARS was elucidated within weeks of the outbreak. However, there exists several exanthems which have been reported for several decades - in one case for more than one century - for which a viral aetiology was suspected but a single definite virus has not been confirmed as the culprit. Indirect evidence of viral aetiology is usually clinical, i.e. an apparently pre-programmed course of events, and epidemiological, e.g. temporal case clustering of cases or contact history of patients.

Although most of these eruptions do not lead to serious complications, the recognition and prompt diagnosis of these are highly pertinent as such would provide reassurance to the patients and their families that spontaneous resolution of the rash is likely in matter of weeks in most circumstances. For most of these eruptions, the perceived infectivity is too low to justify any quarantine measure. The risk of permanent scarring is low. Supportive symptomatic treatment and reassurance from an emphatic doctor are the best remedies.

Asymmetric periflexural exanthem

Asymmetric periflexural exanthem (APE) is also known as unilateral laterothoracic exanthem. It was first described under such terminologies in 1992 and 1993, although similar eruptions might have been reported under different terminologies in many earlier reports. The initial lesions are small papules on the axilla and groin regions. The initial eruption is strictly unilateral. The rash may then spread across to the opposite side of the trunk and limbs.6,7 Face, genitalia, and palmar-plantar surfaces can be affected. The early papular lesions might evolve into patchy scaly lesions with reticular patterns, and vesicular as well as haemorrhagic variants have been described. The accompanying prodromal symptoms include fever, chills, sore throat, and gastrointestinal symptoms. Accompanying signs include axillary and inguinal lymphadenopathy. Spontaneous rash resolution in 4-12 weeks is the rule.8

APE usually affects young children below five. Adult patients with APE are increasingly being recognized,9,10 including a case reported by us recently.11 The aetiology of APE is unknown. Various viruses including parainfluenza viruses,12 adenovirus,13 and parvovirus14 have been implicated. Patients with APE usually have pruritus of mild to moderate severity. Symptomatic relief with topical emollients is adequate for most patients. For patients with severe pruritus, a trial of topical corticosteroids is justifiable.9

Eruptive pseudoangiomatosis

Eruptive pseudoangiomatosis (EP) was first reported in 1969.15 The term stems from the lesional histopathological changes of dilated blood vessels with characteristic hobnail-shaped endothelial cells but with no vasculitis and no proliferation of blood vessels.12,13 The individual lesions are small papules resembling cherry angiomas. Face, trunk, and all four extremities can be affected. Digital pressure leads to fading of the lesions and release of pressure brings about re-engorgement, thus suggesting a prominent vascular component to early investigators. Prodromal symptoms include sore throat, fever, and diarrhea.14 Spontaneous remission of EP lesions is expected in two weeks. EP affects children and adults alike. The aetiology is unknown. Echovirus has been implicated in some cases.12 Most patients with EP are asymptomatic otherwise and no active intervention is indicated.

Gianotti-Crosti syndrome

The term Gianotti-Crosti syndrome (GCS) was first coined in 1965 to describe a triad of acrally distributed papular eruption, lymphadenopathy, and acute hepatitis usually related to hepatitis B virus.16-20 It is now known that most cases of GCS in developed countries are related to Epstein Barr virus infection.21-23 Lymphadenopathy and acute hepatitis are no longer pre-requisites in making a diagnosis of GCS.

GCS usually affects children less than five years. Small papular or papulovesicular lesions are seen on the face and extensor aspects of forearms, buttocks, legs, and feet. The lesions range from not itchy at all to intensely pruritic. The presence of minor truncal lesions does not exclude the diagnosis.24 The rash duration can be as short as 5-7 days, or as long as 4-6 months.25 Spontaneous rash remission is the rule. Post-inflammatory hypo- or hyper-pigmentation is sometimes seen but ultimately no scarring is usually evident.

Table 1 represents a proposed diagnostic criteria for GCS which we have found to be applicable to children with GCS in Hong Kong and in India.26 Further validation...
studies are necessary for children with GCS of other ethnic origins. Symptomatic relief with topical emollients is adequate for most children with GCS.

Papular purpuric gloves and socks syndrome

Papular purpuric gloves and socks syndrome (PPGSS) was first described in 1990. As the name implies, papules are seen on the hands and feet of affected individuals, usually children and young adults. These papules gradually turn purpuric and the demarcations of involved and uninvolved skin at the wrists and ankles are sharp. Subsequent exfoliation is sometimes seen, followed by spontaneous rash remission. Oral manifestation in the form of aphthoid ulcers was reported. The prodromal symptoms are fever and malaise.

The aetiology of PPGSS is also unknown. A role of human herpesvirus 7 (HHV-7), cytomegalovirus, parvovirus B19 are seen on the hands and feet of affected individuals, PPGSS. Investigations for parvovirus B19 are probably indicated, in view of potential groups susceptible to complications such as patients with haematological disorders, immunocompromized patients, and pregnant patients.

Pityriasis rosea

Pityriasis rosea (PR) was first termed as such in 1860, although there is evidence of previous descriptions of the eruption under different terminology. The course of events should be familiar to most medical practitioners. A herald patch is present in 40-60% of all patients. PR usually affects young adults, adolescents, and children. The aetiology is unknown. There have been many recent reports supporting and refuting the role of HHV-7 in PR. It is highly unlikely that PR is related to or associated with infections of cytomegalovirus, EBV, parvovirus B19, picornaviruses, influenza and parainfluenza viruses, Legionella spp, Mycoplasma spp, and Chlamydia spp.

The benefits of active treatment modalities including ultraviolet radiation, systemic corticosteroids, oral erythromycin, and oral acyclovir are controversial. Except for especially recalcitrant cases, conservative management with topical emollients, topical corticosteroids, and sedative antihistamines is adequate for most patients with PR.

Acknowledgements

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Table 1 Diagnostic criteria of Gianotti-Crosti syndrome

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<th>Essential clinical features:</th>
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<td>1. Monomorphous, flat-topped, pink-brown papules or papulovesicles 1-10mm in diameter.</td>
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<td>2. At least three of the following four sites involved: (1) cheeks, (2) buttocks, (3) extensor surfaces of forearms, and (4) extensor surfaces of legs.</td>
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<td>4. Lasting for at least ten days.</td>
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<td>Exclusional clinical features:</td>
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<td>1. Extensive truncal lesions.</td>
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<td>2. Scaly lesions.</td>
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Table 2 Diagnostic criteria of pityriasis rosea

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<th>Essential clinical features:</th>
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<td>1. Discrete circular or oval lesions.</td>
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<td>2. Scaling on most lesions.</td>
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<td>3. Peripheral collarette scaling with central clearance on at least two lesions</td>
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<td>Optional clinical features (at least one has to be present):</td>
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<td>1. Truncal and proximal limb distribution, with less than 10% of lesions distal to mid-upper arm and mid-thigh.</td>
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<td>2. Orientation of most lesions along direction of the ribs.</td>
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<td>3. A herald patch (not necessarily the largest) appearing at least two days before the generalized eruption.</td>
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