

Giant Cutaneous Turbid Bullae in a 6-Year-Old Boy with Acute Fever

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A 6-year-old healthy Thai boy presented with multiple vesicles and bullae varying in size on the whole body, mostly on face and trunk (Figure 1, 2) for five days. The first vesicle arose on scalp while he had low-grade fever and felt headache on that day. A few days later, some vesicles progressed to large bullae containing turbid fluid or yellowish pus. Oral and genital mucosa were not involved.

Which of the following is the most likely diagnosis in a 6-year-old previously healthy Thai boy presented with multiple vesicles and bullae?

1. Bullous fixed drug eruption
2. Bullous pemphigoid
3. Pemphigus vulgaris
4. Staphylococcal scalded skin syndrome
5. Varicella Bullosa (Bullous chickenpox)

Answer

No. 5: Varicella Bullosa (Bullous chickenpox) is correct.

Discussion

Apart from the above history, he had no underlying disease and received all recommended vaccination by Thai Ministry of Public Health (MOPH) except



Figure 1. Multiple discrete vesicles and flaccid bullae on erythematous base varying in size with 1×1 to 4×7 cm in diameter on face, scalp, trunk and all extremities with hemorrhagic crusts on top of some lesions. (Permission was given by the parents for publication)

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varicella vaccination. His weight and height were within normal range. He had a history of playing with his cousin who had had typical lesions of chickenpox

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Figure 2. Close-up at the skin lesions to show small and giant flaccid bullae containing turbid or pus-like fluid on the left trunk.

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without giant bullae two weeks before.

He had injected conjunctiva. Oral and genital mucosa were normal. His temperature was 37.5°C. Other physical examinations were unremarkable.

Skin examination revealed a mixture of multiple discrete erythematous vesicles and few flaccid bullae of varying sizes from 1×1 cm to 4×7 cm containing turbid or pus-like fluid distributed on the face, scalp, trunk, and all extremities. Some dry hemorrhagic crusts were seen on top of healed lesion.

Varicella was initially suspected by the history of chickenpox exposure in one cousin in the family. The classical pattern of lesion spreading is the eruption that appears first on the face, spreads centrifugally to the scalp, upper chest, back, arms, and hands, and appears last on the abdomen, legs, and feet. Tzanck smear from a fresh vesicle showed multinucleated giant cells and helps differentiate varicella, herpes simplex, and herpes zoster from smallpox. The diagnosis of varicella is confirmed with the positive titers of varicella zoster antibodies IgG and IgM. Other diagnostic laboratory methods include direct fluorescent antibody (DFA), viral culture, serology,

and polymerase chain reaction (PCR).

The flaccid giant bullae containing turbid or pus-like fluid is an uncommon presentation of chickenpox⁽¹⁻⁴⁾ and may mimic superimposed bacterial infection due to *Staphylococcus* spp. or other gram-positive cocci. However, culture of aspirated turbid fluid was negative for bacteria. Staphylococcal scalded skin syndrome (SSSS) presents as a macular erythema, a few blisters localized to the site of infection, and followed by diffuse epidermal exfoliation without giant bullae affecting almost the entire body. Almost all cases (98%) are younger than six years old.

Bullous pemphigoid and pemphigus vulgaris are diseases of an ageing population. Intraepidermal blistering seen in pemphigus vulgaris is caused by autoantibodies against desmoglein while subepidermal blistering is caused by autoantibodies against hemidesmosomes in bullous pemphigoid. Hence the bullae of bullous pemphigoid can be large, intact, tense, and clear fluid-filled blisters, and are less fragile than those of pemphigus vulgaris, which may rupture, producing painful erosions.

Bullous fixed drug eruption arises as a result of systemic exposure to a drug. Initial lesions are normally from a widespread erythematous eruption that rapidly evolve into fluid-filled bulla on skin and oral as well as anogenital mucosa. This child has no drug intake history and the lesion appeared on the skin only.

If needed, treatment is intravenous acyclovir (60 mg/kg/day) in divided doses for neonate or oral acyclovir 20 mg/kg qid for five days given within 48 hours of disease onset to achieve maximal benefit and good response. Treatment with non-steroidal anti-inflammatory drug was reported to trigger severe skin and soft tissue complications in patients with varicella and should be avoided.

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