CASE REPORT

A 1.5 YEAR OLD BOY WITH TOXIC EPIDERMAL NECROLYSIS LIKELY DUE TO IBUPROFEN

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ABSTRACT

One and half years old baby boy admitted with history of high grade fever, dry cough and malaise for 05 days. He was given syrup Ibuprofen 100mg at home for fever resulting in swollen face, eye and rash on upper back next day. Erythematous rash progressed to involve nearly 30% of body surface area on 2nd day. Oral ulcers developed on 3rd day. Local practitioner instructed mother to keep him at rest and treat with hydration. Co-Amoxiclav syrup was added whereas Ibuprofen was continued. Diagnosis of Toxic epidermal necrolysis secondary to ibuprofen was established upon presentation to CMH Multan.

Keywords: Ibuprofen, erythema, rash, drug reaction, Toxic Epidermal Necrolysis

CASE REPORT

1.5 years old baby boy was admitted as emergency case in Pediatric intensive care unit. He was referred from a peripheral hospital with history of high grade fever, dry cough and malaise for 05 days. Generalized erythema involving trunk was followed by blisters and skin erosion for 03 days.

He had syrup Ibuprofen 100mg at home for fever. Baby woke up next day with swollen face, eye and rash on upper back. Syrup Ibuprofen 100 mg was repeated for fever and irritability by his mother. Erythematous rash progressed to involve nearly 30% of body surface area with scattered erythema on face, head,trunk,arms, upper thighs and perineum on 2nd day. On 3rd day Oral ulcers developed after which he was taken to local medical practitioner. Provisional diagnosis of viral exanthems likely Measles was made, and the mother was instructed to keep him at rest and treat with hydration. Co-Amoxiclav syrup was added whereas Ibuprofen was continued. His mother observed worsening of symptoms as rash evolved into blisters within 04 days. They came to us on 5th day of illness.

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On physical examination baby was ill looking and irritable. His temperature was 101F, Resp rate 22/min, pulse 120bpm, BP 80/50 mmhg. Cutaneous examination revealed generalized erythema, intact flaccid blisters in axillae, neck fold, scattered lesion on trunk and extremities. Bulbar conjunctiva was erythematous with swollen eye lid margins. Genital andoral erosions were present with crusting on lips. Tongue was coated. There was no lymphadenopathy. Skin was tender and Nikolsky sign was positive. His chest had vesicular breathing with fine basal crepitation. Cerebrovascular; Abdomen and central nervous system examination were unremarkable.

He was admitted for supportive care, blood samples were obtained, laboratory workup wa s done which revealed Hb 6.3g/dl,TLC $9x10^9$/l, platelet $307x10^9$/l, CRP 85mg/l and ESR 30mm at 1st hour, urea 64 mg/dl, creatinine 0.7mg/dl, and ALT 628U/l, ALP 413U/l, Billirubin 33umol/l. HBV, HCV serology was negative, CXR showed normal lung fields, blood cultures report did not reveal any growth of organisms, ASO titer were negative. He was managed with Parentral vancomycin 300mg IV 6 hourly and Inj Meronum 200mg 8 hourly. Rationale for antibiotics in this case was to be cautions for sepsis as he had spikes of fever. IVIG 4gm was given on the day of admission and dose repeated within 48 hours, whereas Brufen stopped.

Clinical diagnosis of Toxic epidermal necrolysis secondary to Ibuprofen was made. Daily liquid paraffin based dressing was advised on skin lesions.

His fever settled after 3 days of admission but he developed sudden respiratory distress, low oxygen saturation, Tachycardia, bilateral scattered crepts, O_2 was maintained with nasal prong, he was switched to IV steroids, NG tube

Figure-1: On day 1: Scattered lesions on trunk and extrimities, intact blisters, errosions, Swelling of eyes, crusting on lips.

Figure-2: ON 8th day: improvement with no new skin lesions

was passed. Chest x-ray showed bilateral patchy opacities, ABGs showed respiratory alkalosis. Parentral Tazobctam piperacilin 1.2gm 8 hourly, Teicoplanin 150mg 24 hourly were continued. Two units of RCC as 5mg/kg/bwt were transfused under cover of IV frusimide. He responded well to treatment. There were no new skin and oral lesions, he remained afebrile, tachypnea improved, oxygen saturation was normal at room temp, oral intake was resumed. Steroids were tapered off in seven days. Repeated lab showed Hb 9.6 g/dl, TLC $5.1x10^9$, Platelet $366x10^9$, ABGS showed metabolic alkalosis, Chest x-ray improved, RFTs and LFTs resumed normal limits. He was referred to RWP for endoscopy to evaluate esophagus and gastric mucosa for strictures.

DISCUSSION

Toxic epidermal necrolysis isextensive cutaneous, drug induced adverse event associated with high mortality and morbidity[1]. It is diagnosed clinically, no definitive lab testor histopathology is required[2]. Epidermis can be detached from dermis over wide spread surface. Mucous membranes may also be affected. Its pathogenesis is still unclear. Toxic metabolites, inflammatory mediators, cytotoxic andregulatory T cells and dermal dendrocytes induce apoptosis or necrosis of epithelial cells[3]. SJS involves less than 10% of Body surface area, whereas >30% of Body surface area is involved in TEN. It is a multi-organ disease. There can beinvolvement of skin, eyes, andnose, gastrointestinal, genitourinary, respiratory system[4] and may be complicated by ARDS[5] which leads to severe morbidity and in some cases death occurs. Lesions are typically target like with central necrosis, bullae formation or purpuric lesions. Mortality ranges from 1-5%in SJS to over 25% for TEN[6]. SCORTEN[7] is a prognostic marker of TEN. Increasing Age, female sex are considered as the important prognostic factors in TEN[8]. Negative ASO titer, blood culture, cutaneous manifestations, mucositis, rapid onset and progress of rash exclude the diagnosis *Staphylococcal* scalded skin syndrome[9].

Regional differences in drugs, patients genetic makeup influence the incidence of drug reactions. So detailed drug history is significant.

We reported this case of TEN secondary to IBUPROFEN. It is important for clinicians as Ibuprofen is over the counter drug, and is widely prescribed medicine in Asia[10]. It must be considered as a cause of TEN in children induced by three doses of ibuprofen.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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