**Case Report**

**Ecthyma in a two years old Children caused by *Streptococcus Non Group A***

**Dyah Pratiwi Purnaningseh, Widya Widita, Faridha Tabri, Faridha S. Ilyas, Nurulny N Wasipo, Sri Rymayani, Departemen of Dermatology and Venereology, Medical Faculty of Hasanuddin University, Makassar**

**ABSTRAK**

Ektima adalah suatu pioderma pada kulit yang dicirikan oleh adanya krusta yang tebal, erosi atau ulserasi. Impetigo yang disebabkan oleh *staphylococcal* atau *streptococcal* yang tidak dirawat dapat meluas lebih dalam dan masuk kedalam epidermis, menghasilkan suatu ulkus berkrustanya yang dangkal. Lesi ektimatous dapat berkembang dari suatu impetigo primer atau dalam suatu dermatosis yang sudah ada sebelumnya atau lokasi dari trauma. Alergi makanan dan sensitivitas makanan lain adalah suatu reaksi merugikan terhadap makanan yang sifatnya individualisme. Gejala atau manifestasi kulit seperti urtikaria dan dermatitis juga manifestasi umum dari alergi makanan.

Dilaporkan satu kasus ekzema yang disebabkan oleh *Streptococcus Non Group A* pada seorang anak laki – laki berusia 2 tahun. Pasien menunjukkan perbaikan setelah diterapi dengan antibiotik sistemik, antihistamin, kompres NaCl 0.9%, dan terapi antibiotik topikal yang dicampur dengan steroid topikal.

Kata kunci: alergi makanan, ektima, *Streptococcus*.

**ABSTRACT**

Ecthyma is a pyoderma characterized by thick crust, erosion, and ulceration. Impetigo caused by *staphylococcal* or *streptococcal* that untreated could extent deeper through the epidermis, result in a shallow ulcer with crust. Ecthymatous lesion could evolve from a primary impetigo or within a pre-existing dermatoses or from trauma. Food Allergy and other food sensitivities is an individualistic adverse reaction of foods. The symptom or cutaneous manifestation such as urticarial ( hives ) and dermatitis ( eczema ) also common manifestation of food allergy.

One case of Ecthyma caused by *Streptococcus Non Group A* in a two years old boy was reported . The patient showed improvement after treated with systemic antibiotic, antihistamin, NaCl 0.9% compress, and topical therapy of antibiotic mixed with steroid topikal.

Key Words : Ecthyma, food allergy, *Streptococcus*.
INTRODUCTION

Echanty is a pyoderma on skin characterized by thick crust, erosion, and ulceration (1). Echanty usually caused by untreated impetigo and simply develop in impetigo that closed by clothes and footwear. *Staphylococcus aureus* and/or *Streptococcus group A* could be isolated on culture. Impetigo that caused by *Staphylococcus aureus* or *Streptococcus* which is untreated could extend deeper and entering the epidermis layer, lead to a superficial crusted ulcer. Echantymatous lesion could develop from a primary impetigo or in a preexisting dermatoses or a location of trauma (1).

Pyoderma in children is one of the most frequent skin disease. Children is 40% of populated disease. *Staphylococcus aureus* is one of the frequent etiologic agent in this case. The prevalence of pyoderma among elementary school children in Tanzania about 4% had documented (3). The incidence of clinical variant of pyoderma from 100 cases of studies, impetigo (30%) was the most clinical type found followed by folliculitis (22%), furunculosis (10%), echanty (6%), scabies with secondary infection (5%), sicosis barbae (5%), erythrasma (5%), cellulitis (3%), eczematous dermatitis with infection (3%), paronichia (3%), karbunkle (2%), periportis (2%), infected wounded (2%), job syndrome (1%), pitted keratolysis (1%). Sexual distribution showed that male more frequent (58%) and female (42%) with ratio male compared to female is 58:42. Age distribution on pyoderma most frequent in age group of 1 – 10 years old (4).

The most common etiology of echantyma is *Streptococcus Group A* or *Staphylococcus aureus* or both (5).

Food allergies and sensitivity to other foods is an adverse reaction to the nature which is individualism. Symptoms or cutaneous manifestations such as urticaria and dermatitis is a common manifestation of food allergy (6).

Reported one case of echanty caused by non-Group A Streptococcus on a 2 years old boy. The patient showed improvement after treatment with systemic antibiotics, antihistamines, 0.9% NaCl compresses and topical therapy in the form of DeSoles® cream mix with mupirocin.

CASE REPORT

A 2 years old boy, body weight 11 kg, with wounded pustules on both leg since ± 3 weeks a go. After playing at the sewer, he complain itchy on both leg accompanied by red papule around it. Red papules become bigger and rupture producing pustules. Both leg swelling, sore. According to family everytime patient eats egg or fish, he feels itchy and his lesion extended. Medicated history
with pikangsuang ointment, a traditional medicine, also Apolar - K ® cream. Fever (+), Cough (-), influenza (-), diarrhea (-), vomitus (-). Similar disease history and Similar disease history in the family were denied. History of allergic was denied.

Physical examination General condition moderate ill. Vital sign: pulse 100x/minute, Respiratory rate 20x/minute, temperature 37.5 °C. Dermatology status regio extremitas inferior dextra et sinistra effluoresensi erythema, ulcer, crust, ekoriasi, pus (+), oedem, lesi madidans (+).

Gb.1. extremitas inferior dextra et sinistra effluoresensi: eritem, krusta with ulcer underneath, eksoriasi, pus (+), oedem, lesi madidans.

Abnormal Laboratory examination haemoglobin 10.5 g/dl, leukositosis (12.100), LED 37mm/jam. Culture sensitivity tes (+) Streptococcus Non Group A. Antibiotic sensitivity
Cefepime, levofloxacin, ofloxacin, vancomycin, linezolid.

Based on anamnesis, physical and laboratory examination, the patient was diagnose with eczema caused by Streptococcus Non Group A.

The therapy was NaCl 0.9% compress, twice a day for 5 – 10 minutes, Cefadroxil syrup 2 x 250mg, interhistin 2x 25mg.

On August 10th, there are improvement, oedem and erythema were reduced, the suppurative lesion was dry up.

Gb.2 extremitas inferior dextra et sinistra effluoresensi eritem and oedem were reduced, krusta, ulkus, ekshorasi, pus (+) reduced,

On August 18th, the lesion become so much better The treatment was continued and added with Desolex ® cream 10 gram mixed with mupirocin cream 10 gram, twice daily if the lesion has dried.
Gb.3 lokasi extremitas inferior dextra et sinistra effluoresensi eritem berkurang, krust, ulkus, ekskoriai, lesi madidans <<, oedem (-)

On august 24th, erythema reduced significantly no itchy, lesion has dried.

Gb.4 lokasi extremitas inferior dextra et sinistra effluoresensi erythema minimal, minimal crust, ekskoriai, lesi madidans (-), oedem (-)

DISCUSSION

Ektima is a bacterial infection that cause crusting attached to the skin with ulceration underneath. With symptoms such as ulcers on the buttocks or legs of children. Bacteria grow inside the skin excoriations, insect bites, and the location of trauma, especially in susceptible individuals such as children, people with limfaedema on both legs, bad hygiene, or individuals with immunosuppressive (5, 7-9) Ektima is a deeper form of impetigo nonbulosa with
ulceration caused by GAS but quickly contaminated by *S. aureus* (10, 11) Initial lesions of ecthyma is vesicles that rupture to form an ulcer; the infection spreads into the dermis with crusting

Healing can occur in 2-3 weeks, leaving scars. An infection that often occurs in the tropics; children - children from disadvantaged backgrounds with poor hygiene. Lesions are often on the legs (12). Ektima may be associated with fever and lymphadenopathy (13).

Anamnesis obtained from patients was a history of playing in the gutter before appearing lesions. Early lesions that appear on both legs in the form of redness with pimples - red and itchy nodules, lesions and broken and widespread cause sores and pus dries on the surface. Both legs become oedema and erythema. Fever (+). From physical examination on extremities inferior dextra and sinistra erythema, ekskoriasi, krusta, superficial ulcer, oedema, pus (+), madidans. Abnormal Laboratory examination haemoglobin 10.5 g/dl, leukositosis (12.100), LED 37mm/jam. Culture sensitivity tes (+) Streptococcus Non Group A. Antibiotic sensitivity Cefepime, levofloxacin, ofloxacin, vancomycin, linezolid.

Gram or culture examination from exudates in impetigo and ecthyma was recommended to identification whether *Staphylococcus aureus* and/or β-hemoliticus *Streptococcus* are the etiologic agent, but treatment without this studies is acceptable in a characterized lesion (14).

Of the 6 cases etiologic bacteria isolated were 1 case (16.6 %) is *Staphylococcus aureus*, 4 cases (66.6 %) is *Streptococcus pyogenes*, and 1 case (16.6 %) is a mixture of both (4). Pyoderma caused by streptococcal invasion is almost exclusively caused by Group A Streptococcus (GAS), which is considered more invasive than other streptococci. Post-infection Non-suppurative complications most produced by Streptococcus Group A. And so we need antibiotic therapy. The main marker of invasive GAS infection is the presence of edema profuse, rapid deployment over the network and eksudatnya relatively little. Infection is spread through the lymphatic and blood-borne and result in fulminating clinical course. The existence of groups other than Group A Streptococcus on the skin lesions may be either colonization surface or secondary infection of skin disorders that have been there before. Streptococcus group C and G occasionally include in impetigo lesions, dermatitis with secondary infection, wound infection with lymphadenopathy, and even on erysipelas and cellulitis (1). *Streptococcus*
isolated from the main lesion is an organism of Group A, however, sometimes the other serogroup (such as Groups C and G) also partially responsible for infecting (15).

Based on culture and sensitivity test, patient was treated with systemic antibiotics are Cefat Forte® Syrup (cefadroxil) 2 x 250 mg, Interhistin® syrup (mebhydrolin) 2 x 25 mg. It also compresses NaCl 0.9% in the morning - afternoon for 5 - 10min each time compresses. In the second control patients received topical therapy in the form of DeSolex® cream (desonide) 10 grams in the mix with mupirocin cream 10 grams, which is used - sore morning when the lesion is dry.

For eczema treatment, underlying factors are the aim of therapy, and antibiotic such as cloxacillin is prescribed to against both S.aureus and S. pyogenes. Topical mupirocin ointment also prescribed (7). Warm compresses, local wound care with a gentle cleansing and debridement, topical and systemic antibiotics can also be done (13). Mupirocin, is a fermentation product of Pseudomonas fluorescens, has broad spectrum activity and active against both staphylococcal dan streptococci (11). Oral therapy for impetigo and eczema should be given for 7 days with agents that are active against S. aureus unless the results of cultures are just a streptococcus (14). Cefadroxil is a semisynthetic cephalosporin antibacterial broad spectrum. The FDA has approved administration in children and infants. Cefadroxil active against urinary tract infections, lower respiratory tract, including pneumonia and lung abscess caused by Streptococcus pneumoniae, Streptococcus, Staphylococcus aureus, infection intraabdominal, including peritonitis and abscess intra-abdominal infections ginekologikal, sepsis on the bone and infection of the joints caused by Staphylococcus aureus (including the ones who produce Penicillinase) and is very effective for treating skin and soft tissue infections (16). DeSolex a topical steroid medium - low (low mid potency) or group 5. Has the effect of anti-inflammatory and antiproliferative local and, rarely, systemic immunosuppressive effect. Inhibit the production of prostaglandins, reduces sensitivity and release of histamine and inhibit mast cell sensitization (17). Elimination of the food that causes the reaction is the only way to avoid a clinical reaction. Antihistamines may partially menredakan symptoms of oral allergy syndrome and symptoms of IgE-mediated skin, but does not inhibit systemic reaction (18).
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