

Cervical Necrotizing Fasciitis In Neonate: A Case Report

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ABSTRACT:- Necrotizing fasciitis is rarely fatal but rapidly progressing disease. It's less recognized in neonates. The aim of this case report was to note the rarity of this particular form of necrotizing fasciitis in neonatal period and to analyze the epidemiological, clinical and therapeutic aspects through a review of the literature.

Keywords: necrotising fasciitis, staphylococcus aureus, newborn, surgical debridement, infant

I. INTRODUCTION

Necrotizing fasciitis (NF) is an infection that can be life-threatening. It's characterized by necrosis of the skin, subcutaneous tissue and fascia with a fulminant course and a high mortality rate [1, 2]. NF can be secondary to an infectious soft tissue complication, or following trauma or surgery. It is more common in the lower limbs, perineum, and abdominopelvic wall, but rare in the retroperitoneal space, thorax, neck and scalp. Cervical necrotizing fasciitis (CNF) is much rarer in a neonates [2-4]. We report a case of a female newborn with cervical necrotizing fasciitis. The importance of early aggressive surgical debridement, repeated sterile dressings and antibiotics in disease control is highlighted.

II. OBSERVATION

This was a female newborn, aged four weeks, who consulted the ENT department with cervical erythematous swelling, with warmth and induration associated with a fever of 39° Celsius that had been going on for a week. ("Fig" 1: send by mother). The mother had put of herbal decoction and kaolin to the newborn face and body. The clinical assessment noted necrotic skin with blisters ("Fig"2). Cytobacteriological examination of the secretions revealed *staphylococcus aureus*. The wound and blood culture were negative. The treatment consisted of an incision with drainage and a large surgical debridement leading to a large loss of skin substance ("fig" 3). Parenteral antibiotic therapy was associated ceftriaxone and metronidazole for 10 days followed by an oral relay. The evolution is marked by a slightly unsightly scar with preservation of neck movements ("fig" 4) after a follow-up of ten months.

III. DISCUSSION

Necrotizing fasciitis is a severe soft tissue infection associated with rapidly progressive necrosis of the subcutaneous tissue and superficial fascia [1, 2]. NF is infrequent and is usually fatal in infants and children [5]. Necrotizing fasciitis of the head and neck is rare in comparison to other regions of the body [6-8]. CNF is a destructive and rapidly advancing form of necrotizing fasciitis that most commonly originates from odontogenic or pharyngeal sources, with the signature characteristic of this disease being necrosis of the layers of the fascia underlying the skin and surrounding vasculature [3].

Diagnosing CNF is largely based on clinical presentation, with findings on computer tomography, such as fat stranding and gas tracking along fascial planes, serving to increase the probability of the diagnosis. The final diagnosis, however, is confirmed by surgical exploration [7]. The early diagnosis of NF is very important in the management. The clinical symptoms and signs, such as erythematous rashes and other signs of sepsis, are important for differential diagnosis. In many cases, it is very difficult to distinguish early NF from cellulitis since fever, skin rashes, and other clinical findings are common symptoms of infection and sepsis [4]. The cytobacteriological examination of the case secretions revealed staphylococcus aureus. The recent clinical classification of NF is distinguished into four types: NF type I (polymicrobial/synergistic, 70– 80%), NF type II

(20% of cases, usually monomicrobial), NF type III (Gram-negative monomicrobial, including marine related organisms), and NF type IV (fungal) [8]. The severity of necrotizing fasciitis depends on the aetiology, anatomical site, depth of tissue involvement, bacteriology and general condition of the patient. Low immunity plays an important role in determining the initiation, progression and outcome of the disease [9]. It's a rare polymicrobial infection of the fascial planes of the neck associated with high morbidity and mortality. With isolated CNF, mortality approaches 20%, and when associated with extension into the mediastinum and sepsis, rates as high as 41% and 64% have been reported respectively [1, 6]. Mediastinitis has a high rate of mortality, and along with septic shock. It's the most dismal prognostic indicator in CNF [2, 9-13].

Aggressive surgery and debridement are usually required in combination with antibiotic therapy to limit the spread of the disease and increase the chance of survival. Our patient had early serial debridement done, and which may have been the keys to success in avoiding wide spread of the infection [13]. Hyperbaric oxygen therapy is believed to limit the extent and number of surgical debridement procedures and reduce the mortality rate associated with necrotizing fasciitis [14]. We didn't use hyperbaric oxygen to our case. Necrotizing fasciitis where reconstruction has been either by flaps or by skin grafts [4]. Our patient is a neonate and most wounds at this age are forgiven with less scarring, which most likely prevented limitation of neck movements. Sometimes, the early multidisciplinary management of this newborn may also have contributed to good outcome, included neonatologist, medical microbiologist, plastic and ENT surgeons.

IV. FIGURES



“Fig” 1: A left cervico-facial swelling; B with redness skin



“Fig” 2: Cervico-facial erythematous swelling



“Fig”3: large surgical debridement



Fig 4: slightly unsightly scar ten months later

V. CONCLUSION

Cervical necrotizing fasciitis is a rare but serious infection in newborns. It requires early diagnosis with a view to rapid treatment guaranteeing a better prognosis.

DISCLOSURE OF INTEREST

The author has not supplied his declaration of conflict of interest.

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