AN UNUSUAL CASE OF PRESEPTAL CELLULITIS - CUTANEOUS ANTHRAX
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Abstract: Anthrax is a rare zoonotic disease still prevalent in India. Cutaneous anthrax is the most common form which usually occurs following handling dead mammals in endemic area. We describe a case of cutaneous anthrax developed after handling the meat of a dead goat. The patient was successfully treated with crystalline penicillin.

Key word: Preseptal cellulitis, cutaneous anthrax, eschar.

INTRODUCTION:
Anthrax is a zoonotic disease caused by spore forming gram positive bacillus – B. Anthracis. Typically occurs in 3 forms: a) Inhalational b) Cutaneous c) Gastrointestinal Cutaneous anthrax, the most common form accounting upto 95% of cases occurs by inoculation of spores into abraded skin. A typical eschar develops at the site of inoculation, usually on the fingers or upper eyelid or on the back, of sheep-rearers and those who handle cattle hides. In the recent times, naturally occurring cases have been described which occurred in clusters in rural areas all over the world (1)(2)(3)(4)(5). Preseptal cellulitis caused by bacillus anthracis has been a common occurrence earlier but is a rare disease now. In this case report, we describe a case of cutaneous anthrax involving the left upper eyelid following handling contaminated meat.

CASE REPORT:
A 35 yr old lady, house wife from rural Tamilnadu, presented with 4 days history of left periorbital and facial painless swelling. The brawny edema rapidly progressed to left hemi-facial and cervical edema. There was no history of trauma or insect bite. She had no complaints of fever, breathing difficulty, loose stools or gastrointestinal bleeding, weakness or loss of consciousness. She had no other known comorbidities. On reviewing the epidemiological history, five days prior to the onset of the illness, she was exposed to the hide and meat of a dead goat. On examination, her vital signs were stable. Local examination revealed a well circumscribed eschar with extensive, nontender subcutaneous edema.

Pus swab : No Pus Cells, No bacteria.
Culture : No Significant Growth

DISCUSSION:
Our patient with typical clinical features with an eschar and brawny edema and a history of handling dead goat few days prior to the onset of illness was highly suggestive of cutaneous anthrax. Swab for culture was taken and patient was started on crystalline penicillin. Her edema gradually came down and was discharged home well. Injection Crystalline Penicillin was continued for 7 days (since this is a naturally occurring disease(6). Preseptal cellulites, a close differential diagnosis, usually follows an insect bite or a hordeolum, and the disease is defined by the restriction of infection of the skin and underlying tissues just anterior to the tarsal plate.
In its uncomplicated form, it can cause inflammation of the eyelid and pre-tarsal tissues but has the potential to lead to serious life-threatening complication like septic cavernous sinus thrombosis (Modified Chandler Staging System) if left unattended. Preseptal cellulitis caused by bacillus anthracis has been more common earlier but is a rare disease now(7)(8). Anthrax as a zoonotic disease most commonly occurs in cutaneous form(95%). The disease is contracted (as an occupational hazard) by inoculation of spores through abraded skin while rearing the sheep and handling the hide of cattle. The incubation period for cutaneous anthrax ranges from 2-7 days. The disease appears as a papule followed by pustule/ulcer and eschar formation, the progression of the lesion being very typical for the disease (9). In a review of 22 patients with cutaneous anthrax, only 3 were culture positive hence a strong clinical suspicion with social history is important in making the diagnosis and initiating prompt treatment(10). Mortality in the pre - antibiotic era with cutaneous anthrax was close to 20% but now is <1% with the appropriate antibiotics. Though cutaneous anthrax has been described as a self limiting disease with good response to therapy, the real challenge lies in diagnosis of anthrax today when physicians are not aware of the disease presentation(7) (11). The CDC (centre for disease control) had compiled a flow chart/algorithm during the threat of bioterrorism in 2001 for treatment of patients with suspected anthrax,(12)(13)(annexure-1) also to aid in the early diagnosis and to report to health authorities. Post exposure prophylaxis for close family who handled the same dead goat and a survey by the local veterinarian of other cattle and animals and vaccination was suggested.

**CONCLUSION:**
Cutaneous anthrax should be considered as one of the unusual causes for preseptal cellulitis especially with eschar, brawny edema and strong epidemiological history. Prompt treatment reduces the mortality significantly. A veterinary survey in the vicinity of index case is recommended in order to prevent further outbreaks.

**Bibliography :**