A 55-year-old male dairy farmer was admitted to our hospital with a skin infection on the neck and face. He was apparently in good general health, and his medical history was unremarkable. He reported that, 50 days before admission, a pruritic red maculopapular rash had developed on the anterior region of his neck. This rash failed to improve after a 10-day course of trimethoprim-sulfamethoxazole and fluconazole; rather it progressively worsened. On admission, examination revealed confluent follicular papulae-pustules with purulent-hematic exudation and crusting, on an erythematous-edematous area extending over the anterior region of the neck, chin and mandible (Fig. 1); hairs within the affected area were not compromised. Body temperature was 38.5 °C, and cervical nodes were not appreciable. Results of routine laboratory investigations were: white blood cells (WBC), 8090/mm³ (85% neutrophils, 10% lymphocytes and 4% monocytes); erythrocyte sedimentation rate, 72 mm/h; C-reactive protein, 44.8 mg/100 mL; serum glucose, 453 mg/100 mL. Quantitative measurements of serum levels of immunoglobulins M, G, A, and E, total complement activity, complement factors C3 and C4, and alpha-1-antitrypsin were within normal limits.

Swabs for bacteriological and mycological analysis were taken from pustules. While waiting for the results of the cultures, insulin therapy was started at 40 IU/day, because of hyperglycemia. Mycological culture was negative, while bacteriological culture yielded *Klebsiella oxitoca*. The patient was treated with ceftazidime 4 g/day intravenously and amikacin 1 g/day intramuscularly for 3 weeks, and a slow and progressive improvement, with no formation of scars or alopecic areas, was observed (Fig. 2).

Discussion

Chronic infection of the bearded area can be caused by many bacteria, dermatophytes and some protozoa, and clinical manifestations generally vary widely. Recently, a number of cases of tinea barbae caused by *Tricophyton verrucosum*, the principal cause of ringworm in cattle, have been observed in dairy farmers.1–3

Our patient, a dairy farmer, presented with a deep dermal inflammatory reaction, with nodule and pustule formation, which is typical of an infection by zoophilic dermatophytes. In the literature, folliculitis caused by *Klebsiella folliculitis* is rare. It is usually classified as a “Gram-negative folliculitis”, and considered as a complication of prolonged broad-spectrum antibiotic therapy in patients suffering from acne and rosacea, especially in older men suffering from severe seborrhea. Furthermore, immunologic factors seem to play a critical role in pathogenesis.4
Our patient had never suffered from acne or rosacea, had not taken any antibiotic before folliculitis appeared, and did not present abnormalities of immunologic parameters. 

*Klebsiella oxytoca* can cause bacteremia in patients with diabetes mellitus, but folliculitis due to *Klebsiella oxytoca* has never been reported in such subjects. It is likely that, in our patient, the high level of glucose increased his susceptibility to infection.6,7

**References**


![Figure 2](image-url) Appearance of the previously involved area after a 3-week course of ceftazidime and amikacin. The area is completely healed, with no evidence of scarring or alopecia.