Case Report

Poststeroid Panniculitis in an Adult

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Abstract : **Poststeroid panniculitis is a rare complication of corticosteroid therapy. All reported cases have occurred in children. In this communication, we describe a 41-year-old woman who presented to us with multiple subcutaneous nodules which appeared after reduction of the dose of oral prednisolone administered for systemic lupus erythematosus. Histopathological examination confirmed the diagnosis of poststeroid panniculitis. To our knowledge, this is the first case report in which poststeroid panniculitis occurs in an adult.**

เรื่องย่อ : **Poststeroid Panniculitis ในผู้ใหญ่**

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Poststeroid panniculitis เป็นโรคแทรกซ้อนจากยาสตีรอยด์ที่พบได้น้อย เท่าที่เคยรายงานมีเพียงประมาณ 20 ราย ผู้ป่วยทุกรายเป็นเด็กในช่วงอายุตั้งแต่ 19 เดือน ถึง 14 ปี รายงานนี้ได้นำเสนอผู้ป่วยหญิง 1 ราย อายุ 41 ปี ซึ่งป่วยเป็นโรค systemic lupus erythematosus อยู่เดิม และเกิดตุ่มใต้ผิวหนังจำนวนมากหลังจากการลดขนาดยาเพร็ดนิโซโลน ผลการตรวจทางพยาธิวิทยาผิวหนังเข้าได้กับ poststeroid panniculitis นับเป็นรายงานแรกที่พบ poststeroid panniculitis ในผู้ใหญ่

CASE REPORT

A 41-year-old married woman was referred to the Dermatology Clinic from a nephrologist with a complaint of multiple asymptomatic nodular lesions for 2 months. A diagnosis of SLE was made in February 1986. She was treated with prednisolone 60 mg daily for autoimmune hemolytic anemia and nephrotic syndrome. The dosage of prednisolone was tapered slowly and was discontinued in April 1989. Four months later she had an exacerbation of SLE with nephrotic syndrome and left pleural effusion. Prednisolone 60 mg daily was reinstituted. Gradual reduction of the prednisolone dosage was started as clinical improvement was achieved. After the daily dosage was reduced to 15 mg daily for 4 months, the nodules appeared. The total dose of prednisolone

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administered was 11,620 mg.

On examination, multiple small, firm, nontender subcutaneous nodules measuring 0.2-1 cm were presented over both upper arms, neck and anterior abdominal wall (figure 1). The overlying skin was normal. The remainder of the physical examination was unremarkable.

Laboratory findings included : Hb 12.03 gm/100 ml, white blood cell count 8,200, differential: 81% neutrophils, 19% lymphocytes; platelet normal; urinalysis: specific gravity 1.016, albumin 1+, white blood cell 2-3/HD; serum calcium 8.2 mg/100 ml; phosphate 4.0 mg/100 ml.

Histopathological examination of the nodule showed a normal epidermis and dermis. There was extensive lobular panniculitis that spared the interlobular septa. Needle shaped clefts were found within lipocytes and histiocytes (figure 2). A diagnosis of poststeroid panniculitis was considered. Because the nodules were asymptomatic, the same dose of prednisolone (15 mg daily) was maintained. Seven months later, the nodules on the neck totally disappeared, leaving neither pigmentation nor depressed scar (figure 3). The nodules on both upper arms and anterior abdominal wall were reduced in number considerably.

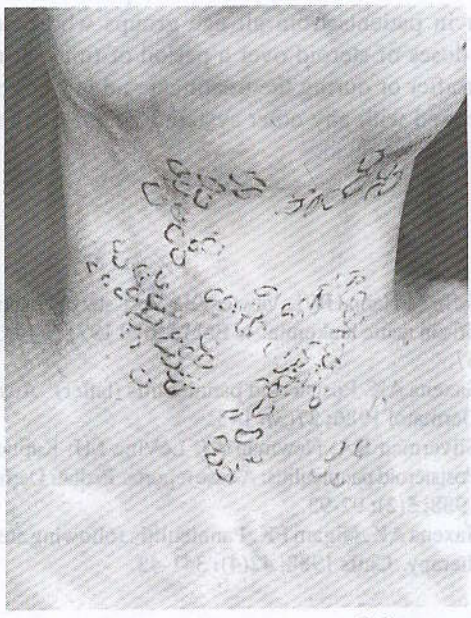

Figure 1. Multiple subcutaneous nodules on neck.

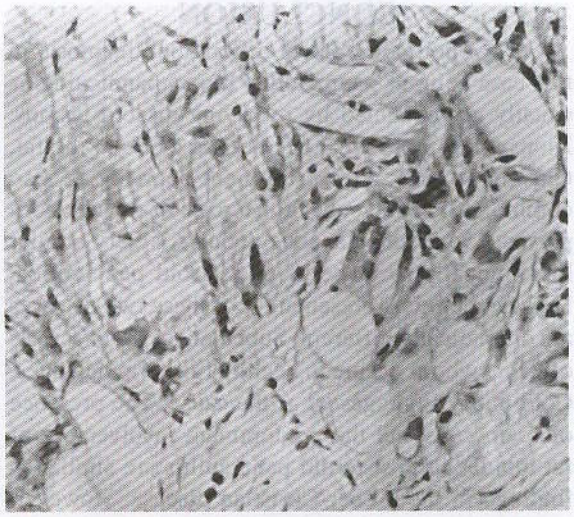

Figure 2. Needle shaped clefts within lipocytes and histiocytes.

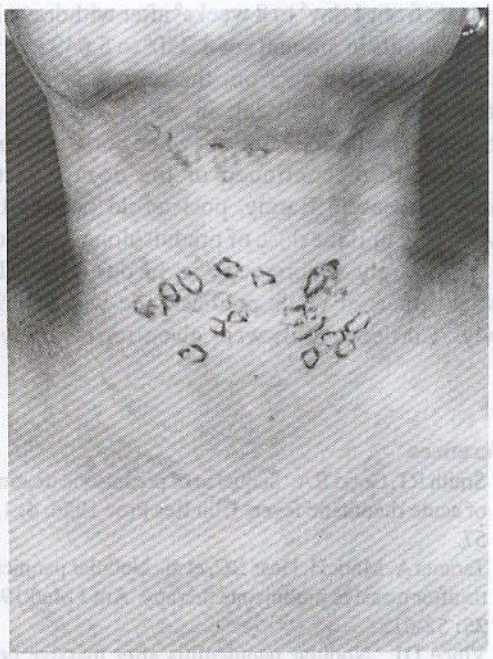

Figure 3. Nodules disappeared, leaving neither pigmentation nor depressed scar.

CONCLUSION

The main clinical differential diagnosis in this case is lupus panniculitis. Lupus panniculitis is usually accompanied by overlying discoid lesions. Biopsy does not reveal needle-like clefts in the fat. Chronic course with prominent scarring is also common. Subcutaneous fat necrosis of the newborn presents with subcutaneous nodules is very similar histologically to those of poststeroid panniculitis. However, clinical presentation of these two diseases are dramatically different. Subcutaneous fat necrosis of the newborn occurs in healthy full-term neonates. Cold injury is suggested as the cause. The presence of foam cells and the predominant involvement of fat lobules in poststeroid panniculitis are similar to findings in the Weber-Christian disease. However, needle-shaped clefts have not been observed in the latter.

Poststeroid panniculitis was first described in 1956 by Smith and Good.[1] Since then, only 20 cases have been reported.[1-9] It is exceptionally rare. It appears from 1 day[5] to 8 weeks[9] after withdrawal of corticosteroids in amounts of 1,350[6] to 5,649 mg.[2] It is considered distinct from the rebound effect of corticosteroid withdrawal, in which the original pathologic condition reappears when corticosteroids are suddenly discontinued or the dosage is too rapidly decreased. Rarely, poststeroid panniculitis may also occur if the dose of prednisolone is reduced but not entirely suppressed[3], as in our case. The nodules appeared while prednisolone was tapering slowly. Corticosteroids were given for a variety of conditions, including acute rheumatic fever[1,2] nephrosis[5], leukemia[6], and hepatic encephalopathy.[9] The subcutaneous nodules appear on the cheeks, arms, and trunk. Individual lesions range in diameter from 0.5-4.0 cm and may be pruritic. Cutaneous lesions rapidly resolve if steroid therapy is reestablished. Spontaneous resolution may occur in mild case. Resolution without scarring is the rule. A fatal case associated with intestinal fat necrosis has been reported.[1] It has not been associated with any other systemic manifestation of steroid withdrawal.

All reported cases of poststeroid panniculitis occurred in children aged ranging from 19 months to 14 years old. We believe that our case is the first to be reported in which poststeroid panniculitis occurred **in adult**. Histopathological examination revealed extensive fat necrosis and needle-shaped clefts within fat cells and histiocytes that confirmed the diagnosis of poststeroid panniculitis

The pathogenesis is unclear, but it is regarded as a complication of corticosteroid therapy.[1] It has been suggested that since panniculitis occurs in areas showing the greatest accumulation of fat during steroid therapy, the loss of factors leading to the accumulation and the attendant accelerated fat removal might injure the adipose cells.[4]

In conclusion, poststeroid panniculitis can occur in patients from all age groups who receive high doses of steroid over a period of time. It may occur after or during the treatment and has not been associated with any other systemic manifestation of stêroid withdrawal.

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