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Nephrology
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Teaching Point
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The child with initially refractory skin infection after renal transplantation

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Case report

A 7-year-old boy with autosomal recessive polycystic kidney disease underwent pre-emptive living-related kidney transplantation from his mother. Initial immunosuppression consisted of cyclosporin, mycophenolate mofetil (MMF), and prednisone. Ten weeks after transplantation he experienced steroid resistant rejection (Banff Grade II) and cyclosporin was switched to tacrolimus. Renal function subsequently normalized and plasma creatinine has been stable at between 60 and 78 μmol/l for the following 3 years. No side effects to tacrolimus were noted at a dose of 10 mg/day with subsequent whole blood trough levels between 7.3 and 11.0 μg/l. MMF was administered at a dose of 800 m^2/day (two-thirds of the recommended dose due to altered metabolism with concurrent tacrolimus treatment). Prednisone was given at a dose of 5 mg on alternate days.

At the age of 10 years the patient developed a few lesions of molluscum contagiosum (MC) on the trunk. Over a period of a few weeks the number of lesions increased dramatically (Figure 1) and extended over the anterior and posterior trunk as well as the extremities, embarrassing the patient and his parents. Intensive local treatment was initiated: cryotherapy was tried for a short time, but was abandoned as lesions recurred immediately after treatment. Topical treatment with silver nitrate also failed (Figure 2). A slow reduction of tacrolimus dosage aiming at trough levels of 5 μg/l was tried and cryotherapy was restarted. Again there was no improvement.

In addition to MC, two episodes of community-acquired pneumonia occurred 3 and 6 months after MC had developed and were successfully treated with a 10-day course of oral amoxicillin. After the second pulmonary infection it was decided to discontinue MMF and start azathioprine at a dose of 1 mg/kg while tacrolimus and prednisone dosage were not changed. FACS scan demonstrated normal lymphocyte subsets levels at this stage and serum immunoglobulin levels (IgG, IgA, and IgM) were normal.

The effect was impressive: MC lesions decreased dramatically within 1 week after this second change of immunosuppression with continued cryotherapy. The skin lesions improved rapidly and disappeared after

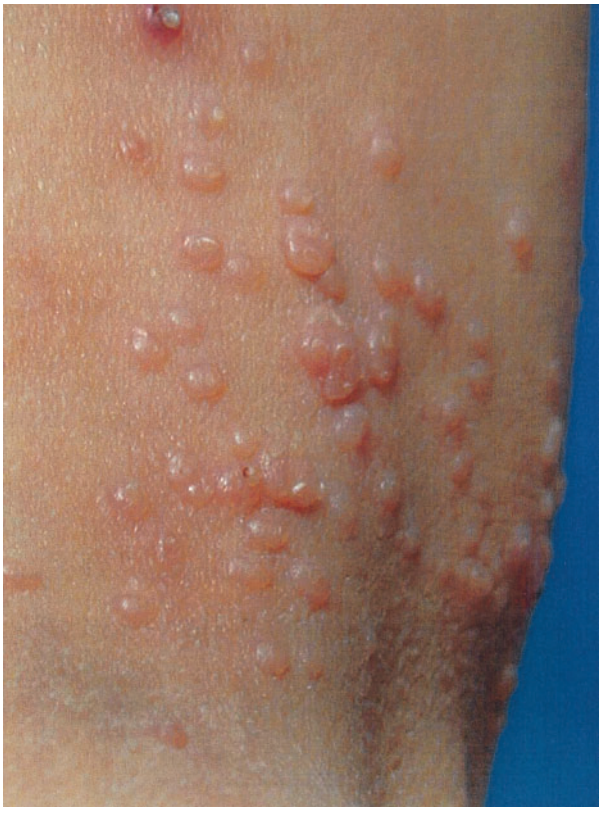

Fig. 1. Multiple lesions of molluscum contagiosum on the trunk.

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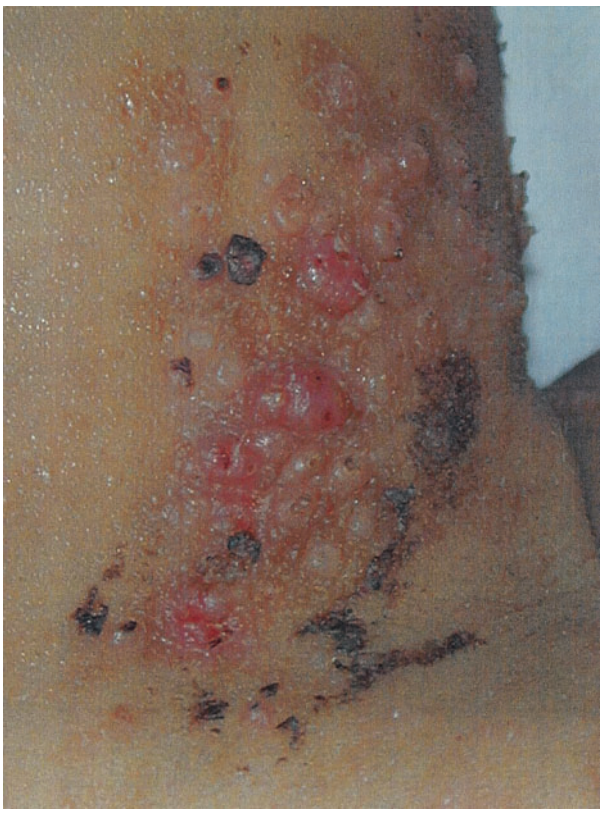

Fig. 2. Aggravation despite intensive local therapy.

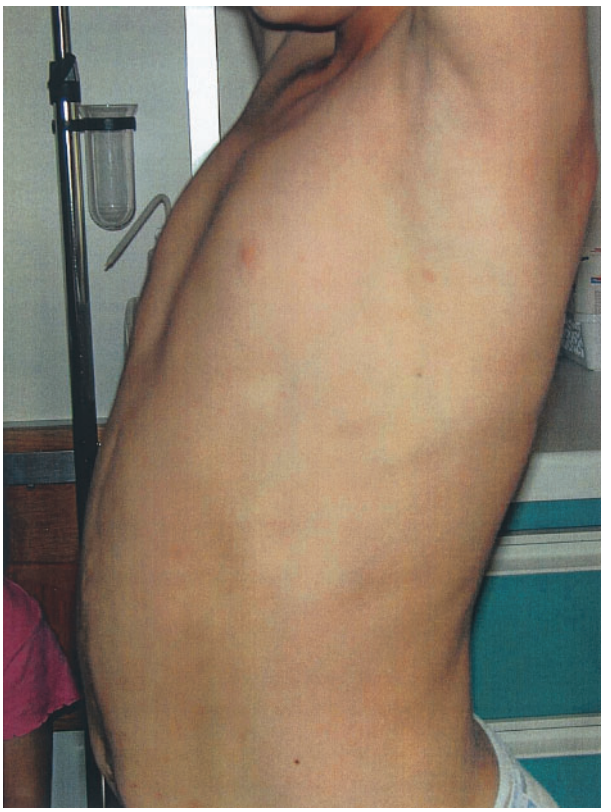

Fig. 3. Complete healing after switching mycophenolate mofetil to azathioprine.

3 months and did not recur (Figure 3). Renal function remained stable and no further pneumonia occurred.

Discussion

Infectious complications are the price of effective immunosuppression leading to long-term graft survival of kidney transplantation especially in childhood. With immunosuppression viral infections can cause systemic and life-threatening infections (e.g. CMV and EBV). Viruses, however, can also lead to skin disease. In children after transplantation these most frequently include warts, herpes simplex/zoster, and in up to 6.9% MC [1,2]. Most of these lesions are not life threatening but can cause significant morbidity, cosmetic problems, and may compromise quality of life considerably [3]. Usually MC can be treated easily by cryotherapy in immunocompetent children, however, in our patient, development of extensive lesions could not be controlled by external measures. Reduction of calcineurin inhibition was unsuccessful. Only after switching mycophenolate to azathioprine, did external treatment result in complete healing of lesions. This suggests a causal role for MMF in the development of MC.

Teaching point

In a patient on immunosuppression treatment, refractory skin infections such as MC can cause significant morbidity. While external treatment alone may be insufficient, additional modification of immunosuppression may be necessary to achieve complete healing.

References

1. Euvrard S, Kanitakis J, Cochat P, Cambazard F, Claudy A. Skin diseases in children with organ transplants. *J Am Acad Dermatol* 2001; 44: 932–939
2. Taskapan O, Yenicesu M, Aksu A. A giant solitary molluscum contagiosum, resembling nodular basal cell carcinoma, in a renal transplant recipient. *Acta Derm Venereol* 1996; 76: 247–2488
3. Au WY, Lie AK, Shek TW. Fulminant molluscum contagiosum infection and concomitant leukaemia cutis after bone marrow transplantation for chronic myeloid leukaemia. *Br J Dermatol* 2000; 143: 1097–1098