

# Case Letter

## Multiple Cysts in a Renal Transplant Recipient

To the Editor:

Renal transplant is a boon for patients with renal failure as they escape the rigors of regular dialysis sessions. However, transplantation may lead to its own spectrum of skin problems that often present a diagnostic dilemma. The clinical picture may be modified by the concomitant immunosuppressive medications. We report a case of multiple cysts in a renal transplant recipient.

A 45-year-old man presented with cystic lesions on the buttocks and arms of 2 years' duration. Following a renal transplant, which was performed approximately 2.5 years prior, he received cyclosporine 200 mg daily, azathioprine 50 mg daily, and prednisolone 40 mg daily, which was subsequently tapered to 10 mg daily. The cysts started developing on the buttocks approximately 6 months after the transplant. Thereafter, new cysts appeared and old ones enlarged. Occasionally these lesions became red and tender. Incision and drainage was done and he was given antibiotics by the local practitioner. The lesions subsided but recurred after some time.

Examination revealed multiple, flesh-colored, nontender nodulocystic lesions varying in size from 1 to 4 cm over the buttocks, thighs, and arms in a bilateral symmetric distribution (Figure 1). He also had a few multilocular cysts on the thighs (Figure 2). In addition, he had extensive tinea corporis and onychomycosis. Fine-needle aspiration cytology from one of the lesions revealed pultaceous material and the smear showed squamous cells; the findings were consistent with the diagnosis of an epidermoid cyst. The cysts were dissected bluntly from the surrounding tissue. The specimen sent for histopathology revealed cysts filled with horny material and lined by keratinized stratified squamous epithelium, suggestive of an epidermoid cyst. There was no evidence of

malignancy or human papillomavirus (HPV) in the cyst wall or its contents.

Cutaneous lesions can be a notable problem in transplant recipients. Factors such as climate and skin type have been implicated as modifiers of these clinical manifestations. Patients may develop cutaneous complications related to long-term immunosuppressive drug treatment. These complications are either related to immunosuppression such as common warts, dermatophytosis, premalignant lesions, and skin cancer, or drug-specific effects such as acne, rosacea, folliculodystrophy, and hypertrichosis.

Epidermoid cysts are commonly encountered in routine dermatologic practice. The exact etiology of epidermoid cysts is unknown, but many factors such as trauma and occlusion of pilosebaceous follicles by HPV have been cited as etiologic factors.<sup>1</sup> Although viral infections occur at an increased frequency in

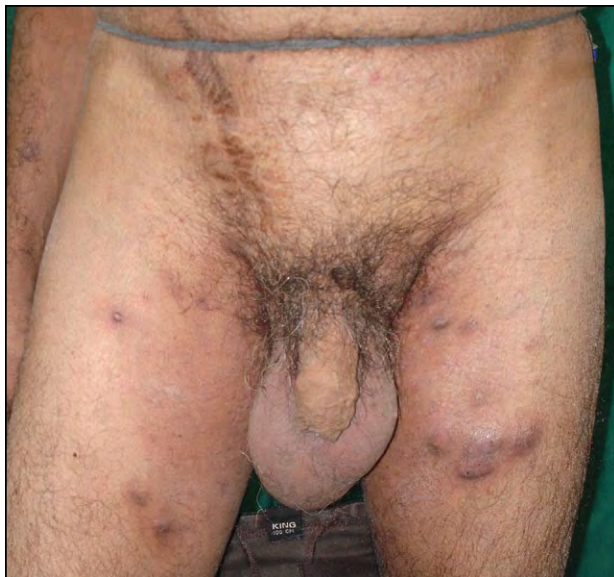


**Figure 1.** Multiple discrete cysts on the buttocks and arms.

All from Post Graduate Institute of Medical Education and Research, Chandigarh, India. Drs. Narang and Sharma are from the Department of Dermatology, Venereology, and Leprology. Dr. Kaur is from the Department of Pathology. Dr. Sharma also is from Gian Sagar Medical College and Hospital, Ram Nagar, Banur, Patiala, Punjab, India.

The authors report no conflict of interest.

Correspondence: Tarun Narang, MD (narangtarun@yahoo.co.in).



**Figure 2.** Large multilocular cysts on the thighs.

transplant recipients receiving immunosuppressive drugs, the role of HPV in these patients is unclear.<sup>2</sup>

Multiple epidermoid cysts are known to occur as a rare sequela of cyclosporine therapy.<sup>3,4</sup> A study of cutaneous lesions in 67 cyclosporine-treated renal transplant recipients revealed that a majority of these lesions concerned the pilosebaceous unit: hypertrichosis (60% [40/67]), epidermal cysts (27% [18/67]), pilar keratosis (21% [14/67]), acne (15% [10/67]), folliculitis (12% [8/67]), and sebaceous hyperplasia (10% [7/67]).<sup>5</sup> However, in another study epidermoid cysts were not seen in any of the 200 renal transplant recipients who were not given cyclosporine.<sup>2</sup> Cyclosporine is known to cause hirsutism and induction of follicular keratinization. Occlusion of pilosebaceous orifices by cyclosporine-induced keratinization may be responsible for these epidermoid cysts.<sup>6-8</sup>

Transplant medicine has seen many innovations over the years and continues to evolve in the 21st century. Newer immunosuppressive strategies in renal transplantation are associated with better patient and graft survival rates; however, the adverse toxicities and long-term side effects associated with these agents present a number of challenges.

Epidermoid cysts have a benign course and development of malignancy in cutaneous cysts is indeed a rare event.<sup>9</sup> Differential diagnoses have included squamous cell carcinoma, basal cell carcinoma, and melanoma.<sup>1</sup> These cysts can be excised or kept under close observation in immunosuppressed individuals who are at a risk for development of malignant tumors.<sup>8</sup>

Tarun Narang, MD  
Meghna Sharma, MD  
Anureet Kaur, MD

## REFERENCES

1. Thomas VD, Swanson NA, Lee KK. Benign epithelial tumors, hamartomas and hyperplasias. In: Wolff K, Goldsmith LA, Katz SI, et al, eds. *Fitzpatrick's Dermatology in General Medicine*. 7th ed. New York, NY: McGraw Hill; 2008:1054-1067.
2. Koranda FC, Dehmel EM, Kahn G, et al. Cutaneous complications in immunosuppressed renal homograft recipients. *JAMA*. 1974;229:419-424.
3. Schoendorff C, Lopez Redondo MJ, Roustan Gullon G, et al. Multiple epidermoid cysts in a renal transplant recipient taking cyclosporine A. *Cutis*. 1992;50:36-38.
4. Gupta S, Radotra BD, Kumar B, et al. Multiple, large, polypoid infundibular (epidermoid) cysts in a cyclosporin-treated renal transplant recipient. *Dermatology*. 2000;201:78.
5. Bencini PL, Montagnino G, Sala F, et al. Cutaneous lesions in 67 cyclosporin treated renal transplant recipients. *Dermatologica*. 1986;172:26-30.
6. Seibel W, Sundberg JP, Lesko LJ, et al. Cutaneous papillomatous hyperplasia in cyclosporine-A treated beagles. *J Invest Dermatol*. 1989;93:224-230.
7. Richter A, Beideck S, Bender W, et al. Epidermal cysts and folliculitis caused by cyclosporin A [in German]. *Hautarzt*. 1993;44:521-523.
8. Gupta AK, Cardella CJ, Haberman HF, et al. Cutaneous malignant neoplasms in patients with renal transplants. *Arch Dermatol*. 1986;122:1288-1293.
9. Antón-Badiola I, San Miguel-Fraile P, Peteiro-Cancelo A, et al. Squamous cell carcinoma arising on an epidermal inclusion cyst: a case presentation and review of the literature [in Spanish]. *Actas Dermosifiliogr*. 2010;101:349-353.