Kaposi's Sarcoma in a Renal Allograft Recipient under Cyclosporin A

P.		Riegler ^a
R.		Corradini ^a
W.		Huber ^a
W.		Wallnöfer ^b
E.		Egarter ^c
A.		Königsrainer ^d
M.		Spielberger ^d
H.		Hintner ^e
R.		Margreiter ^d

Departments of ^aNephrology, ^bDermatology, and ^cPathology, City Hospital, Bolzano, Italy; Departments of ^dTransplant Surgery and ^eDermatology, University Hospital, Innsbruck, Austria

Prof. R. Margreiter, I. Universitätsklinik für Chirurgie, Abteilung für Transplantationschirurgie, Anichstrasse 35, A-6020 Innsbruck (Austria)

Dear Sir,

Up to 1983 a total of 58 cases of Kaposi's sarcoma (KS) in renal allograft recipients were reported to the Cincinnati Transplant Tumor Registry [1]. By August 1986 another 45 cases had been registered [2]. Whereas all earlier cases were given steroids and azathioprine for prophylactic immunosuppression, the number of patients who developed KS under cyclosporin A (CS) treatment is increasing. Moreover, KS is given as the most common type of malignancy among renal transplant patients in Saudi Arabia [3, 4], but a high incidence of KS is also reported from Egypt and Italy [5, 6]. We report on the case of a benign cutaneous form of KS. A 39-year-old Mediterranean female with end-stage reflux nephropathy after 9 years of hemodialysis, during which she was given eleven units of blood, underwent cadaveric renal transplantation. The patient had developed cytotoxic antibodies against 80% of a panel; direct Tcell cross-match, however, was clearly negative. Donor and recipient shared one HLA Antigen at the A, B and DR loci respectively. Immunosuppression consisted of CS, steroids, and azathioprine. Because of leukopenia, azathioprine had to be discontinued on day 20. One acute cellular rejection was successfully treated with 3×500 mg methylprednisolone given on 3 consecutive days. The further course was completely uneventful, and the patient was discharged from the unit 3 weeks after transplantation with stable graft function (serum creatinine 1.7 mg%). At that time CS (2×250 mg; 8.4 mg/kg) with whole-blood levels around 400 ng/ml was given together with 20 mg prednisolone for immunosuppression. Steroids were reduced thereafter by 2.5 mg every other week, until a maintenance dosage of 10 mg was reached. At the time of discharge the patient was negative for hepatitis B virus, cytomegalovirus, Epstein-Barr virus, and human immunodeficiency virus. Five months later, azathioprine

was reinstituted at a dosage of 75 mg (1.5 mg/kg/day) and CS reduced to 2×210 mg. Ten months after grafting, several purple-brown skin nodules appeared on her left leg. Biopsy revealed KS. At that time seroconversion of cytomegalovirus (IgG 1:10,240, IgM positive) and Epstein-Barr virus (IgG 1:40, IgM weakly positive) was noticed. No antibodies against human immunodeficiency virus, however, or antigens were detected. The T4/T8 ratio was decreased to 0.8. Visceral involvement was excluded by means of computerized axial tomography and endoscopy. Azathioprine was now rediscontinued and CS reduced to 300 mg/day (4.6 mg/kg), while prednisolone was temporarily increased to 15 mg/day. In addition, all cutaneous lesions were irradiated with a total dose of 90 Gy. All nodules disappeared, whereas the T4/T8 ratio remained low (0.43) and cytomegalovirus and Epstein-Barr virus serology positive. Only 1 month later, while steroids were back to 10 mg/day, KS reappeared on her trunk and right leg. After repeated exclusion of visceral lesions, CS was further reduced to 200 mg/day (3.3 mg/kg), and KS was treated by local irradiation (60 Gy). The T4/T8 ratio now improved to 1.02, and cytomegalovirus and Epstein-Barr virus serology became negative. Now, 8 months after the first appearance of KS, the patient is doing well, is tumor free, and has stable graft function. The fact that the patient did not show any rejection symptoms during reduction of immunosuppression may indicate that she was highly overimmunosuppressed which together with ethnic and viral factors was certainly the cause of KS. On the other hand, this type of immunosuppression was initially chosen, since the patient was felt to be at high risk due to the strong degree of presensitization. The role of CS in the development of KS is difficult to determine from this single observation. From this case, however, it can be seen that KS in pharmacologically immunosuppressed patients can be cured by reduction of immunosuppression and local irradiation. A close follow-up with respect to KS is advisable for allograft recipients with predisposing factors taking CS.

References

- Penn, I.: Kaposi's sarcoma in immunosuppressed patients. *J. clin. Lab. Immun.* 12:1–10 (1983).
- Penn, I.: Personal communication. (1988).
- Al-Suleiman, M.; Haleem, A.; Al Khader A.: Kaposi's sarcoma after renal transplantation. *Transplant. Proc.* 19: 2243–2244 (1987).
- Qunibi, W.; Akhtar, M.; Shew, K.; Ginn, H.E.; Al-Furayh, O.; De Vol, E.B.; Taher, S.: Kaposi's sarcoma: the most common tumor after renal transplantation in Saudi Arabia. *Am. J. Med.* 54:225–232 (1988).
- Civati, G.; Busnach, G.; Brando, B.; Broggi, M.L.; Brunati, C; Minetti, L.: Kaposi's sarcoma in renal transplant recipients treated with cyclosporine (Abstract). *Curr. Ther. Nephrol.*, Sorrento 1988.
- Sohb, M.; Moustafa, F.; Shehab El-Din, A.; Abdel Ghafar, H.; Attalla, A.; Mowafy, H.; El-Shammy, S.; Elwehedy, G.; Gho-neim, M.: Kaposi sarcoma after kidney transplantation. An etiologic study and a successful treatment (Abstract). *Curr. Ther. Nephrol.*, Sorrento 1988.