

0959-8049(94)E0176-5

## Non-AIDS-related Kaposi's Sarcoma in Florence, Italy (1985–1989)

A. Barchielli, E. Buiatti and M. Geddes

THE ASSOCIATION between Kaposi's sarcoma (KS) and AIDS has increased interest in the epidemiology of KS. Only limited population-based data are available on pre-AIDS and non-AIDS-related KS incidence. No cases of KS were registered by Levi and colleagues in the Swiss canton of Vaud before 1983 (the year of the first case of AIDS in Switzerland) [1]. Pre-AIDS KS incidence rates were 0.14/1 000 000 in England and Wales (both in men and in women) [2]; in Sweden [3], rates were 0.40/100 000 in men and 0.14/100 000 in women and in the U.S.A. [4] they were 0.29/100 000 in men and 0.07/100 000 in women. In Italian areas with population-based cancer registries, pre-AIDS incidence rates were 1.05/100 000 in males and 0.27/100 000 in females [5]. Higher incidence rates were reported in Italian islands: 1.8/100 000 (males and females) in Sardinia [6] and 1.9/100 000 in males and 0.6/100 000 in females in Ragusa-Sicily [7].

To provide further data on KS incidence rates in southern Europe, we reviewed KS cases (ICD-O, morphology 9140/3) incident in the province of Florence (Census 1981: about 1 200 000 inhabitants) reported to the Tuscany Cancer Registry (TCR) from 1985 to 1989. To identify the AIDS-related tumours, the KS cases were nominatively linked with the list of AIDS-affected subjects notified to the AIDS Surveillance System of the same area.

In Table 1, the absolute number of KS cases by sex, age group and AIDS status and the standardised incidence rates are shown (standard: European population). Out of the 31 cases in males, 18 were AIDS-related (mean age 35 years, range 26–52) and 13 were non-AIDS-related (mean age 66 years, range 40–81); in females all cases were non-AIDS-related (8 cases, mean age 66 years, range 43–91). In males, age-standardised incidence rates were 0.63/100 000 for AIDS-related cases and 0.34/100 000 for non-AIDS-related cases, in females the rate was 0.18/100 000.

In both sexes, most of non-AIDS-related cases were older than 49 years (17/21, 81.0%). Age-specific incidence rates (not reported) showed a first peak in those aged 30–39 years (AIDS-related cases) and a second peak in those older than 60 (non-AIDS-related cases). Only the peak at older ages was observed in females.

In non-AIDS-related KS cases, the most important localisations were the lower limb (11 cases), other sites of the skin (6 cases) and unspecified sites (3 cases); in AIDS-related cases they were oral cavity, visceral and multiple sites (10 cases) and unspecified sites (5 cases).

Correspondence to A. Barchielli.

A. Barchielli and E. Buiatti are at the Tuscany Cancer Registry, Descriptive Epidemiology Unit, Center for the Study and Prevention of Cancer, via San Salvi 12, 50135 Florence, and M. Geddes is at the Epidemiology Unit, (Satellite Unit c/o C.S.P.O., Florence), National Institute for Cancer Research of Genoa, via san Salvi 12, 50135 Florence, Italy.

Table 1. Absolute number of KS cases and age-standardised \* incidence rates per 100 000 by age group, sex and AIDS status, Florence, Italy, 1985–1989

	< 50 years		Age group ≥ 50 years		All ages	
	n	Rate	n	Rate	n	Rate
Males						
Non-AIDS-related	2	0.10	11	1.04	13	0.37
AIDS-related	17	0.84	1	0.13	18	0.63
Total	19	0.94	12	1.17	31	1.01
Females †	2	0.09	6	0.40	8	0.18

\* Age-standardised to the European population. † All non-AIDS-related cases.

Seven occurrences of non-AIDS-related KS (three males and four females, the third of total non-AIDS cases) were diagnosed in subjects born in southern Italy, and five of them in Sicily or Sardinia, while only 6.5% of the population resident in the province of Florence originates from southern Italy, and 3.7% from Sicily or Sardinia (Census 1981).

Five subjects with non-AIDS-related KS had a diagnosis of another primary cancer (one colon cancer, one non-Hodgkin's lymphoma and one melanoma of skin in males; one breast cancer and one myeloma in females), incident between 2 years before and 4 years after the occurrence of KS.

In conclusion, these data show that the incidence rates of non-AIDS-related KS in Florence are lower than those reported for other Italian areas (i.e. Italian islands) in the pre-AIDS period, similar to those of the U.S.A. and Sweden, but higher than those reported for other European areas (i.e. England and Wales, Switzerland). Internal migration from high-risk Italian areas (i.e. southern Italy) represents a relevant component of the KS incidence rates in Florence.

1. Levi F, Franceschi S., La Vecchia C. Kaposi's sarcoma in the Swiss canton of Vaud, 1974–1990. *Eur J Cancer* 1993, **13**, 1918–1919.
2. Grulich AE, Beral V, Swerlow AJ. Kaposi's sarcoma in England and Wales before the AIDS epidemic. *Br J Cancer* 1992, **66**, 1135–1137.
3. Dictor M, Attewell R. Epidemiology of Kaposi's sarcoma in Sweden prior to the acquired immunodeficiency syndrome. *Int J Cancer* 1988, **42**, 346–351.
4. Biggar RJ, Horm J, Fraumeni JF, Greene MH, Groedert JJ. The incidence of Kaposi's sarcoma and *Mycosis fungoides* in the United States and Puerto Rico. *J Natl Cancer Inst* 1984, **73**, 89–94.
5. Geddes M, Franceschi S, Barchielli A, et al. Kaposi's sarcoma in Italy before and after the AIDS epidemic. *Br J Cancer* 1994, **69**, 333–336.
6. Cottoni F, Ena P, Cerimele D. Kaposi's sarcoma in North Sardinia from 1977 to 1979. *Italian Gen Rev Derm* 1980, **17**, 13–22.
7. Gafà L, Gafà R, Dardanoni L. Il Sarcoma di Kaposi a Ragusa e in Sicilia. IX Renuion du Group pour l'epidemiologie et l'enregistrement du cancer dans les pays de langue latine, 31 May–1 June, Madrid 1984, 69–71.

**Acknowledgements**—This study has been supported by a grant from the Ministero della Sanità of Italy - ISS (VI Progetto AIDS - 1993, contract number 8203 -01).