

Male Preponderance of Cluster Headache is Progressively Decreasing Over the Years

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Cluster headache (CH) is known to affect men much more frequently than women. The various case series in the literature suggest male-to-female (M/F) ratios ranging from 3.7:1 to 11.6:1, the average being 6.5:1. The largest case series—Horton's in 1956¹ of 1176 patients and Kudrow's in 1980² of 425 patients—report M/F ratios of 6.7:1 and 5:1, respectively. Among the 180 CH patients studied between 1976 and 1983 at the University of Parma Headache Centre, we had found a M/F ratio of 7.2:1.³

As of December 31, 1995, the total number of CH sufferers referred to the Parma Headache Centre was 482 (374 men and 108 women), with a M/F ratio that had decreased to 3.5:1.

The diagnosis of CH for patients first observed between 1976—the year when the University of Parma Headache Centre began its activity—and 1988 was based on the criteria established in 1962 by the Ad Hoc Committee on Classification of Headache⁴ for episodic CH, and on the criteria of Ekbohm and de Fine Olivarius for chronic CH.⁵ For patients referred to our center after 1988, the diagnosis of both chronic and episodic CH was based on the International Headache Society (IHS) criteria.⁶ However, the clinical features of CH in patients seen before 1988, as reported in their clinical records, also met the diagnostic criteria of the IHS classification.

Of the 482 CH patients, 392 (306 men and 86 women) had an episodic form of the disease, 52 (42 men and 10 women) had a chronic form, and 38 (26 men and 12 women) had a form with undetermined periodicity according to the IHS classification.⁶ The episodic-to-chronic ratio was 7.5:1.

The mean age for the 482 patients studied was

39.07 years at the time of referral (39.4 for men and 38.0 for women) and 30.44 years at CH onset (30.30 for men and 30.89 for women).

The M/F ratio was 3.6:1 for episodic sufferers, 4.2:1 for chronic sufferers, and 2.2:1 among patients with periodicity undetermined.

In order to determine whether or not the higher prevalence of CH in men versus women has actually decreased over the years, the M/F ratio of the 482 CH patients in relation to the year of onset of the disease was determined. The M/F ratio decreased from 6.2:1 for the patients with CH onset before 1960, to 5.6:1 for the patients with CH onset in the 1960s, 4.3:1 for the patients with CH onset in the 1970s, 3:1 for the patients with CH onset in the 1980s, and 2.1:1 for the patients with CH onset after 1990 (Table). The well-known male preponderance of CH appears to be progressively decreasing over the years.

The finding seems to be unaffected by any bias or confounding factors. The patient referral procedure to the University of Parma Headache Centre has not changed over the years and no particular attention appears to have been focused recently by medical investigators on female CH sufferers that could lead to a dramatic increase in the number of women being referred to our center.

It presently can not be stated with absolute certainty whether the changing sex ratio among CH patients over time is related to a decrease in this

Distribution of Cluster Headache Patients by Sex and Year of Onset

	No. of Males	No. of Females	Total No. of Patients	Ratio of Males to Females
Before 1960	25	4	29	6.2:1
1960-1969	39	7	46	5.6:1
1970-1979	128	30	158	4.3:1
1980-1989	138	46	184	3.0:1
1990-1995	44	21	65	2.1:1
Total	374	108	482	3.5:1

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