Host Epidemiological Factors Distribution in Erectile Dysfunction

(Epidemiological study)

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by

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ABSTRACT

The mean age of the patients complaining of erectile dysfunction was 47 years. It was found that the prevalence of erectile dysfunction was higher in patients residing rural areas, patients with sedentary occupations, those who are married, poor and those with low education and illiterates. It was noted that overweight patients, those who led a sedentary life style and smokers also showed a higher prevalence of erectile dysfunction.

KAY WORDS

Epidemiological_ Distribution_ Dysfunction

Contents

List of Abbreviations

BACH	Boston Area Community Health
BMI	Body Mass Index
CAD	Coronary artery disease
CNS	Central nervous system
DM	Diabetes Mellitus
ECG	Electro-Cardiography
ED	Erectile dysfunction
EDEM	Epidemiologia de la Disfunction Erectil Masculina
HDL	High density lipoproteins
HPG	Hypothalamic pituitary gonadal axis
IDDM	Insulin dependant diabetes mellitus
IIEF	International Index of Erectile Function
IIEF EF	International Index of Erectile Function Erectile function domain
KEED	Kolner Erhebungsbogen der Erektilen
LDL	Low density lipoproteins
LH	Luteinizing hormone
MALES	Men's Attitude to Life Events and Sexuality
MDD	Major depressive disorder
MMAS	Massachusetts Male Aging Study
NHSLS	National Health and Social Life Survey
NIDDM	Non insulin dependant diabetes mellitus
NIH	National Institute of Health
SD	Sexual dysfunction

Introduction

Introduction

Epidemiology is a scientific study of the distribution and determinants of disease in humans. Epidemiological data are the basis for assessing the overall impact of a condition on a given society. These data are needed to help public health systems to recognize the impact of the studied condition in the population and organize screening, diagnostic, and treatment strategy ***(Boyle, 1999).***

Epidemiology has two components: descriptive and analytical. Descriptive epidemiology includes incidence and prevalence. Incidence is defined as the number of new cases with a certain condition during a specific time period in relation to the size of the population studied ***(Lewis, 2001).***

Prevalence characterizes the proportion of a given population that at a given time has the condition. Current prevalence reveals the percentage of people experiencing the disorder at the time of the assessment. Lifetime prevalence measures the percentage of people ever experiencing the disorder, even if they are no longer experiencing it.

Analytical epidemiology provides an analysis of risk factors for the studied disorder. It aims at development of preventive medicine strategies ***(Lewis, 2001).***

The first step of epidemiological studies is the definition of the disease or condition under investigation. If there is no consensus in definition of the condition or in severity scaling, it is impossible to compare data from different

epidemiological studies. The second step is the selection of the study sample. Communitybased samples are the most appropriate. They define the potential number of patients sustaining the disorder/condition who might benefit from treatment. The study sample must be representative of the studied population in terms of social, cultural, and health status. The third step is the selection of the tools that will be used for screening. In case of male sexual dysfunction, these tools usually include questionnaires or other methods such as interviews. Finally, analysis of the data collected is a copious procedure that aims at a clear, concise presentation of the descriptive and analytical epidemiology to translate them into clinical practice and future planning ***(Lewis et al., 2004).***

Aim of Work

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The aim of this work is to evaluate various epidemiological factors in patients presenting with erectile dysfunction.

Review of Literature

Epidemiology of Erectile Dysfunction (ED)

The scale and potential social impact of erectile dysfunction (ED) may be best understood by an appreciation of its international frequency. In 1995, it is estimated that there were 152 000 000 men worldwide suffering from ED. Because of the accelerating aging of the world population, coupled with the high prevalence of ED in men over 50, the world population of men with ED is expected to increase to 322 000 000 by the year 2025 ***(Aytac et al., 1999).*** With this high prevalence, erectile dysfunction will become a progressively more common and compelling public health problem throughout the world.

Many studies on the prevalence of ED have been published in recent years but their conclusions vary widely. The reasons for the varying results include differences in the design and methodology of the studies, the methods of selecting subjects for the study, the age and health of the cohort studied, the questions that are asked, how the questions are asked, cultural characteristics of the cohort under study, the prevailing attitudes about what constitutes a normal and an abnormal erection in the cohort under study, and prejudices of the investigators. A review of 15 large-scale prevalence studies from 1994 to 2004, reporting men with ED as a percentage of the studied population shows that the prevalence of ED has varied from a low of 10.2% in Laumann's US study of men aged 18–59 years ***(Laumann et al., 1999)***, to a high of 64% in Akkus'

Turkish study of men over 40 ***(Akkus et al., 2002)*** (Table1). Among all 15 studies, the Massachusetts Male Aging Study is the one that is most often referenced. This study demonstrated an overall prevalence of erectile dysfunction of 52% in men aged 40–70. Of these 52%, 17.2% had minimal ED, 25.2% had moderate ED and 9.6% had complete ED ***(Feldman et al., 1994)***.

Author	**Year**	**Country**	**N**	**Age**	**Total (%)**	**Mild (%)**	**Moderate (%)**	**Complete (%)**
Feldman et al.,	1994	US	1.290	40-70 (∅54)	52	17.2	25.2	9.6 (∅54)
Dunn et al.,	1998	UK	780	18-75 ∅50	26			
Laumann et al.,	1999	US	1.249	18-59	10.2			
Braun et al.,	2000	Germany	4.489	30-80	19.2			
Chew et al.,	2000	Australia	1.240	18-91 (∅56)	39.4	9.6	8.9	18.6
Akkus et al.,	2002	Turkey	1.982	>40	64.3	35.7	23	5.6
Vaaler et al.,	2000	Norway	1.182	>40	33	NA	20	13
Meuleman et al.,	2001	Netherlands	1.215	>40	13			
Mahmoud et al.,	2000	Egypt	594	30-70 (∅39)	54.9	32.3	20.4 (∅39)	2.2
Koskimaki et al.,	2000	Finland	2.128	50-70	48	22	14	12
Dogunro et al.,	2000	Nigeria	917	35-70 (∅43)	50.7	40.5	9.9	0.2
Kadiri et al.,	2000	Morocco	646	>25 (∅40)	53.6	37.5	15	1.1
M.-Morales et al.,	2001	Spain	2.476	25-70	12.1	5.2	5	1.9
Rosen et al.,	2004	Multinational	27.839	20-75	16			
Laumann et al.,	2005	Multinational	13.618	40-80	12.9-28.1*			
deBoer et al.,	2004	Netherlands	2.117	18-80	16.8	5.9	3.6	6.9
Ponholzer et al.,	2005	Austria	2.869	20-80	32.3	23.7	7.2	1.3

*Variation of prevalence depends on the region under investigation.

Table 1: Prevalence of ED. Quoted from ***Porst and Sharlip*, 2006**).

Prevalence studies have produced much practical information of clinical importance. Across all prevalence studies, when controlling for other factors, increasing age is a strong risk factor for erectile dysfunction. This effect becomes especially prominent after about age 50 years. For example, in 11 prevalence studies which report ED by decade of life, the prevalence of ED for men in their 30s is 2–15.9%, in their 40s is 9–39%, in their 50s is 16–67%, in their 60s is 27–76%, and in their 70s is 37–83% (Table 2).

Author	**Year**	**Country**	**N(total)**	**Decade of life**				
				30-39	**40-49**	**50-59**	**60-69**	**70-80**
Feldman et al.,	1994	USA	1.290	?	39%	48%	57%	67%
Laumann et al.,	1999	USA	1.249	9%	11%	18%	NA	
Braun et al.,	2000	Germany	4.489	2.3%	9.5%	15.7%	34.4%	53.4%
Chew et al.,	2000	Australia	1.240	8.4%	13.1%	33.5%	51.5%	69.2%
Kadiri et al.,	2000	Morocco	646	5%	?	?	56.7%	?
Mahmoud et al.,	2000	Egypt	594	15.9%	?	?	35.7%	?
Koskimaki et al.,	2000	Finland	2.178	?	?	67%	76%	83%
Glina et al.,	2000	Brazil	825	2%	9%	16%	27%	49%
Meuleman et al.,	2001	Netherlands	1.779	10%				78%
M.-Morales et al.,	2001	Spain	2.476	1%	1.7%	4.5%	11.7%	-
Rosen et al.,	2004	Multinational	27.839	11%	15%	22%	30%	37%
deBoer et al.,	2004	Netherlands	2.117	5.6%	13.7%	23.7%	40%	41.9%
Ponholzer et al.,	2005	Austria	2.869		28.9%	37.5%		71.2%

NA, not available.

Table 2: Prevalence of ED by decade of life. Quoted from ***Porst and Sharlip, 2006).***