PARKINSON'S DISEASE AMONG RESIDENTS OF HARRIS COUNTY, 1998

Eugene C. Lai, MD, PhD, Stephen Waring, DVM, PhD, Suzanne Moore, BA, Maryevanna Thompson, MPH

Veterans Affairs Medical Center and University of Texas - Houston School of Public Health, Houston, Texas, USA

Abstract:

Objective: To describe the occurrence of Parkinson's disease (PD) and parkinsonism among patients in Harris County, encompassing the greater Houston area, for the period January 1, 1998 through December 31, 1998, and to compare characteristics of patients from the Houston Veteran's Administration Medical Center (VA) with patients from non-VA facilities.

Background: Parkinson's disease is a prevalent disorder with distinct clinical and neuropathological features, although the cause(s) remain largely unknown. Information on the occurrence of PD in this large multiethnic population is currently not available. This study represents the first to describe the patterns of occurrence of PD in this population.

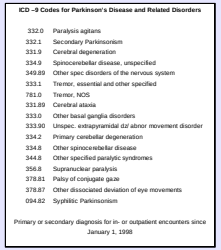
Methods: Newly diagnosed cases among residents of Harris County were sought from the Houston VA Medical Center and other hospitals, neurologists, and geriatric specialists in the Harris County area. For all eligible patients, information to support a diagnosis of PD or parkinsonism was abstracted from all available records. A final clinical diagnosis was established by consensus review for all cases.

Results: From the over 3,000 individual records screened, ninety (90) cases of parkinsonism have been ascertained for 1998. The predominant diagnosis is PD, representing 59% of all cases. Median years of age at initial diagnosis for all cases is 73.5, with VA cases being younger than non-VA (71 vs 76). For all cases combined, 71% are white, 13% black, and 6 % Hispanic, with blacks representing a much higher proportion of VA cases (24%) than non-VA cases (8%).

Conclusions: This study is the first to report on the occurrence of PD and parkinsonism in this large multi-ethnic population, and will provide important information relevant to clinical practice and health care planning.

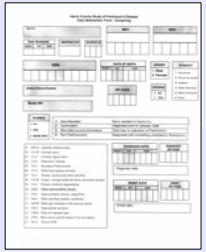
Methods:

Data Abstraction Forms



ICD codes requested from medical records

Demographics information form (stored separately)



Screening form for determining eligibility

Case description form for determining diagnosis for eligible patients who pass screening (2-sided form)

Results:

Table 1. Results of screening and characterization of screening ineligibles

Category/Characteristics	Total	VA	Non-VA
Total Screened	3,166	703	2,463
Eligible	247 (8%)	33 (5%)	214 (9%)
Need more information	472 (15%)	28 (4%)	444 (18%)
Not eligible	2,447 (77%)	642 (91%)	1,805 (73%)
Reason for exclusion			
Non-resident	512 (16%)	187 (29%)	325 (18%)
Non-incident	1,690 (53%)	344 (54%)	1,346 (75%)
Non-parkinsonism	198 (6%)	74 (2%)	124 (7%)
Miscoded	47 (2%)	37 (6%)	10 (<1%)
Median Years of Age (Range)	71 (21-98)	70 (23-94)	72 (21-98)
% Female	35%	3%	48%
Race/Ethnicity			
White	68%	73%	66%
Black	9%	15%	7%
Hispanic	5%	5%	6%
Other	2%	0%	3%
Missing	15%	7%	18%
Case yield by ICD-9 Code			
332.0—Parkinson's disease	70%	50%	77%
332.1—Secondary parkinsonism	3%	2%	4%
333.1—Tremor, Essential	12%	18%	10%
356.8—Supranuclear paralysis	4%	14%	1%
781.0—Tremor, not otherwise specified	7%	11%	5%
All other codes	4%	5%	3%

Note: 90 assigned a final diagnosis (29 VA; 61 Non-VA)
157 eligible but need more information to assign final dx (4 VA; 153 Non-VA)

Table 2. Incidence of parkinsonism among veterans in Harris County, 1998 Cases

Category/Characteristics	Total	VA	Non-VA
All Parkinsonism	90	29	61
PD	53 (59%)	14 (49%)	39 (64%)
Drug-induced	15 (17%)	6 (21%)	9 (14%)
Vascular	12 (13%)	6 (21%)	6 (10%)
PSP	5 (6%)	1 (3%)	4 (7%)
MSA	2 (2%)	1 (3%)	1 (2%)
Unspecified	3 (3%)	1 (3%)	2 (3%)
Median Years of Age (Range)			
All patients	73.5 (32-89)	71 (43-80)	76 (32-89)
PD	75 (40-89)	74 (64-80)	75 (40-89)
% Female	40%	3%	57%
Race/Ethnicity			
White	71%	69%	72%
Black	13%	24%	8%
Hispanic	6%	3%	7%
Other	3%	3%	5%
Case yield by ICD-9 Code			
332.0—Parkinson's disease	71	24	47
332.1—Secondary parkinsonism	13	4	9
333.0—Other basal ganglia disorders	1	0	1
331.9—Cerebral Degeneration	1	0	1
781.0—Tremor, not otherwise specified	1	1	0
Missing	3	0	3

Table 3. Agreement between ICD-9 code and final diagnosis

	Final Clinical Diagnosis			
ICD-9 CM Code	Parkinson's Disease	%	Parkinsonism (Non-PD)	%
All patients				
Parkinson's disease	52	98	19	56
Parkinsonism (non-PD)	1		15	44
VA patients				
Parkinson's disease	13	93	11	73
Parkinsonism (non-PD)	1		4	27
Non-VA patients				
Parkinson's disease	39	100	8	42
Parkinsonism (non-PD)	0		11	58

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Summary:

Of 3,166 records on individual patients screened that came to us with a diagnosis of interest, 247 were determined eligible based on having an initial diagnosis in 1998 and residency in Harris County at the time of diagnosis. Of these, we identified 90 cases of definite Parkinson's disease or parkinsonism, with the remaining 157 lacking sufficient available information to assign a final diagnosis. It is expected that a number of cases in this latter group may actually be incident cases and should be included in future analyses if further follow-up is possible.

In this study, compared to non-VA patients:

- VA patients were younger at initial diagnosis
- VA patients were less likely female
- VA patients were more likely black and less likely Hispanic
- VA patients were less likely to have a diagnosis of PD
- VA patients were more likely to have a diagnosis of vascular PD

Conclusions:

- First report on the occurrence of parkinsonism in this population
- There was excellent agreement between the ICD code (records screening) and final clinical diagnosis (based on research criteria) for Parkinson's disease, but less so for secondary parkinsonism. This could have important implications for planning medical records review studies that attempt to ascertain all cases of PD and parkinsonism
- Studies based on medical records review in a large population such as Houston, while logistically challenging, can provide important information with relevance to both clinical practice and health care planning
- Differences in demographic and clinical characteristics need to be further elucidated in order to better understand the occurrence of Parkinson's disease and parkinsonism in this large multi-ethnic population