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## Clinically-diagnosed dementing illnesses in Ibadan: Features, types and associated conditions

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### Summary

In this hospital-based study of dementing illnesses in Ibadan, 37 cases were seen over a 6 year period from 1984 to 1989 out of 57,440 cases admitted. The average hospital frequency was 64 cases per 100,000 admissions. Eighteen cases (48.7%) had vascular dementia. The other types encountered were: secondary dementias (8), mixed (5), probable primary degenerative (1) and the remaining 5 cases were unclassifiable. The associated conditions were mainly hypertension, parkinsonism, diabetes mellitus and benign prostatic hyperplasia. The findings confirm the relative rarity of primary degenerative dementia in Nigeria and raise the possibility of prevention of the predominant type by identifying the stroke-prone individuals early and intervening.

### Résumé

Dans cette étude faite dans un hôpital des maladies démences à Ibadan, 37 cas avaient été accueillis pendant une période de 6 ans de 1984 à 1989, d'un total de 57440 cas admis à l'hôpital. La moyenne fréquence à l'hôpital était 64 cas par 100000 des malades hospitalisés. Dix-huit cas (48,7 pourcent) avaient une démence vasculaire. Les autres genres vus étaient Les démences secondaires (8), les cas mélangés (5), probablement dégénérescence primaires (1) et le reste 5 cas n'étaient pas classifiés. Les conditions (états) associées étaient l'hypertension artérielle, la maladie de Parkinson, le diabète sucré et l'hypertrophie bénigne de la prostate. Les résultats montrent une possibilité d'une prévention du genre prédominant en identifiant les individus qui sont prédisposés à avoir les attaques de paralysie tôt, et intervenant.

### Introduction

Dementia is global impairment of higher cortical

functions in the presence of clear sensorium. In the adult population, it can be regarded as a growing medical and social problem with heavy financial implication for long-term care[1]. Five to eight per cent of the population above the age of 65 years are estimated to suffer from the disease in the developed countries and the prevalence ratio rises to about 20% in those over the age of 80 years[2]. In most studies, the predominant type is Alzheimer's disease (AD) which accounts for more than 50% of the cases except in Japan where multi-infarct dementia is the commonest type[2-4]. Although no racial predilection for the disease was observed in a biracial community in North America[5], there is a suggestion of rarity of the disease in communities in Nigeria and other developing countries[6,7]. Cases have however been reported in some hospital-based studies in Nigeria[6-10] which would suggest that hospitalisation might partly be responsible for the observed rarity in communities, and that information on features and types of dementing illnesses would have to be hospital-based for the present time.

Earlier studies of dementia in Nigeria had concentrated on aetiology and the associated diseases with little information on the types of dementing illnesses encountered. In this communication, we present our findings on the types and manifestations of the disease in our environment.

### Materials and methods

This study was undertaken at the University College Hospital, Ibadan, Nigeria (UCH) which is the National Centre for Excellence in the Neurosciences. The study covered the period from 1984 to 1989 (both years inclusive). The case records which had been coded according to the 9th revision of the International Classification of Diseases[11] were obtained from the Records Department of the hospital. The cases with the following admission or

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final diagnoses were selected for the study: cognitive or personality change of other type (rubric 310.1), cerebral degeneration including senility not otherwise specified (rubric 331) and late effects of cerebrovascular disease (rubric 438).

For this study, our inclusion criteria were:

- cognitive impairment in the absence of clouding of consciousness or drug therapy.
- physical and functional incapacitation as a result of (a) with the person requiring supervision for daily chores.
- persistence of symptoms for at least 6 months except those that recovered after some intervention in hospital (to include cases of secondary dementias), and
- absence of depressive illness (clinically assessed).

The demographic data of eligible cases, their clinical features and the results of investigations carried out were recorded. The cases were classified into vascular dementia (multi-infarct dementia), primary degenerative dementia, mixed and secondary dementias using the ICD 10R, NINCDS-ADRDA criteria, and the Hachinski ischaemic score [12-14]. Those with equivocal features or incomplete data were regarded as unclassifiable dementias. The associated diseases were also noted. Being a descriptive study, no statistical analysis was done.

## Results

Over the 6-year period, 57,440 cases were admitted to the hospital and 37 of them were diagnosed as demented. The average hospital frequency was 64 cases per 100,000 admissions. Six patients were excluded and their diagnoses included: depressive illness (4) transient ischaemic attack and delirium in one case each. The 37 subjects consisted of 28 males and 9 females with ages ranging from 47 to 85 years and a mean of 67 (SD 9.0) years. Twelve of the cases (32%) were under the age of 65 years. The age and sex distribution is shown in Table 1.

Table 1: Age and sex distribution of the cases

Age (Years)	Males	Females	Total (%)
< 50	1	—	1 (2.7)
50 - 54	2	—	2 (5.4)
55 - 59	5	—	5 (13.5)
60 - 64	3	1	4 (10.9)
65 - 69	5	3	8 (21.6)
70 - 74	8	3	11 (29.7)

75 - 79	4	1	5 (13.5)
≥ 80	—	1	1 (2.7)
Total	28	9	37 (100.0)

Table 2: Types of dementing illnesses

Type	Number	(%)
Multiinfarct	18	(48.7)
Secondary	8	(21.6)
Metabolic/Toxic*	4	
Subdural Haematoma	2	
Organ Failure	2	
Mixed	5	(13.5)
Unclassifiable	5	(13.5)
Probable Primary Degenerative	1	(2.7)
Total	37	(100.0)

\*Diabetes Mellitus (2); Alcohol (1) Lead encephalopathy(1).

Eighteen of the cases (48.7%) had vascular dementia (Hachinski score > 7) while 8 cases (21.6%) were classified as secondary dementia. The secondary causes were metabolic, toxic, terminal organ failure and subdural haematoma in 2 cases each as shown in Table 2. Five cases had mixed dementias (Hachinski score: 4-6) and 5 were unclassifiable. There was one case of probable primary degenerative dementia and further classification was not possible because he was lost to follow-up. Tables 3 and 4 show the symptoms and signs respectively. Hypertension (sustained systolic and diastolic blood pressure recordings greater than 160 and 95mm Hg respectively and with evidence of cardiac involvement) was the commonest associated disease. More than half of the cases had this and mainly those with vascular dementia. The other associated conditions are listed in Table 5. Electroencephalography was done in 8 cases — in 5 of them (with vascular dementia), focal abnormality was observed and the remaining 3 had diffuse slowing which was thought to be age-related. Eleven of the subjects (30%) died during the study period.

Table 3: Presenting symptoms of the cases

Symptoms	Number n = 37	(%)
Memory Loss	37	(100.)
Incontinence	37	(100.0)
Psychotic Symptoms	24	(64.9)
Nocturnal Confusion	9	
Hallucination	8	
Delusion	3	

Aimless Wandering	2	
Extravagance	1	
Suicidal Tendencies	1	
Involuntary Movements	9	(24.3)
Fits	6	(16.2)
Transient Neurological Deficits	6	(16.2)

Table 4: Clinical signs elicited in cases

Signs	Number n = 37	(%)
Memory Loss	37	(100.0)
Disorientation	25	(67.6)
Poor Abstract Thinking	20	(54.1)
Hemiparesis/Hemiplegia	19	(51.4)
Poor Judgement	9	(24.3)
Primitive reflexes	5	(13.5)
Echolalia and Echopraxia	2	(5.4)

Table 5: Associated diseases

Disease	Number n = 37	(%)
Hypertension	19	(51.4)
Parkinsonism	6	(16.2)
Diabetes Mellitus	5	(13.5)
Benign Prostatic Hyperplasia	4	(10.8)
Others*	2	(5.4)

\*Cervical Spondylosis (1). Cerebellar Degeneration (1)

### Discussion

Our results showed a preponderance of vascular dementia which is sequel to cerebral infarction over the other types. We attribute this to a high frequency of hypertension in the subjects we studied. Hypertension which currently afflicts about 10% of Nigerians[14] is a dominant risk factor for cerebrovascular diseases (CVD)[15]. It predisposes to lipohyalinosis of cerebral vessels and microaneurysm formation (Charcot-Bouchard aneurysms) which may get occluded leading to cerebral infarcts. The development of dementia in stroke survivors would further add to the morbidity of CVD. The association of dementia with diabetes mellitus which we observed could also be related to cerebral atherosclerosis and predisposition to cerebral infarction[15].

Our results suggested low frequency of primary degenerative dementia in the patients we studied. In the absence of computerised tomographic scan or neuropathologic diagnosis, we were unable to

confirm the diagnosis of AD in the presumed single case in this category. Although AD is considered to be relatively uncommon in Africans. One has to be wary of reaching any firm conclusions from our data because of the limitations of hospital-based studies. The causes of secondary dementia, the clinical features and the associated conditions which are mainly age-related are similar to the findings of others[3,16]. The psychiatric symptoms which may cause confusion with other psychotic illnesses are presumed due to the involvement of the limbic system by the disease process[17].

Although dementia is reported to be commoner in females than in males most probably as a result of their longer life span[5], we found a male preponderance in this study. This could reflect the pattern of hospital attendance which other workers have observed in similar hospital-based studies in this environment[8].

We are aware that hospital-based data could depend on the extent of the utilisation of services as well as referral patterns, hence the findings may not be generalisable to the entire community. However with suggestion of higher frequency of vascular dementia, associated with some of the risk factors, it may be possible to lower the burden of the disease by taking steps to control these factors in those at risk of the disease. Longitudinal studies that are community-based are however required to confirm our findings and for the determination of the survival pattern of the patients.

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