SENILE DEMENTIA; A CLINICAL STUDY OF TWO HUNDRED CASES WITH PARTICULAR REGARD TO TYPES OF THE DISEASE.¹

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Senile dementia is that mental impairment which is a direct expression of cerebral deterioration from old age. It very rarely occurs before the sixth decade of life, and at least two-thirds of all patients over sixty years of age, admitted to asylums, are cases of senile dementia.

In the period (about three and a half years) which supplied the two hundred case histories (one hundred women and one hundred men) analyzed in this paper, there were admitted to the Insane Department of the Philadelphia Hospital, 269 patients over sixty years of age—69 of them not being senile demented. (Table No. I.)

TABLE NO. I.

<i>69 Cases (though over 60 years of age) Not Senile Dementia.</i>	
Delirium	4
Confusion	8
Recurrent mania	4
Melancholia	8
Paranoia	11
Presenile delusional	9
Dementia præcox	1
Alcoholic dementia	6
Apoplectic dementia	6
Paresis	5
Tabes (with dementia)	1
Epileptic dementia	3
Imbecility	3

Many of the two hundred true senile demented remained free from gross dementia for a long period after admission, and on

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the other hand many of the 69 excluded cases were considerably demented on admission or became so finally. However, some of the psychoses enumerated in Table I. are recoverable. All the "confusion" cases were discharged cured; in each case there had been a definite exciting cause—a railroad accident in one case, death of a friend under shocking circumstances in another, exhausting illness in a third, etc.

Delirium in old age (Table I.) arises quite readily, and generally it is similar in its etiology and in its clinical course to delirium at other periods of life. Even when it is terminal, to include it under the head of senile dementia seems hardly fair, since in our experience terminal delirium of old age may always be assigned to a definite organic cause—usually nephritis; frequently a surgical condition; in one instance it was a double parotitis, apparently mumps.

If then senile dementia is an entity, and can be separated clinically from various acute and chronic psychoses which may occur in old age, we are justified in declaring that the term "senile insanity" (Clouston) is useless and even confusing.

The essence of senile dementia is a quantitative change,—a mental loss; but the more obvious change is frequently qualitative—excitement, depression, delusion—so that the disease may appear in a guise simulating one of the pure insanities—mania, melancholia, paranoia, etc.

The mental loss is probably the source and spring of the entire disease; at any rate the mental enfeeblement which ultimately appears in every case, is peculiar and progressive, surviving the qualitative changes. Analysis of it, according to J. Rogues de Fursac,² reveals the following characters:

(a) Enfeeblement of attention, and slowness in the association of ideas.

(b) Inexact and incomplete perception of the external world.

(c) Several kinds of memory defect.

(d) Impoverishment of the stock of ideas.

(e) Impairment of judgment.

(f) Diminution of normal feeling (affectivity) and morbid irritability (tyrannical tendencies, etc.).

²Manuel de Psychiatrie, 1903.

(g) Automatic character of the reactions (turbulence or apathy).

TABLE No. 2.
Special Symptoms in the Several Types of Senile Dementia.

	143 Cases		17 Cases		14 Cases		26 Cases	
	Simple Con- fusional		Excited (Maniacal)		Depressed (Melancho- lic)		Paranoid	
	Men	Women	Men	Women	Men	Women	Men	Women
Wandering streets	34	23=40%	1	3=24%	1	1=14%	0	3=12%
Hallucinations promi- nent,	23	10=23%	0	2=12%	3	6=64%	11	11=85%
Vertigo,	21	6=19%	1	0=6%	0	2=14%	6	1=27%
Violence,	15	12=19%	7	3=59%	1	1=14%	7	7=54%
Headache,	11	0=8%	1	0=6%	0	0=0%	4	1=19%
Night-prowling,	4	7=8%	0	1=6%	1	3=28%	0	2=8%
Suicidal attempts,	5	4=6%	1	1=12%	1	1=14%	4	0=16%
Apoplectic strokes	3	5=6%	2	1=18%	1	3=28%	2	1=12%
Exaltation,	8	3=8%	1	0=6%	1	0=7%	7	4=42%
Epileptiform attacks,	2	2=3%	0	1=6%	0	1=7%	0	0=0%
Violence at night,	4	2=4%	0	1=6%	1	0=7%	4	0=19%
Suspicion of poison- ing,	2	1=2%	0	3=18%	0	1=7%	5	4=35%
Suspicion of conspir- acy,	1	2=2%	1	0=6%	1	0=7%	6	6=46%
Persecutory ideas, other than poison- ing, conspiracy, etc.	6	8=10%	2	2=24%	1	3=28%	6	4=38%
Setting fire to things,	1	0=2-3%	1	1=12%	0	0=0%	0	0=0%
Delusion of marital infidelity,	0	0=0%	1	0=6%	0	0=0%	3	0=12%
Echolalia,	1	2=2%	0	0=0%	0	0=0%	0	0=0%
Chorea,	0	0=0%	0	0=0%	0	0=0%	0	1=4%
Sum of Symptoms,	228		38		34		111	
Numbers of cases,	143		17		14		26	
Symptoms to each case,	1 3-5		2 1/4		2 1/2		4 1/4	

As the disease advances, mental loss becomes more palpable, and some of the "special symptoms" tabulated in Table II. make their appearance. In its perfectly simple or "pure" form, senile dementia would exhibit none of these special symptoms—the mental power would simply fade away imperceptibly—but such cases are rare, particularly in asylums.

The commonest departure from such theoretical simplicity of type consists in the added element of confusion. In a few cases

this is the dominant feature and may seem to call for the erection of "senile confusion" into a separate type of dementia senilis (Kraepelin, Dercum, *et al.*).

This type may strongly resemble acute confusion (mentioned in Table I.), but the graver condition is distinguished by the signs of the accompanying dementia. A few cases of this type resemble paresis.

Confusion of some degree is present in all types of senile dementia; it appears episodically in many cases, being one cause of the familiar street-wandering of senile demented (Table No. II.).

Probably a simple senile dementia, when it advances rapidly, becomes senile confusion. At any rate so great difficulty was found, both by my colleague, Dr. Elizabeth Lovelace, who classified the women, and by myself, with the men, in satisfactorily separating the simple cases from the confusional in the present series, that it was thought best to abandon the attempt; and so in all the tables they are to be found combined under the name "simple-confusional type" of senile dementia. This is not an arbitrarily novel plan, if we reflect that many writers (Clouston *et al.*) include senile confusion in the simple type, while others (Kraepelin), almost ignoring the simple type, evidently include many "simple" cases under senile confusion. The composite "simple-confusional" has the value of a compromise; but in addition it signifies the dual aspect of this group, which contains more than two-thirds of all cases of senile dementia (143 of the 200).

That this simple-confusional type is really *simple* in its manifestations, is seen in Table No. II., where its special symptoms summed up at the foot of the first column average only 1 3-5 to each case. In this respect the excited type (Table No. II., second column) ranks next, the depressed third, and the delusional (paranoid) fourth; that is, farthest from the simple type—the special symptoms in column four of the table averaging 4 1/4 to each case.

I have introduced the term "Paranoid" in conformity with the nomenclature of dementia præcox, the paranoid form (Kraepelin) of which bears somewhat the relation to the group of adolescent dementias that this paranoia-like form bears to senile dementia.

To my own surprise I find that the graded series, obtained in Table II. is evidently a natural one; for the records of knee-

TABLE NO. 3.
Knee-jerks in the Several Types.

	Simple- Confusional	Excited [Maniacal]	Depressed [Melancholic]	Paranoid
Normal	17%	17%	18%	25%
Minus	22%	25%	18%	38%
<i>Normal or Minus</i>	39%	42%	36%	63%
Absent	29%	25%	10%	20%
Plus	24%	25%	27%	17%
Unequal	8%	8%	27%	0%
<i>Absent, Plus or Unequal</i>	61%	58%	64%	37%

jerks (Table III.) range the four types of the disease in this same series, while the family histories of insanity, expressed in percentage (Table IV.), support it strictly.

These facts, if we are permitted to express them in the form of laws, will be: First (from Table III.), Physical deterioration in senile dementia is greatest in the simple-confusional type, and is progressively less in the excited, depressed, and paranoid types;

TABLE NO. 4.
Instances of Insanity in Families of Senile Dement.

Cases with Acceptable History	46	9	7	9	
	Simple Confu- sional	Excited [Mani- acal]	De- pressed [Melan- cholic]	Para- noid	
Father insane	2	1	0	0	II Ascendants
Mother "	6	1	0	1	
Brother "	1	1	0	3	II Collaterals.
Sister "	4	0	1	1	
Son "	5	0	2	1	12 Descendants.
Daughter "	2	1	1	0	
	43%	44%	57%	67%	

Second (from Table IV.), Hereditary degeneration is least in the simple-confusional type, and is progressively greater for the others in the same order—excited, depressed, paranoid. We may perhaps account for these facts by supposing that senile cerebral changes, by impairing the association systems of the cortex, will cause simple mental loss in a man of normal nervous make-up, only after diffuse degenerations have become established, revealing themselves in the cord by abnormal knee-jerks, etc., whereas in neuropathic individuals the cortical changes, at an earlier stage,

light up the inherited tendencies to pure insanity. If this be the correct explanation it is strange that we do not find the simple-confusional cases oldest in years, and the paranoid youngest. Clouston³ says that in his experience the simple cases are in truth older, but no such generalization can be made from our statistics. (See charts.)

As regards excitement and depression in old age, it is to be remembered that irritability and violence do not constitute true

Charts to show the ages of patients belonging to the several types of senile dementia. The figures at the bottom represent the ages by hemi-decades; those at the side, the numbers of cases.

mania, nor fear and anxiety, melancholia. In our simple-confusional patients such emotional manifestations were not infrequent, though they were always transient.

The seventeen cases which we have grouped under the "excited" type in Table II. were those in which there was something

³Mental Diseases, p. 637.

of the flight of ideas and hilarious expansiveness of mania; yet we believe that true mania probably never arises in old age. Cases diagnosed "senile mania" are, ordinarily, delirium or confusion with excitement.

On the other hand, we believe with Kraepelin, C. K. Mills and others, that many cases of so-called senile melancholia—those in short that exhibit a conscious, reasoning depression—are true melancholiacs, and recoverable (eight cases in Table I.). Our fourteen cases of the true depressed type (Table II.) of senile dementia, showed the signs of the underlying peculiar dementia from their beginning.

Of all phases of this subject that of fixed *delusion* in the aged is the most perplexing.

If we eliminate (as in Table I.) paranoiacs, presenile delusionals, alcoholic dementers (rarely a case of dementia præcox!), etc., from our category of senile dementia, we still have to dispose of a number of cases (26 in Table II.) in which delusions, more or less systematized, have been the troublesome feature, making the patients disagreeable, unjust or even dangerous, to their families; though when met with in the wards of the asylum they are "uninteresting" senile dementers.

Such a case is Charles W. J., a sea-captain, 84 years old, who was admitted to the Philadelphia Hospital in 1902. This patient's brother committed suicide while insane; his sister was "melancholy" in an asylum, and his son died insane under our care. In 1901 Charles was said to be "growing childish" and had physical complaints—his "legs were going to break," he said; then voices began to urge him to commit suicide; grotesque figures and faces would appear on the walls, and he believed that his life was in great jeopardy. On admission he told us, confidentially, of a conspiracy against him, making his "life not worth that" (a snap of the finger) if he told it; though before a class of 150 students, which he mistook for the State Senate, he dilated upon the machinations of the "U. G. I." and of the "Traction Company" which "is putting electricity on" him.

This patient has a mind to make a vengeful visit to the offices of these "secret societies," as he calls the corporations mentioned, yet he has very little idea of where he is at any time, and in all respects, except for his delusions, is a garrulous, foolish senile.

Another example is Catharine K., a woman 65 years old, of whose family we know only that her father died of apoplexy. About a year before her admission in 1899, Catherine was observed to be failing in mind and body, and to be growing over-religious. She wandered from church to church, was several times lost on the streets, and in this manner finally reached the hospital through the police.

We learned that for several months the old lady had refused to eat any food prepared by her daughter, with whom she lived, and had tried to prevent the daughter's children from eating it, for fear of poison. She would stop strangers on the street, or policemen, and complain that her daughter and daughter's husband were going to kill the children "to get life-insurance money." She tried to have the children sleep in her bed and, being prevented, she one day rented a house and took the children to it, where after two days they were found with their demented grandmother, who had not attempted to even feed them; her sole thought having been to save them from their "murderous" parents.

In the hospital Catherine has recognized numerous patients, nurses and doctors as her nieces and nephews; she promises them houses and money—if she had wealth her own kindred surely would be disinherited—and in all her works and ways is a senile dement.

These are very marked examples of the cases that compose the paranoid type of senile dementia—in legal medicine one of the most important forms of insanity. Its various characters may be gathered from Table II., fourth column. We have called especial attention to it only because it is so little dwelt upon by the standard authors.