

# FAMILIAL OCCURRENCE OF ENURESIS IN SCHOOL-CHILDREN

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Enuresis, while not a serious disorder in the sense of disabling the affected individual physically, nevertheless often causes great mental suffering and anxiety to both the enuretic child and his parents. The evidence from the majority of studies has shown that enuresis is a rather frequent disorder in children. Comprehensive bibliographies are found in papers by, *inter alia*, Zappert, Andersson, Rauchfuss and Hallgren<sup>1-3, 4a, 4b</sup>, who showed prevalence rates for children at the age of 5 years ranging from ten to one half per cent, and with a consistently higher rate for boys than for girls. In Israel, the average prevalence of enuresis at the age of 6 years was found, in a recent study (1962),<sup>5</sup> to be 15.5 per cent, with no significant differences between the sexes. In a survey carried out in Jerusalem schools, the proportion of enuretics was 17.9 per cent for boys and 15.17 per cent for girls, and in a study of over 4,000 school children in Tel Aviv and its environs, an overall prevalence of about 13 per cent was found in first-graders.<sup>6a, 6b</sup> Two surveys carried out in co-operative settlements (Kibbutzim),<sup>7, 8</sup> showed the average prevalence of enuresis to be from 35 to 50 per cent in 5 year olds in one case, and 30.5 per cent in children aged 4—8 years in the second one. A third study conducted in co-operative settlements,<sup>9</sup> however, reported 12 per cent of enuretics in 7 year old children. On the whole the Israeli figures tend to show two main differences when compared with findings of overseas studies: a higher prevalence of enuresis, and a similarity in the prevalence of enuresis between boys and girls.

Considerable weight has been given by a number of different investigators to familial and hereditary factors in the occurrence of this disorder. Attention was drawn to this point as early as 1890,<sup>10</sup> and more recent studies have tended to report a higher rate of familial occurrence than did the earlier ones.<sup>9, 11, 12-14</sup> Thus, the

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figures quoted in later studies range from a prevalence of 20 to 50 per cent, as compared with one of 3 to 15 per cent in earlier investigations.<sup>15-23</sup> It should be pointed out, however, that many of these studies included distant relatives of the enuretic cases, and in some no account was given of the categories of relatives included. In addition, the majority of these studies used the recall method, the inherent inaccuracies of which are discussed in a later section of this paper. Despite these reservations, the findings of these studies in regard to the familial occurrence of enuresis are nevertheless of great interest. Thus, one investigator,<sup>15</sup> reporting on a control group, found enuresis among the parents and grandparents in 20 out of 50 cases with nocturnal enuresis, compared with 7 out of the 50 non-enuretic controls—a difference which is statistically significant. In another study,<sup>24</sup> enuresis was found among the parents of 63 out of 100 enuretic children—i.e. a morbidity risk of 31.5 per cent presuming that there was only one affected parent in each family. On the other hand, a third study<sup>12</sup> reported a considerably lower risk, viz. 9.5 per cent among the parents of 121 enuretic index cases. Even lower rates were reported by two other investigators who found 2.5 per cent among parents and 7 per cent among siblings of 800 enuretic children<sup>25</sup> in one study, and less than 2 per cent among the parents of 107 enuretics in another study.<sup>11</sup> In contrast, however, a much later survey (1950),<sup>26</sup> conducted on a random sample of the general population found the following prevalences of enuresis among siblings in different groups of surveyed children: (1) 10.6 per cent among 264 siblings of "regular" bedwetters; (2) 9.6 per cent among siblings of "occasional" bedwetters; and (3) 5.1 per cent among 2,794 siblings of non-enuretics. These differences are statistically significant. Of the Israeli studies, only one<sup>9</sup> made any attempt at showing the familial occurrence of enuresis; the diagnostic criteria used in this study, however, do not allow comparison with the investigations referred to above.

The above review of literature leaves no doubt about the familial nature of enuresis, although the nature of transmission—biological or social or a combination of these—is not clear. Any epidemiological study into this condition omitting the familial nature of enuresis would thus be ignoring an important element. For these reasons, the present study was designed to test the following basic postulate: "Enuretic children have more enuretic siblings in their family than non-enuretic children".

### Methods and Material

An attempt has been made in this study to compare two populations of school children who would be as identical as possible in respect of all characteristics other than the presence of enuresis.

For the purpose of this investigation three consecutive cohorts of pupils of a primary school in Jerusalem, Israel, were studied. The school is situated in a suburb established mainly for new immigrant families and comprising several distinct groups or areas of housing. The variations between these areas are not too marked, although a difference is found both in the quality of building as well as in the different prestige-value attached to some of the areas concerned. The flats comprise either 2, 2½, or 3 rooms; sanitary conditions are identical throughout the suburb. Since the neighbourhood is populated by immigrants from a number of different countries it represents a fair cross-section of Israeli society, a fact which markedly influenced our choice of this particular school.

The families of the enuretic pupils were compared with the families of non-enuretic ones, matching the two populations in the way described below; by means of this technique, it was hoped to arrive at two populations as identical as possible, except in regard to the occurrence of enuresis. The present investigation did not concern itself with the aetiological factors in enuresis, nor did it try to throw light on the prevalence of enuresis in any members of the family other than the siblings. The main emphasis of this investigation was placed on the development of epidemiological methods, by means of a systematic, step-by-step analysis of the problem.

#### *Diagnostic criteria*

Enuresis in the index case was defined as repeated involuntary micturition by night or by day in children aged 6 years old in the first grade of primary school.

Enuresis in siblings was defined as repeated involuntary micturition by night or by day after the 4th year of life.

The diagnosis of enuresis presents numerous difficulties and problems: we are dealing here with a symptom which, in the vast majority of cases, is not confirmed by the doctor's own observation. The condition might be over or under-reported because of factors such as a feeling of shame in certain cultural groups or socio-economic classes, inadequate use of medical services, incomplete records, lapses and changes in the memory of the family or the patient, and many other factors. In regard to the memory factor, various investigators<sup>27, 28a</sup> have pointed out the changing pattern in the reporting of events, such as the date of onset of menarche or the reporting of foods consumed and dietary patterns and habits in recall studies. Thus it would be advisable not to talk about the number of enuretics under investigation, but of the *reported* number of cases.

Since the term "repeated" presents a problem of establishing exact criteria, we have tried to exclude all children who have enuretic

accidents less frequently than once a week or ten days.

*The material and sources of information*

The school health cards of three consecutive years of first-graders in a primary school in Jerusalem, Israel, i.e. 1958—1960, were taken as the basic source of information. The choice of these cohorts of school children was made because:

1. One grade did not provide enough material to be analysed statistically.
2. Since 1958 the report of the kindergarten nurse about the pupil-to-be has been included in the school health card and contains valuable information about enuresis. (All children aged 5 years in Israel have to go to obligatory kindergarten.)
3. It was felt that to include cohorts further removed in time than 1958 would unduly influence the recall studies connected with this investigation. A compromise between the accuracy and reliability of the recall on the one hand and a larger numerical material on the other one, had to be found.

The school health card contains a large number of items giving information about the child and its family. The following items were extracted in respect of 432 pupils and these were checked with the school nurses for omissions, inaccuracies, or contradictions. This corrected material then formed the basis for the analysis of the study. A further check on the accuracy of the information was made when the mothers of the index cases and of the controls were interviewed in a later phase of the study:

- |                               |                                  |
|-------------------------------|----------------------------------|
| 1. Grade                      | 8. Year of immigration of father |
| 2. Name and family name       | 9. Occupation of father          |
| 3. Sex                        | 10. Number of siblings           |
| 4. Year of birth              | 11. Birth rank                   |
| 5. Country of birth           | 12. Address                      |
| 6. Year of immigration        | 13. Enuretic or non-enuretic     |
| 7. Country of birth of father |                                  |

In general, little or no difficulty was encountered in the extraction of the above data. Mention should be made, however, of the following points:

- (a) The general impression prevails among professional workers in Israel that children's ages, and particularly those from Oriental communities, are often inaccurately stated. This, however, is not quite the case. Thus, parents will give the birth date of their children in relation to Jewish holidays, events in their family life or to natural phenomena (e.g. about a month after Pass-over, three months before immigration, during the floods five years ago, etc.). A knowledge of such events may in fact provide an excellent guide for determining birth dates with a high degree of accuracy. In this study the year of birth as entered by the nurses from the identity cards was recorded.
- (b) A certain variation in the ages of first-grade children was found since the enrolment age in schools is governed by the birth date as of 31 December of each year. Pupils in the first grade, therefore, may be 5 or 6 or even sometimes 7 years old—the great majority, of course, being 6 years of age. The five and seven-year-olds were excluded from this investigation.
- (c) Utilizing country of birth of father as an indication of his cultural background and, consequently, of that of his family, presents certain problems. Nevertheless, numerous studies have been carried out in this country

making use of this index and this practice seems to work satisfactorily. In cases where country of birth of mother was different from that of the father, this was noted and corrected for.

- (d) The father's present occupation rather than his profession was noted since after immigration to Israel people quite frequently work in different occupations from those of their profession. Occupation has been taken in this, as in other studies<sup>28b, 29, 30</sup>, as a fairly reliable indication of social class and an occupational grading scale has consequently been used as a guide for social stratification. The scale worked out by the British Registrar-General<sup>31, 32</sup>, adapted for use in our department, was used in this present investigation. We are, of course, aware of the limitations of this kind of scale which does not take into account factors such as educational level, income, address, ethnic group or year of immigration. However crude it may be, it is nevertheless the best system we have at this time in Israel and since it has already been used by a number of investigators in numerous studies, a basis of comparison was thus provided. The following, then, was the scale used in the present investigation:

- I. Professionals in academic positions; large shopowners, senior officials.
- II. Professionals, independent, small, and medium-scale shopowners; self-employed electricians, plumbers, etc.
- IIIa. White-collar workers
- IIIb. Skilled labourers
- IV. Semi-skilled labourers
- V. Unskilled labourers, occasional labourers; social welfare cases.

In order to facilitate the analysis of the material, punch cards were prepared, one card for each pupil.

### Results

Tables I—VI give the main findings from this analysis. These show:

1. Out of 432 pupils, 56 were reported to enuretic—13 per cent. Out of 389 pupils aged 6 years, 52 were reported to be enuretic—13.4 per cent. Out of 205 males aged 6 years, 29 were reported to be enuretic—14.1 per cent. Out of 181 females aged 6 years, 23 were reported to be enuretic—12.7 per cent.
2. No significant differences were found in the material under study in respect of age, sex, number of siblings, birth rank, and occupational rating of father on the one hand, and the prevalence of enuresis on the other. Similarly no statistically significant differences were found in the distribution of enuretic children in our material, according to the country of birth of the father and the sexes of the pupils. A trend was perceptible, however, in the analysed material when this was broken down and arranged into "occidental" and "oriental" groups, the latter having a slightly higher prevalence of enuresis than occidentals. The trend becomes more pro-

TABLE I  
ENURETIC AND NON-ENURETIC CHILDREN AGED 5 AND 7

	5 Years		7 Years		Total
	M	F	M	F	
All children .. ..	4	5	21	13	43
Enuretic .. .. .	—	—	2	2	4
Non-enuretic .. .	4	5	19	11	39



TABLE III  
DISTRIBUTION OF ENURETICS AND NON-ENURETICS ACCORDING TO OCCUPATIONAL RATING OF FATHER AND SEX

Non-enuretic						Enuretic						
Occupational rating of father												
1		2		3a		3b		4		5		
M	F	M	F	M	F	M	F	M	F	M	F	
13	12	12	22	65	52	38	32	45	33	3	10	
25	34	117	70	78	13	2	2	3	3	20	13	
337						389						52

TABLE IV  
DISTRIBUTION OF ENURETICS AND NON-ENURETICS ACCORDING TO ORIGIN AND SEX (ARRANGED ACCORDING TO "ORIENTAL", "OCCIDENTAL" -- SEE TEXT)

	Males		Of these enuretic		Females		Of these enuretic		Total		Of these enuretic	
Orientals ..	..	..	12	17	83	17	175	29				
Occidentals ..	..	..	11	3	59	3	134	14				
Israel ..	..	..	6	3	42	3	77	9				
TOTAL ..	..	..	29	23	184	23	386	52				

Oriental males .. 13.0 per cent enuretic  
 Occidental males .. 14.7 per cent enuretic  
 Israeli males .. 15.8 per cent enuretic  
 \*Just significant on the 5 per cent level

Oriental females .. 20.48 per cent enuretic\*  
 Occidental females .. 5.08 per cent enuretic  
 Israeli females .. 7.69 per cent enuretic

nounced when comparing oriental females with occidental females, the difference here just barely touching the five per cent level. None of the comparisons, apart from these, showed statistical significances.

Despite the lack of positive findings reported above, it was nevertheless decided to match the families of enuretic and non-enuretic children to be investigated further according to the following criteria, which were shown in the review of literature given above to be of importance. Birth rank, however, was omitted from the matching correlates as it was shown in the literature to be of minor importance only. This was done because we wanted to ensure two populations of children as comparable as possible. The following matching procedure was adopted in the following order of priority:

*Age:* only children of 6 years on admission to school were included.

*Sex:* enuretic males were matched with non-enuretic males; enuretic females were matched with non-enuretic females.

*Country of birth of father:* the following list was used:

- |                                |                       |
|--------------------------------|-----------------------|
| 1. Russia, Baltic countries    | 15. Tunis             |
| 2. Poland                      | 16. Algeria           |
| 3. Rumania                     | 17. Egypt             |
| 4. Hungary                     | 18. *                 |
| 5. Bulgaria                    | 19. *                 |
| 6. Yugoslavia                  | 20. Turkey            |
| 7. Greece                      | 21. Syria, Lebanon    |
| 8. Germany                     | 22. Iraq              |
| 9. Austria                     | 23. Kurdistan         |
| 10. Czechoslovakia             | 24. Iran, Afghanistan |
| 11. U.K. and Dominions, U.S.A. | 25. *                 |
| 12. Other Europe               | 26. *                 |
| 13. Other America              | 27. Yemen             |
| 14. Morocco                    | 28. Israel            |

\*Not represented in our material.

(Sub-divisions: East Europe 1—7; Mid Europe 8—10; West Europe—11; North Africa 14—16; Middle East 20—27. "Occidental" 1—13; "Oriental" 14—27.)

Where possible, country was matched by country; where this was not possible, the next sub-division was taken.

*Number of siblings:* this was matched as exactly as possible; where this was not possible, it was tried to match for plus-minus one; failing this, plus-minus 2, etc.

*Occupational rating of father:* group I and II, IIIa, IIIb and groups IV and V were matched.

Quite automatically, if siblings were attending the same three consecutive classes under investigation, the punch cards would have selected siblings as ideal matches, which, of course they are, differing only in birth rank—which was not included in the matching.

TABLE V  
ENURETIC AND ALL CHILDREN ACCORDING TO BIRTH RANK

<i>Birth rank</i>	1	2	3	4	5	6	7	8	9	9+	Total
All children	159	105	66	25	11	10	9	2	1	1	389
Enuretic	21	15	5	3	3	1	2	1	0	1	52
$\chi^2$	0.06	0.07	1.61	0.03	4.05	0.08	0.05	0.2	0.1	0.001	6.05 9 df
	(1-4)		355 44		(5-9+)		34 8			$\chi^2 = 3.222$ 1 df	

TABLE VI  
ENURETICS AND NON-ENURETICS ACCORDING TO NUMBER OF SIBLINGS

<i>Number of siblings</i>	0	1	2	3	4	5	6	7	8	9	10	11	Total
All children	41	123	94	58	29	17	18	4	1	1	1	2	389
Enuretic	2	12	16	11	5	2	2	1	0	0	0	1	52

Therefore, the cards of siblings of pupils under investigation were marked before, and when selected by the punch cards were discarded as a matched control and returned into the pool. There was no reason to discard siblings selected by the punch cards as control matches if selected on the basis of identical correlates. Thus, two non-enuretic siblings could serve as two controls although belonging to the same family.

The matching procedure gave the results shown in table VII.

TABLE VII

	<i>Age</i>	<i>Sex</i>	<i>Country origin</i>	<i>Birth* rank</i>	<i>No. of sibs</i>	<i>Occup. rating</i>	<i>Year* immigr.</i>
Number of couples matched .. ..	52	52	34† 46††	20	42	41	18
Percentage of concordant couples ..	100	100	65† 89††	39	81	79	35

\*Not matched for †Country by country ††By blocks—see text.

NUMBER OF SIBLINGS OF ENURETICS .. .. .	134
NUMBER OF SIBLINGS OF MATCHES .. .. .	130
MEAN BIRTH RANK OF ENURETICS .. .. .	2.53
MEAN BIRTH RANK OF MATCHES .. .. .	2.42 (t = 0.3)

It was therefore decided that the families of the enuretic pupils and those of the matched for non-enuretic ones were comparable populations in regard to the items which were analysed.

A random sample of 1 in 2 was then drawn of the 52 couples of index case families and their matched controls, and 26 mothers of enuretic children and 26 mothers of the matched control children were then interviewed by the author. It was decided that if this number proved to be too small to yield statistically significant results, the remaining 26 couples would be interviewed. This, however, proved to be unnecessary. A pre-tested guide sheet was used in the interviews, which were conducted in the homes of the mothers. Apart from the difficulty experienced in finding the mothers because of inadequacies in the recording of addresses, no problems whatsoever were encountered in obtaining the required information. A short letter was sent to each mother prior to the interview informing her that an investigator would be calling on her. At the beginning of each interview a short explanation was given of the aim of the visit; in the case of the control families a slightly more detailed explanation was furnished. In no instance was there any hesitation or reluctance on the part of the mothers to speak about the subject under discussion or to provide information about enuresis in

members of their families.

Among the enuretic families, 22 enuretics over 4 years old were discovered, whereas among the matched control families there were only two (table VIII).

TABLE VIII

	<i>Siblings over 4 years of age</i>	<i>Of these enuretic</i>
Index-case families .. .. .	52	22
Matched-control families .. .. .	46	2

$$\begin{aligned}x^2 &= 10.76 \text{ (with Yates' correction)} \\df &= 1 \\p &< 0.001\end{aligned}$$

In comparable populations 26 enuretic children were found to have 22 enuretic siblings, whereas in the matched control among 26 families only two enuretics could be discovered.

As seen by the above statistical analysis this is an event extremely unlikely to occur by chance ( $p < 0.001$ ).

### Discussion and Conclusion

The literature shows that enuresis about the age of 6 seems to have a prevalence of 10 to 15 per cent; it is thus one of the commonest disturbances in childhood, thereby making it an important and significant problem in the field of public health. Although little is known about the aetiology of this upsetting, but not dangerous, disorder, two schools of thought have emerged in the last two decades: one singling out the genetic mechanism of enuresis, the other classifying enuresis under the behaviour disorders of childhood and therefore looking for the aetiological mechanisms within the emotional climate of families where this phenomenon occurs. While the evidence brought in favour of the genetic-hereditary aetiology is impressive, we nevertheless tend to believe that the main causes for this disorder should be looked for within the emotional interactions and social transmissions of the family. Psychiatrists nowadays tend to classify enuresis as one of the passive behaviour disorders, assuming a certain combination of personality characteristics of the parents, e.g. the permissive mother as opposed to the exacting, pedantic father. Evaluating the hereditary aetiology *versus* the psychogenic one is a difficult undertaking since the nature of genetic studies usually makes these more precise and exact in comparison with studies in psychiatry; epidemiological studies in psychiatry are rare and very little work has been done with modern epidemiological techniques in this direction. Much more investigation, using modern epidemiological methods, will have to be carried

out into the emotional background of enuresis before we can arrive at a clearer picture of the correlates of this disorder. The present study has made no attempt to deal with any of these factors.

The study presented here emphasizes epidemiological methods as such and has taken its particular postulate in order to evaluate the methods used, and to test the associations existing between several epidemiological indices. As seen from this study, much more work needs to be done in Israel in order to lay the foundations for the exact definition of such criteria as, for instance, social stratification, cultural background, etc. We have done our best with the knowledge available today to make use of those indices generally accepted in Israel for the purposes of this study. We have not tried to throw any light on the question of aetiology but we have shown that enuresis, in the material under study, has a definite familial occurrence. Other authors in Israel have indicated that enuresis might be associated with social class, educational level of parents, I.Q. of children, and certain psychologic-emotional constellations within co-operative settlements (kibbutzim), but comparison of the material is extremely difficult because of the different criteria used.

It would be of great benefit to study further the epidemiological correlates of this familial disorder in Israel, in order to enable us to isolate more efficiently than we can do today the families at risk. This would be of the greatest importance for the prevention and treatment of the disorder under investigation since nowadays the most divergent methods of treatment are in use with only questionable success, and there are no known ways of prevention.

## BIBLIOGRAPHY

1. Zappert, J., *Ergebn. inn. Med. Kinderheilk.*, 1920, **18**, 109.
2. Anderson, F. N., *Amer. J. Dis. Child.*, 1930, **40**, 591 and 818.
3. Rauchfuss, E., *Diss. Bleicherode am Harz*, 1939.
- 4a. Hallgren, B., *Acta psychiat.* (Kbh.), 1956, **31**, 405.
- 4b. — *Acta psychiat.* (Kbh.), 1957, Supp. 32.
5. Thaustein, J. and Halevi, H. S., *Brit. J. prev. soc. Med.*, 1962, **16**, 1.
- 6a. Saslani and Peretz, E., personal communication.
- 6b. Koplinsky, D., *Dapim Refuim*, Nov. 1960.
7. Caplan, G., Problems of Infancy and Childhood, *Trans. VII Conf.*, 1953  
102 Josiah Macy Jr. Foundation, New York.
8. Levine, A., *Amer. J. Psychiat.*, 1943, **100**, 320.
9. Kaffman, M., Enuresis in Kibbutz Children. Paper delivered at Israeli Congress of Neuropsychiatry, 1961.
10. Janet, J., *Diss. Paris* 1890.
11. Miller, F. J. W., Court, S. D. M., Walton, W. S. and Knox, E. G., *Growing Up in Newcastle upon Tyne*, Oxford University Press, 1960.
12. Lechler, H., *Psychiatry*, 1949, **17**, 533.
13. Pierce, C. M., *Sth. med. J.*, 1959, **52**, 1520-4.
14. Hallgren, B., *Acta paediat. S.*, 1959, **48**, 118.
15. Hubert, W. H. de B., *Lancet*, 1933, **224**, 1281.
16. Backus, P. L. and Mansell, G. S., *Brit. med. J.*, 1944, **2**, 462.
17. Kanner, L., *Child Psychiatry*, ed. 2, Springfield, 1948.
18. Braithwaite, J. V., *Practitioner*, 1950, **165**, 273.

19. Oster, J., *Nord. méd.* 1951, 46, 1164.
20. Brock, H., *M Schr. Kinderheilk.*, 1952, 100, 86.
21. Hodge, R. S. and Hutchings, H. M., *Arch. Dis. Child.*, 1952, 27, 498.
22. Grover, J. I., *J. Amer. med. Ass.*, 1918, 71, 626.
23. Stalker, H. and Band, D., *J. ment. Sci.*, 1946, 92, 324.
24. Stockwell, L. and Smith, C. K., *Amer. J. Dis. Child.*, 1940, 59, 1013.
25. Weigl, E., *Z. Kinderpsychiat.*, 1938, 5, 103.
26. Blomfield, J. M., and Douglas, J. W. B., *Lancet*, 1956, 2, 850.
27. Kark, E., *S. Afr. J. Lab. clin. Med.*, March 1956.
- 28a. Shiloh, A., *Harefuah*, Oct. 1960.
- 28b. — personal communication.
29. Hollingshead, A. B., and Redlich, F. C., *Social Class and Mental Illness*, J. Wiley, N.Y., 1958.
30. Eisenstadt, S. N., *From Generation to Generation*, The Free Press, Illinois, 1956.
31. Registrar General's Decennial Supplement. England and Wales 1951. *Occupational Mortality*, Part II, Volume 1.
32. *International Statistical Classification of Occupations*, International Labour Office, 1958, Geneva.

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### Malpraxis

An action for damages for: *circa* 1435

“To the most gracious lord, the Chancellor of England, Humbly beseecheth your poor orator, Ralph Fryday, that whereas the Suppliant's right arm was broken through certain evil-doers, who lay in wait to kill him, which arm, one John West of Leicester undertook at Wigston well and duly to cure and save; which John West set about his cure of the said arm so improperly, through the malice and covin of the enemies of the said suppliant, that the arm mortified and becam incurable, to the perpetual destruction of the said suppliant: May it please your most gracious Lordship to grant the said suppliant a writ directed to the said John West (Commanding him) to appear before you in the Chancery on the octave of the Purification of Our Lady under pain of £40 to be examined by the Surgeons of our Lord, the King, and by other efficient surgeons, as to the cure not duly performed, and also to answer the said suppliant for this great injury, as sight and search demand, for God and in the way of charity. Considering, most gracious Lord, that the said suppliant cannot have execution nor any remedy at (common) law for this misdeed so done by colour of the case, if he be not acted in this way, because of the great maintenance against the said suppliant in those parts.”

Quoted from *Brit. med. J.*, 1927, 1, 968.