TABLE II—*General Attitude of Psychiatrists and Nurses*

	Consultants (31)					Junior Staff (45)				
	Unfavourable		Favourable			Unfavourable		Favourable		
	No.	%	No.	%	P	No.	%	No.	%	P
Myocardial infarction	0	0	31	100	<0·0005	0	0	45	100	<0·0005
Pneumonia	1	3	30	97	<0·0005	0	0	45	100	<0·0005
Urinary tract infection	2	6	29	94	<0·0005	4	9	41	91	<0·0005
Neoplastic disease	5	16	26	84	<0·0005	4	9	41	91	<0·0005
Schizophrenia	2	6	29	94	<0·0005	3	7	42	93	<0·0005
Affective psychoses	1	3	30	97	<0·0005	1	2	44	98	<0·0005
Organic psychoses	4	13	27	87	<0·0005	5	11	40	89	<0·0005
Senile and presenile dementia	7	23	24	77	<0·0005	12	27	33	73	<0·0005
Neuroses	11	35	20	65	<0·001	24	53	21	47	<0·005
Self-poisoning	17	55	14	45	N.S.	31	69	14	31	N.S.
Drug dependence	26	84	5	16	N.S.	37	82	8	18	N.S.
Alcoholism	24	77	7	23	—	38	84	7	16	—

P = Alcoholism against each of the other illnesses; d.f. 1 in each case.
N.S. = Not significant.

TABLE III—*Psychiatrists' Opinion of other Doctors' Attitudes towards Alcoholism*

	Consultants (31)					Junior Staff (45)				
	Unfavourable		Favourable		Not Answered	Unfavourable		Favourable		Not Answered
General physicians	23	74%	7	22%	1	32	71%	11	24%	2
General surgeons	24	77%	6	19%	1	39	87%	3	7%	3
General practitioners	13	42%	17	55%	1	19	42%	23	51%	3

Psychiatrists' opinion of other doctors' attitudes: Favourable, $\chi^2 = 30{\cdot}73$, d.f.2, G.P.s > general physicians and surgeons.

treatment of alcoholism is unfavourable. The question of unfavourable attitudes cannot be the sole answer, though it is not one which is likely to improve the success of any alcohol treatment programme. Much more emphasis on education of the public,[12] medical undergraduates,[13-15] and indeed within the profession[9-16] is required.

We thank all our colleagues who took part in this study. It was supported in part by a grant from the Distillers Co.

Requests for reprints should be addressed to E.B.M.

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Effect of Teaching on Students' Attitudes to Self-poisoning

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British Medical Journal, 1975, 2, 431-434

Summary

The attitudes of students, resident house physicians, and medical social workers towards 10 medical conditions were assessed in relation to both personal attitudes and the opinions expressed of the attitudes of the medical profession. Final-year students and house physicians showed unfavourable attitudes towards self-poisoning in contrast to fourth-year students and medical social workers. The fourth-year students were given the opportunity to admit patients referred to hospital with self-poisoning and visited the family doctor and the patient after discharge. After this exposure there was a subjective impression that the students became more interested in the problems of the self-poisoned patients, and this was supported by a review of their attitudes at the end of the teaching project.

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Introduction

Though self-poisoning is one of the commonest reasons for acute admission to hospital, the junior clinical students rarely have contact with these patients. The majority of self-poisoners arrive in hospital during the evening or late at night, their stay in hospital is short, and formal teaching on the subject, if any, tends to be restricted to the physical aspects. The only close

contact with self-poisoners comes in the final term of medicine or after graduation, when house physicians are confronted with a large number of such patients, whose illnesses are unfamiliar to them.

During 1973 a total of 885 self-poisoned patients were seen at the acute medical receiving area of the Glasgow Western Infirmary. Of these, 707 (80%) were admitted to wards and the rest were allowed home. Only 12% of the admitted patients required transfer to a psychiatric hospital after assessment in the general hospital. The remainder were found to have mainly social and interpersonal problems and were allowed home within 24 hours of admission. Thirty-nine per cent. of all acute male admissions and 61% of all acute female admissions, under the age of 40 years, were due to acts of self-poisoning.

The medical student is at one of the most impressionable stages in his career and is developing attitudes towards patients and diseases which can be affected by those that he sees in his teachers. While it is usual for these influences to be beneficial, there is a risk that an unfavourable attitude such as may be expressed towards the self-poisoner can be accepted by the student as correct. Murray,[1] a Glasgow medical student, after her experience of two consecutive medical terms, writes, "The truth is, once I qualify, I will have no idea how to approach a patient who has attempted self-poisoning. I adopt the attitudes of others whom I see on receiving nights: that attitude leaves a fair amount to be considered." Patel, in his accompanying paper, shows that junior physicians and nursing staff tend to show unfavourable attitudes towards the self-poisoner.

This paper describes an attempt to influence the attitudes of students towards such patients by exposing the students to the patients both during and after the period of hospital admission.

Method

The students in this university are required to write a dissertation during the winter and spring terms of their fourth academic year. The topic is selected by the student from a list of suitable subjects, and the dissertation accounts for up to 20% of the marks in the final written examination in medicine. "Self-poisoning" was included in the list in October 1973, and the number of students who were allowed to take this topic was limited to 10.

The students were divided into five pairs, each of whom had two separate weeks "on call" for patients admitted to the Western Infirmary with self-poisoning during two consecutive terms of their curriculum. The students admitted patients, compiled case reports on as many as possible, and in relation to at least two patients visited the family doctor and the patient at home approximately one week after discharge from hospital. On average the students spent 45 to 90 minutes with the patient while in hospital, 30 to 60 minutes with the family doctor, and one to two hours with the patient at home. In several instances additional return visits were paid to the patient, and the psychiatrist who had seen the patient during or after the hospital admission was also consulted. Seminars were held for the 10 students at the end of each term, and the patients who had been visited at home were presented and discussed in detail. The students were encouraged to develop their dissertations by using the patients they had studied as a core of factual information.

At the beginning (October 1973) and at the end (March 1974) of the project an assessment was made of the students' own attitude and their opinion of that of the medical profession towards 10 medical conditions by employing a 10 cm line scale.[2] Similar assessments were also made on house physicians who had completed their six-months residency in general medicine and 15 final-year students at the end of a three-months clinical appointment in medicine. Eight medical social workers from another general hospital (Glasgow Royal Infirmary) were also invited to complete the questionnaire.

Results

The attitudes have been expressed in three categories—unfavourable (hostile), neutral, and favourable (sympathetic). The latter two categories have been grouped together in the tables.

Table I shows that the fourth year students showed no significant differences between the "unfavourable" and the other group ("neutral" and "sympathetic") for attitudes towards "self-poisoning" as compared with each of the other nine conditions. The final-year students and the resident house physicians differed considerably: except for "alcoholism" and "juvenile delinquency" the unfavourable attitudes are significantly more often expressed towards "self-poisoning" as compared with the other seven conditions. The medical social workers expressed attitudes similar to those of the fourth-year students.

Table II shows that the fourth-year students considered that the medical profession show unfavourable attitudes to "self-poisoning," "alcoholism," "juvenile delinquency," and "the unmarried mother." The final-year students, the resident house physicians, and the social workers show a similar view with the exception of "the unmarried mother."

Table III shows that after the completion of the teaching project the fourth-year students tended to express fewer unfavourable responses to "self-poisoning," "alcoholism," "juvenile delinquency," and "the unmarried mother" (the "emotive" conditions). At the same time they felt that the medical profession's attitude towards "self-poisoning" was more unfavourable than they had previously assumed.

TABLE I—*Participant Groups own Attitude: Comparisons between Scores for "Self-poisoning" and all other Conditions*

Condition	4th-year Students (10)			Final-year Students (15)			Resident House Physicians (12)			Medical Social Workers (8)		
	Unfavourable	Neutral and Sympathetic		Unfavourable	Neutral and Sympathetic		Unfavourable	Neutral and Sympathetic		Unfavourable	Neutral and Sympathetic	
Self-poisoning ..	2	8	χ^2	8	7	χ^2	11	1	χ^2	0	8	χ^2
Comparison with:												
Cerebrovascular accident ..	0	10	2·22*	1	14	7·77	3	9	10·92	0	8	*
Myocardial infarction ..	0	10	2·22*	0	15	10·90	0	12	20·30	0	8	
Epilepsy ..	0	10	2·22*	0	15	10·90	2	10	13·59	1	7	0·0*
Asthmatic attack	0	10	2·22*	0	15	10·90	0	12	20·30	0	8	*
Alcoholism ..	6	4	3·33*	7	8	0·13*	8	4	2·27*	2	6	0·5*
Cardiac failure..	0	10	2·22*	0	15	10·90	0	12	20·30	0	8	*
Diabetic ketoacidosis ..	1	9	0·39*	1	14	7·77	0	12	20·30	0	8	*
Juvenile delinquency..	6	4	3·33*	11	4	1·29*	9	3	1·25*	3	5	1·6*
Unmarried mother ..	3	7	0·26*	2	13	5·40	1	11	16·66	1	7	0·0*

*Non-Significant comparisons.

TABLE II—*Participant Groups Opinion of Attitude of Medical Profession: Comparisons between "Self-poisoning" and all other Conditions*

Condition	4th-year Students (10)			Final-year Students (15)			Resident House Physicians (12)			Medical Social Workers (8)		
	Unfavourable	Neutral and Sympathetic		Unfavourable	Neutral and Sympathetic		Unfavourable	Neutral and Sympathetic		Unfavourable	Neutral and Sympathetic	
Self-poisoning ..	7	3	χ^2	12	3	χ^2	12	0	χ^2	7	1	χ^2
Comparison with:												
Cerebrovascular accident ..	0	10	7·9	2	13	10·8	3	9	11·3	0	8	9·1
Myocardial infarction ..	0	10	7·9	0	15	16·8	0	12	20·1	0	8	9·1
Epilepsy ..	0	10	7·9	0	15	16·8	2	10	13·8	0	8	9·1
Asthmatic attack	1	9	5·2	0	15	16·8	0	12	20·1	1	7	6·2
Alcoholism ..	8	2	0·0*	9	6	0·6*	12	0	— *	8	0	0 0*
Cardiac failure..	0	10	7·9	0	15	16·8	1	11	16·7	0	8	9·1
Diabetic ketoacidosis ..	1	9	5·2	0	15	16·8	0	12	20·1	1	7	6·2
Diabetic Juvenile delinquency ..	6	4	0·0*	12	3	— *	11	1	0·0*	7	1	— *
Unmarried mother ..	4	6	0·8*	5	10	4·8	3	9	11·3	2	6	4·0*

*Non-significant comparisons.

TABLE III—*Fourth-year Students' Scores before and after Teaching: Own Attitude and Opinion of Profession's Attitude*

Condition	Own Attitude				Opinion of Profession's Attitude			
	Before Teaching		After Teaching		Before Teaching		After Teaching	
	Unfavourable	Neutral and Sympathetic	Unfavourable	Neutral and Sympathetic	Unfavourable	Neutral and Sympathetic	Unfavourable	Neutral and Sympathetic
Cerebrovascular accident	0	10	0	10	0	10	0	10
Myocardial infarction	0	10	0	10	0	10	0	10
Epilepsy	0	10	0	10	0	10	0	10
Asthmatic attack	0	10	0	10	1	9	0	10
Alcoholism	6	4	4	6	8	2	9	1
Cardiac failure	0	10	0	10	0	10	0	10
Self-poisoning	2	8	0	10	7	3	9	1
Diabetic Ketoacidosis	1	9	0	10	1	9	0	10
Juvenile delinquency	6	4	4	6	6	4	9	1
Unmarried mother	3	7	1	9	4	6	2	8

Discussion

Reference has been made to an apparent decline that takes place in students' "humanism" as undergraduate training progresses and to the preference that students seem to show for the organic rather than the psychological aspects of medicine.[3 4] The teaching that was given to fourth-year students was an attempt to see whether a planned and detailed exposure to the behavioural aspects of the incident of "self-poisoning" would alter student attitudes.

The assessment made of the fourth-year students' attitudes before they had been exposed to patients admitted with self-poisoning indicates that all 10 students held non-hostile attitudes to the 10 conditions. In this they were similar to the medical social workers but in marked contrast to the final-year students and the resident house physicians, who had all completed a period of work in general medicine during which they had had repeated contact with patients admitted with self-poisoning. As the 10 fourth-year students had elected to study self-poisoning as a dissertation topic it could be argued that they represented an "affective" group as described by Walton.[4] This is not supported in that they did not show any preference for the "emotive" as opposed to the other conditions.

In this teaching experiment the students were given the same opportunity to see the patient in hospital as had the resident medical staff. The extra and differing factors were that they were able to interview the family doctor, to hear his views of the patient and of the events which had led to the patient's admission, and to see and talk to the patient at length in the security of his own home. The difference in the history that the students obtained was striking: at home, the patient was calm and relaxed and talked freely and in detail of the problems and events which had led to the episode of self-poisoning.

The patients were sometimes critical of the medical profession, accusing doctors of not being interested in their problems and of not having the time to listen. Society as a whole was also criticized and in many instances the patients gave the impression that they had only just been able to resist adverse social, psychological, and economic stresses over many years.

In the majority of patients studied the factor which had precipitated the act of self-poisoning was relatively trivial in itself but represented the straw which had finally broken the will of the patient to resist adversity. From the conversations that the authors had with the students, both in the two seminars and during the visits to patients at home, it was clear that the students gained a significant degree of insight into the problems and pressures of a social and psychological nature which can affect some patients—pressures which few students, if any, had ever or ever would themselves experience. The students were able to see the episode of self-poisoning in the context of a long and often adverse social history, to realize the difficulties that are evident in the management of such patients, to appreciate the need for aftercare, and to consider the responsibilities of the medical profession towards them.

There is no statistical proof that this exposure to the patients at home and in greater depth had altered the students' attitudes towards self-poisoning. The number of participating students was small, but whereas two showed a hostile attitude before teaching none gave hostility scores after the course. This supports the authors' subjective impression that the students gained more insight into the problem of self-poisoning through this experimental teaching course, and showed an attitude which was a blend of understanding, sympathy, and concern. Similarly, while seven students thought that the profession showed hostility to self-poisoning, this had increased to nine at the end of the teaching course—perhaps the influence of the attitudes shown by the resident house physicians with whom they had been in contact.

No statistical comparison can be made between the attitude shown by different participant groups, but it appears that attitudes to emotive conditions harden as the student approaches graduation. It is possible that the unfavourable attitudes shown to emotive conditions is related to the emphasis that is given to the organic aspects of illness in undergraduate teaching, while

the sympathetic opinion of the medical social workers is the result of a predominantly "behavioural" training.

We wish to thank all those who participated in the study. We thank the members of the medical division of the Western Infirmary for allowing the students to study their patients.

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Hospital Topics

Acute Reactions to Urographic Contrast Media

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British Medical Journal, 1975, 2, 434-437

Summary

A prospective study of 3509 consecutive patients examined by excretion urography has been conducted to assess the incidence and significance of the untoward effects of urographic contrast media. Four compounds were used in doses containing 160 to 500 mg iodine/kg body weight. Toxic effects, arm pain, and allergic reactions were assessed separately, while the remainder were classified according to the influence of each reaction on the investigation and the need for treatment. From the results and a review of the literature we conclude that when there is a clear clinical indication for excretion urography a dose of contrast medium containing up to 600 mg iodine/kg body weight should be injected rapidly. Prophylactic antihistamine treatment and pretesting should be abandoned. Special care is needed for small infants and the elderly and for patients with renal or hepatic failure, myeloma, heart disease, or a history of previous major reaction. Full resuscitation facilities must always be available.

Introduction

Almost everyone suspected of urinary tract disease will undergo excretion urography.[1] During the past decade studies of film quality and urinary concentrations of excreted contrast medium have established that the use of higher doses of contrast media results in an improvement in the radiographic visualization of the whole urinary tract.[2] High doses have been recommended for the investigation of almost all urinary tract disorders, including acute and chronic renal failure,[3 4] congenital abnormalities,[5] obstructive uropathy,[6] inflammatory disease,[7-9] calculus disease,[10 11] trauma,[12 13] and renal masses,[14 15] and as a preliminary to renal puncture[16] and needle nephrostomy.[17] Acute reactions to the injection of urographic contrast media, however, are well known, and anxiety has been expressed about the safety of high-dose urography.[18] A prospective study has been undertaken to assess the incidence of untoward effects and their influence on the investigation.

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Patients and Materials

A consecutive series of 3509 patients referred to this department for excretion urography were included in the study, which was carried out over 23 months. Altogether 2008 were male and 1501 female and their ages ranged from 9 to 94 years (fig. 1). Out of 355 patients with a history of asthma, eczema, hay fever, or drug hypersensitivity 147 were given prophylactic chlorpheniramine (Piriton). Doses of contrast medium ranged from 160 to 500 mg iodine/kg body weight. An infusion of 25% sodium diatrizoate (Hypaque) was used for 444 examinations, a mixture of sodium and meglumine diatrizoate (Urovison) was injected in 713, sodium iothalamate (Conray 420) was used for 1022, and 45% sodium diatrizoate (Hypaque) was used for the remaining 1330. A further 755 patients were examined to assess the cause of arm pain.

Method

Immediately before the investigation the patient's age, sex, menstrual state, and allergic history were recorded. The type and quantity of the contrast medium used and the speed of injection were documented during the examination. The presence and nature of any untoward

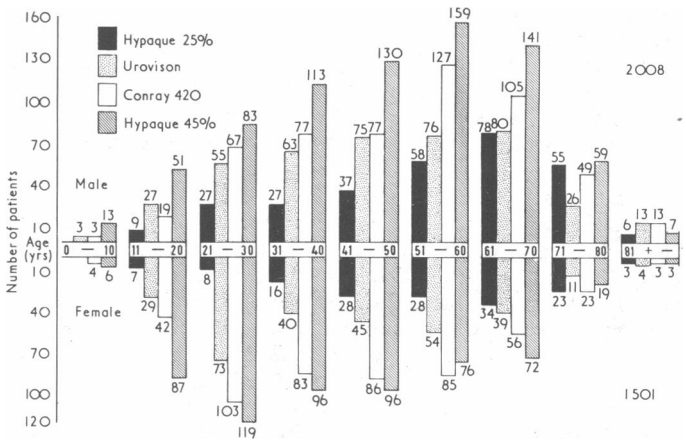

FIG. 1—Frequency with which each contrast medium was used in each age group. Figures at top and bottom of columns are numbers of patients.