

A study of patients who leave an Accident & Emergency department against medical advice

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Patients leaving an Accident & Emergency Department against medical advice are often considered a high-risk group. A prospective study was carried out in an Accident & Emergency Department (ED) to determine the characteristics of this distinct group of patients, their reasons for leaving against medical advice (AMA), and their subsequent outcome. Telephone or personal interview of patients by a clerk was attempted within 48 hours of the visit for all patients who left Against Medical Advice (AMA) based on a pre-set questionnaire. A follow-up call was used to ascertain health outcomes after the discharge. There were 210 AMA cases during the study period giving an incidence of 0.95%. Interview was successful in 186 (88.6%) patients. The mean age of the AMA group was around 36 years but there was no significant difference in sex. The major reasons for AMA included wanting to observe symptoms at home (78 of 186, 42%), non-medical personal reason (64 of 186, 34%) and symptoms have abated (21 of 186, 11%). Eighteen (9.7%) patients left AMA because they wanted to seek treatment from other providers and among them three had private insurance coverage. Of the 5 (2.7%) patients who were dissatisfied with the management in ED, four disagreed with the diagnosis and treatment offered and the remaining one was unhappy with the attitude of the attending physician. About 12% (22) of patients returned within 48 hours for further treatment and 8 (36%) were admitted. The remaining 22% (40 of 186) sought further medical treatment from other sources. No formal patient complaint was received during the study period from this group. (*Hong Kong j.emerg.med.* 2000;7:22-26)

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Introduction

Patients have the right to leave an Accident and Emergency Department (ED) against medical advice (AMA) based on human rights and the 'Patients' charter'. This is often a source of frustration for the medical staff who have to maintain a balance between the interests of the patient in preserving his/her autonomy and the interests of the state in maintaining life and adequate health.

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Discharges against medical advice (DAMA) were considered by some overseas studies to be high-risk events with potential of leading to malpractice litigation.^{1,2} The health of the AMA group is considered to be at a higher risk. Preventing mishaps following AMA discharges is an important risk management issue in emergency medicine.

The objectives of this study were to: (1) describe the characteristics of this group of patients, (2) determine the patients' reasons for leaving AMA, and (3) determine the outcome of this distinct group.

Methods

Study setting

Our hospital is a public hospital under the Hospital Authority. It has 955 beds for acute general patients

and 455 beds for patients with acute mental illness. It is situated at the eastern part of the Hong Kong Island and is serving a population of 600,000. The ED had an average daily attendance of 459 during the study period.

All patients who left against medical advice and had signed the DAMA form were included in our study. Patients who refused treatment but did not require admission were excluded. Patients who disappeared after registration were also not included. On the spot personal interview or telephone follow-up within 48-hour of attendance were attempted by our clerk using a pre-set questionnaire. For every person, at least 4 phone calls were made during office hour before closing the case. Since the clerk was not directly involved in patient care, she would be less biased in the interview. The survey included questions on demographic characteristics, chief complaints and reasons for DAMA.

The first author would call the patients again about one week after discharge to find out their self reported current health status, subsequent medical care sought and the outcome. Using the ED computer system, patients re-attending for the same complaints were checked about one week from the attendance, and the outcome recorded.

The data were analysed using SPSS PC computer software.

Results

Our ED had an attendance of 22022 during the study period from 15 July 1996 to 31 August 1996. A total of 210 (0.95%) patients were included in the

study. Of the 210 DAMA patients, 118 female and 92 male with age ranging from infant to 85 years (mean 36.1 ± 23.2 years) were included in the study. Chinese accounted for 204, Indian for 5 and European for 1 of these discharges. Of the 210 included in the study, three of the Chinese and one of the Indian had discharged themselves twice AMA during the study.

In our study, we divided the patients into eight age bands. (Table 1) The proportions of DAMA patients roughly follow the age distributions of the attendees during the study period. The proportion of DAMA was lower in the 10-19 age band and higher in the 60-69 age band. The 1st age band (0-9) had the largest number (40) of AMA cases. This age band was most likely to seek other means of treatment (22%), especially attending private practitioner. Around 13% of this age band had re-attended, and 60% of them were admitted into our hospital. The number of AMA discharges is dramatically less in 2nd age band (10-19). There was a gradual rising trend from the 3rd age band (20-29) to the 5th age band (40-49), with the 5th age band forming the second largest group (37). Over 92 % of the 7th age band (60 to 69) preferred to leave because they wanted to observe their symptoms at home or had some other personal reasons. They seldom sought further medical treatment after discharge. Around 13% of this age group sought other means of treatment and less than 7% of this age group re-attended.

Of the 210 patients, 60 (28.6%) were triaged as urgent (category 2) and 150 (71.4%) as semi-urgent (category 3). The average wait before being seen by a physician was $26.35 \pm SD20.99$ minutes, whereas the duration of the visit was $105.37 \pm SD 74.94$ minutes.

Table 1. Age distribution of patients

Age group	DAMA patients N=210	Proportion in DAMA Patients (%)	Proportion in ED Population %
0-9	40	19	17
10-19	15	7.1	10.5
20-29	28	13.3	15
30-39	32	15.2	15.3
40-49	37	17.6	12
50-59	13	6.2	7.4
60-69	30	14.3	9.1
> 69	15	7.1	13.7

The study consisted of 34 weekdays and 14-weekends/public holiday. No statistical significant difference in the number of AMA discharges between the weekday and the public holiday/weekend were shown in our study. ($t=.044$, $p=.965$)

The chief complaints of the patients were given in table 2. The most common complaints were foreign body in throat (13.8%), abdominal pain (11.9%), respiratory problems (11%), cardiovascular problems (10.5%), febrile illness (9.5%), and injury (9.5%).

A total of 76(36.2%) patients were interviewed in person and 110 patients (52.4%) were interviewed by telephone. Only 24 (11.4%) patients could not be contacted. The main reasons for DAMA are outlined in table 3. Only 5 (2.7%) patients left AMA because of dissatisfaction with management in the ED. Four were unhappy about the treatment and diagnosis and one was dissatisfied with the attitude of medical staff. Of the 64 (34.4%) patients who left against medical advice for personal reasons, 33 (51.6%) were related to family affairs and 22 (34.4%) related to work. Six (9.3%) left because they had bad past experience with the ward environment and policy. The remaining three (4.7%) patients left AMA due to financial reasons. Eighteen (9.7%) patients left AMA because they wanted to seek treatment from other providers and among them 3 had private insurance coverage.

Twenty four (out of 186, 12.9%) patients sought medical treatment elsewhere, 16 of whom attended private doctors, 5 attended ED in other public hospitals and 3 attended government general outpatient department. Of the 5 patients attending other public hospitals, 3 of them were admitted. (Table 4)

A search using our computer system revealed that of the 22 (10.5%) patients who had re-attended our ED with the same complaints within one week, twelve (55%) were discharged, eight (36%) were admitted and two (9%) were referred to specialist outpatient department.

We did not encounter any formal complaints or medico-legal actions relating the patients who left AMA.

Discussion

There are few studies on DAMA patients in the ED setting. Previous studies from Camargo³ and Pennycook⁴ have reported a DAMA rate of 0.68%, and 0.73% respectively, which was lower than our rate of 0.95%. Since many factors could affect the result, strict comparison would be difficult.

Table 2. Diagnosis of patients who have left AMA

Diagnosis	Number	Percentage
Foreign body ingestion	29	13.8
Abdominal pain	25	11.9
Respiratory problems	23	11
Circulatory problems	22	10.5
Injury	20	9.5
Febrile illness	20	9.5
Neurological illness	18	8.6
GI upset	15	7.1
Other painful condition	11	5.2
GU problems	7	3.3
Psychological problem	4	1.9
Others	16	7.6

Table 3. Reasons of DAMA

Reasons	Number (%)
Wants to observe symptoms at home	78 (41.9)
Personal reason (non-medical)	64 (34.4)
Symptoms abated	21 (11.3)
Prefer other treatment	18 (9.7)
Dissatisfied with management in AED	5 (2.7)
Long waiting time	0 (0)

Table 4. Outcome of patients seeking medical treatment after DAMA

Outcome of further care	Number of patients
Attend others	
Other ED	2
Government outpatient clinics	3
Private practitioner	16
Admitted HA hospital	3
Attend PYNEH	
Home	12
Refer specialist outpatient clinics	2
Admitted PYNEH	8
Total	46

Children less than 10 years of age constituted the biggest group of patients who left AMA. (Table 1) The large number of DAMA may be related to the fact that parents are very much worried about leaving their children behind in the hospital. Emergency physicians need to treat both these children and their anxious parents. All the AMA discharges that were dissatisfied with management in ED were found in the 20 to 49 age group. This may be due to the fact that this group of patients is young, better educated and has a higher need for self-determination. The high number of case (30) in the 60 to 69 age band was unexpected. In Moy's (1996) study it has been shown that older individuals were less likely to leave AMA. Many of the aged patients were afraid of hospital admission, which might be related to traditional beliefs, and preferred outpatient treatment.

In a US study, African-American patients were more likely to discharge against medical advice than white patients.⁵ This may suggest that African-American patients were less satisfied with the medical care. In our study, 4 Indians and 1 European discharged against medical advice. Their reasons for leaving included wanting to observe symptoms at home and work related commitments. Three of the Indians re-attended with the same complaints within one week; one was admitted into our hospital.

In Moy's study,⁵ it has also been shown that individuals with no insurance were more likely to leave against medical advice. In our setting, hospital charges are only nominal except for non-citizens. After reviewing the records of our Indian and European patients, they all had Hong Kong identity cards and financial problems were probably not a reason for leaving AMA.

In the Pennycook study⁴ trauma accounted for over half of the AMA cases, which was much higher than our rate of less than 10%, and this was similar to the results obtained in Dubow's study.⁶ Foreign body ingestion, usually fishbone, was the largest proportion in our study. In our hospital, endoscopy for the removal of foreign body was performed as an in-patient procedure. There is therefore a gap between the patient's desire to be treated as an out-patient and the hospital policy of admitting patients in this situation.

Alcohol intoxication was found to be a main reason (65.5%) for irregular discharge in a UK study.⁴ In a US study,⁶ most patients left AMA because they did not agree with the physician's management plan. In our case, people just wanted to observe their symptoms at home. Many people believe that it is difficult for an emergency physician to establish a trusting relationship with an unfamiliar patient due to the short stay in ED. In Dubow's study,⁶ 30% of the patients reported dissatisfaction with their emergency physicians. In our study, less than 3% who left AMA were dissatisfied with their interaction with the emergency physician.

In Pennycook's study⁴ 12.9% of patients reattended and most were admitted to hospital. Only 22 (10.5%) of our patient returned to our ED and 8 (36%) were admitted. However 24 (11.4%) sought medical attention elsewhere and 3 (12.5%) were admitted. Overall, 46 (22%) required further attention which is comparable to Camargo's (1995) study, where one in five AMA patients returned to the ED within 7 days of their index visit, and only one-third were admitted.

Although no formal complaint was received and no medico-legal action was brought against the hospital related to these events during this period, DAMA is still considered an important risk management issue. Dubow⁶ found that the documentation on the ED records of patients signing out AMA was generally poor. The American College of Emergency Physicians suggests that every chart should reflect that the patient is competent, and understands the diagnosis, treatment offered, alternative therapy and potential consequences of disregarding the recommended treatment.² In our ED, a standardised form and protocol had already been introduced for AMA discharges before the study so as to improve the documentation. Good documentation will minimise any subsequent medico-legal problems for the attending doctor and emergency department.

Pennycook⁴ suggested that prompt, friendly and sensitive nurse triage and minimizing waiting time might decrease the number of patients leaving AMA. In a US study of 24 patients, long wait was a contributing factor in 37% of the AMA cases.⁶ However, this was not supported by our own data

where no one left AMA because of long waiting time. Dan Mayer's study suggested that the usual reasons for patients' refusal of medical attention included misunderstanding, anger and fear. Clarification of misconceptions and modification of negative preconceptions about hospitalisation by a team of patient advocates was successful in reducing the rate of AMA discharges in a psychiatric hospital.⁷

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