...Nonhomeless and Homeless Patients With Acquired Immunodeficiency Syndrome

Variables	Nonhomeless Patients (n = 291), No. (%)	Homeless Patients (n = 30), No. (%)	Total Patients (N = 321), No. (%)
Race			
White	162 (87)	9 (30)*	171 (74)†
Black	15 (7)	14 (47)*	29 (13)†
Hispanic	22 (11)	7 (23)*	29 (13)†
Asian	2 (1)	0 (0)	2 (1)†
Risk group			
Homosexual or bisexual	156 (94)	15 (50)*	203 (88)
Intravenous drug user	15 (7)	21 (70)*	36 (16)
Opportunistic infections and malignancies			
Pneumocystis carinii			
Biopsy proved	144 (72)	15 (50)‡	159 (69)
Presumed	23 (11)	9 (30)‡	32 (14)
Mycobacterium tuberculosis	3 (1)	6 (20)‡	9 (4)
Kaposi's sarcoma	69 (34)	2 (7)§	71 (31)
Outcome			
Died	109 (54)	14 (47)	123 (53)
Survived	92 (46)	16 (53)	(100) (47)
Discharged home‖	88 (96)	2 (13)*†	88 (83)
Discharged to shelter or streets‖	4 (4)	14 (88)*†	18 (17)
Signed out against medical advice	5 (6)	8 (50)*	13 (12)
Lost to medical follow up	5 (6)	13 (81)*	18 (17)

*$P < .0001$ (χ^2 analysis)
†Percentages do not add up to 100 because of rounding
‡$P < .01$ (χ^2 analysis), $P < .0002$ (Fisher's exact test, two tailed)
§$P < .001$ (Fisher's exact test, two tailed)
‖Percentage of survivors excluding transfers to other hospitals

quent. This reflects the unwillingness of many patients to undergo diagnostic bronchoscopy. Higher rates of noncompliance were also evidenced by the larger percentage of homeless patients who signed out against medical advice and were unavailable for medical follow-up. These individuals often did not complete adequate courses of intravenous antibiotics for opportunistic infections and did not take medications as outpatients because they lost or could not afford to fill their prescriptions. Hospital stay was longer for homeless patients (62 vs 40 days [$P < .02$]) and did not correlate with risk group, since no statistically significant difference was found between intravenous drug users and homosexuals in terms of average length of stay.

Comment.—Previous studies[1-3] have profiled the differences between intravenous drug users and homosexuals with AIDS, yet homelessness has not been addressed as a specific factor influencing their medical and social welfare. Our study suggests that intravenous drug users constitute the major pool of human immunodeficiency virus infection in public shelters and on the streets of large urban centers. Once hospitalized, they pose significant management and discharge problems. Increasing numbers of AIDS patients remain hospitalized solely because of homelessness,[4] and others are inappropriately discharged to shelters or the streets. Cross-sectional and prospective studies are needed to investigate the prevalence of AIDS, AIDS-related conditions, and human immunodeficiency virus seropositivity among residents of shelters. Risk-reduction efforts[5] must be expanded to curtail the sharing of needles in these premises.

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4. Goode* PV, Smith J, Altman S. *AIDS Shelter Project Final Report*. Institute of Public Services Performance Inc, 1986.
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Pediatric Surgery

To the Editor.—In his review of the two-volume text *Pediatric Surgery*, Dr Burrington[1] criticizes the chapter I wrote on necrotizing enterocolitis by stating that it had an omission, ie, it "does not mention the high association of rotavirus with necrotizing enterocolitis." Please look at page 348 in the chapter on necrotizing enterocolitis. The association of viruses, including rotaviruses, with necrotizing enterocolitis is, I believe, adequately covered in a paragraph and highlighted by three references. A report of an outbreak of necrotizing enterocolitis associated with rotavirus infection is detailed. It would appear to me that the reviewer should carefully check the text before allowing his comments to be published in a journal as reputable as *JAMA*.

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1. Burrington JD. Pediatric surgery. *JAMA*. 1987;257:2361.

Multiple Severe Complications From Recreational Ingestion of MDMA ("Ecstasy")

To the Editor.—We would like to report the case of a young woman who suffered serious but reversible toxic reactions from a recreational dose of 3,4-methylenedioxymethamphetamine (MDMA, "Ecstasy") and whose blood levels of MDMA were much higher than in any of the fatalities reported by Dowling et al.[1]

Report of a Case.—A 32-year-old woman and her friend, both of whom had used MDMA before, ingested an alleged 100 to 150 mg of MDMA powder mixed in apple juice. The patient reported rapid onset of general body tingling, vivid color enhancement, and visual hallucinations, but had no memory of ensuing events. Two hours after ingestion, her friend brought her to the emergency department. Significant findings included agitation; hallucinations; combativeness; diaphoresis; dilated pupils (7 mm); pulse rate, 150 beats per minute; blood pressure, 90/50 mm Hg; respirations, 36/min; rectal temperature, 41.6°C; diffuse wheezing; diminished bowel sounds; vertical nystagmus; tonic arm movements; and hyperactive reflexes. She responded to her name and to painful stimulation. Initial laboratory studies disclosed the following values: arterial blood oxygen partial pressure, 44 mm Hg (on 1.5 L of molecular oxygen); serum bicarbonate, 19 mEq/L; creatinine, 170 μmol/L (1.9 mg/dL), and prothrombin time, 13.6 s. Results of other laboratory studies, summarized in the Table, were initially normal. A chest roentgenogram showed pulmonary vascular congestion, and an electrocardiogram after several hours demonstrated sinus tachycardia with nonspecific ST-T wave changes and

Summary of Selected Laboratory Values During Hospitalization and After Discharge*

	Hours After Admission		Hospital Day					
	1	4	1	2	3	4	5	10
MDMA,† mg/L								
Serum	6.5	7.0	-		-			
Urine	410	-	816				1.3	
Gastric		1070						
White blood cells, $\times 10^9$/L ($\times 10^3$/mm^3)	5.9 (5900)		15.3 (15 300)	26.2 (26 200)	33.3 (33 300)	14.3 (14 300)	13.0 (13 000)	
Platelets, $\times 10^9$/L ($\times 10^3$/mm^3)	376	-	126	66	73	97	141	
Bicarbonate, mEq/L	19		23		-	26		
Creatinine, μmol/L (mg/dL)	170 (1.9)		130 (1.5)		110 (1.2)	- -		80 (0.9)
Prothrombin time, s	13.6	- -	33.2	37.9	16.9	13.8	12.8	
Uric acid, μmol/L (mg/dL)	980 (16.5)	- -	710 (12.0)	- -	390 (6.5)	- -	- -	-
Lactate dehydrogenase, U/L	205	-	775		1225	1315	1320	365
Total bilirubin, μmol/L (mg/dL)	6 (0.4)	-	20 (1.2)		116 (6.8)	130 (7.55)	96 (5.6)	28 (1.6)
Alanine aminotransferase, U/L	42		62		100	100	214	88
Aspartate aminotransferase, U/L	30		385		1820	1435	1680	237
Alkaline phosphatase, U/L	50		65		107	90	145	88

*Creatine kinase levels were 756 U/L on day 14 and 24 U/L on day 24.
†MDMA indicates 3,4-methylenedioxymethamphetamine.

peaked T waves. Initial treatment included intubation, gastric lavage, gastric instilled activated charcoal and magnesium citrate, intravenous (IV) dextrose, IV naloxone, IV diazepam, inhaled isoetharine, and IV methylprednisolone.

Her systolic blood pressure decreased to 70 mm Hg, but responded to 2 L of IV fluids. Her hyperthermia was managed with ice packs and moist towels. Jugular venous distention, rales, and decreasing urine output developed, all of which responded to 40 mg of IV furosemide, which produced a 1600-mL diuresis. Eight hours after presentation, she was hemodynamically stable and responsive, but required haloperidol and diazepam for agitation and tremor. She was extubated at 23 hours. Over the next two to four days, she was lethargic, anorexic, nauseated, dizzy, and tachycardiac and had visual hallucinations. She developed a nonpruritic, herpes-like rash on the right side of her mouth, which progressed to a vesicular, crusted, papular, acneiform rash on her head, mucosa, and upper torso. Laboratory data evidenced further complications, including rhabdomyolysis, coagulopathy, thrombocytopenia, delayed leukocytosis, and toxic hepatitis (see Table).

Serum, urine, gastric aspirate, and a sample of the ingested powder were assayed for MDMA by thin-layer chromatography, ultraviolet spectrophotometry, infrared spectrometry, flame ionization, and capillary nitrogen phosphorus gas chromatography (three different columns). The powder was more than 99% pure MDMA. Standards were prepared from laboratory stock and powder. Toxicological screening revealed no other substances. An enzyme immunoassay for amphetamine cross-reacted with MDMA (25 mg/L MDMA = 0.3 mg/L amphetamine).

Comment.—Dowling et al[1] reported five deaths in young people related to use of MDMA or MDEA. One patient (Case 4) seemed to have died directly from MDMA (ventricular fibrillation), while the other four deaths were the result of trauma or underlying disease exacerbated by the use of MDMA or MDEA. Our patient developed severe complications consistent with amphetamine overdose[2] or possibly an idiosyncratic reaction, an allergic reaction, or malignant hyperthermia. We agree with Dowling et al that ingestion of MDMA may result in life-threatening events or exacerbation of coronary artery disease, asthma, or underlying cardiomyopathy.

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Laboratory stock and powder for MDMA testing were provided by A. Shulgin, MD.

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2. Cressberg MD, Herrmann M, Schmidt-Nowara WW. Amphetamine interactions with coagulopathy, hyperthermia and reversible renal failure. *Ann Intern Med* 1976;7:81-85.

Hematologic Data on Healthy Very Old People

To the Editor.—Zauber and Zauber[1] conclude from their investigation of old, apparently healthy people that hematologic data are essentially unaffected by age. However, the population studied was small, several inclusion criteria seem somewhat vague, and significant differences were seen between old and young men, mainly in regard to hemoglobin-dependent variables. There thus seems to be a contradiction between their data and their conclusion.

Study.—In an epidemiologic study,[2] we recently tested a random sample of the population (n = 4022). Using strict criteria (no signs of chronic disease, no smoking; no medications; blood pressure <160/95 mm Hg; cholesterol level <6.70 mmol/L [260 mg/dL]; urea level <400 mmol/L [1120 mg/dL] in men and <340 mmol/L [962 mg/dL] in women; body mass index <30 kg/m^2; and a normal resting electrocardiogram), 567 persons were defined as healthy. Among other factors, we measured hemoglobin level and plasma viscosity. These data are shown in the Table. Hemoglobin level was sex dependent but not age dependent. Plasma viscosity was independent of either variable. Although we were not able to study very old individuals, these data support the conclusions of Zauber and Zauber.

Comment.—In our experience, most "normal" values depend critically on the definition of the population studied. If