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Acquired immunodeficiency syndrome in forensic autopsies

Morgue of the city of São Paulo - "Instituto Médico Legal"

From May 1985 to May 1989, 126 necropsies were performed at the São Paulo City Morgue on cadavers of individuals AIDS victims whose unnatural deaths had prompted police investigations. One hundred and nineteen males and 17 females were included. Ages were most commonly in the 20-to-30 year range. Fifty four deaths occurred in penal institutions, 29 deaths resulted from suicides, 17 deaths from manslaughter, 17 deaths were considered suspicious, 5 willful murders and 4 others also considered suspicious because corpses were found in advanced stages of putrefaction.

Inmates, except one man who was strangled, died as a consequence of the disease. During all autopsies, special attention was paid to the high rate of extrapulmonary Mycobacterial infections. Suicides were committed in different ways and the majority of the victims were documented to be still in the initial stages of the disease. Suspicious deaths and deteriorated corpses were the result of negligence of the subject's families. Homicidal deaths occurred in subjects in the terminal stages of the disease inside the hospital where these subjects were assisted and the immunodeficiency certainly contributed to aggravate the injuries leading to death. Attention is drawn to both legal and social issues affecting AIDS victims. The authors believe these issues may pose a hindrance for efficient control of the AIDS epidemic.

INTRODUCTION

Autopsy studies of subjects with Acquired Immunodeficiency Syndrome has brought light a myriad of legal-medical features of this syndrome. Beginning in May 1985 when the first cadaver bearing the HIV virus arrived at the São Paulo city morgue and during the following four years, autopsy studies were performed on individuals suspected of having AIDS and whose deaths had entailed police investigations.

All deaths were analyzed from a pathological point of view, as well as from a legal point of view, and it was possible to collect a large body of information about these deaths.

A review of the legal aspects liable to affect victims of AIDS is put in relief, in the belief it might become

useful to all health care, social and legal professionals interested in the adequate assessment of these cases.

METHODS

From May 1985 through May 1989 all corpses brought to the Morgue of the City of São Paulo with a suspicion of AIDS were submitted to an in-depth analysis concerning the diagnosis of AIDS, as well as the proper legal aspects that normally regulate the performance of forensic autopsies.

AIDS diagnosis criteria employed in this study were in accordance with both the criteria set by the Atlanta Center for Disease Control (5, 7) and by the Health Ministry according to its Epidemiological Bulletin (11).

Blood samples from the left ventricle were collected and screened for antibodies anti-HIV (ELISA method). When bowel pathology was suspected, samples were sent for the Forensic Biology Laboratory for histopathological examination. Should any other samples or material of legal interest have required analysis (toxicological screen-

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ing, alcohol dosage, sperm scans) appropriate collection took place and they were forwarded to the laboratory. Subsequently, after autopsy termination, the corpses were delivered to the family members.

Upon the completion of all tests, a final reported was produced and one copy was remitted to the requesting police official and a second copy was filed.

During the autopsies, protection measures for the staff were enforced. They were supplied with masks, gloves, glasses and aprons as well as complete information about the syndrome's transmission mechanisms. It was repeatedly stated to the morgue's personnel that the risk of occupational contagion would be minimal if all the established norms were fully respected (17).

A retrospective analysis of all autopsies performed in the four years of observation was completed. All subjects who did not qualify the diagnostic criteria were excluded.

Doubts emerged regarding the corpses in putrefaction due to the detriment of the morphological and laboratory analysis caused by putrefaction. Nonetheless, despite the advanced stage of putrefaction of these corpses, immunoglobulin serology testing for HIV was possible (4).

No systematic analysis of the risk group epidemiology of the subjects included in this study were under-

taken because of the lack of reliable data produced by the victim's family members. However, the information contained in the written telex request for the autopsies were duly taken into consideration for the diagnosis. On that basis, it was concluded that 126 cases could be included in this study.

The next step was to inspect the files of the of São Paulo City Morgue of in search of the statistics on all autopsies performed in those years (33). The Epidemiological Bulletin of the São Paulo State Health (32) Department was also surveyed to locate subjects who died from AIDS during the same time frame.

RESULTS

1. Demographics

One hundred and twenty six corpses were autopsied, 119 males and 7 females producing a male/female ratio of 17/1.

Age distribution peaked between 20 to 30 years of age (40%), followed by 30 to 40 years of age (26%), and from 40 to 50% (18%). The youngest subject was a 3 month-old infant born to a inmate and the oldest a 71 year-old man found in putrefaction (Figure 1).

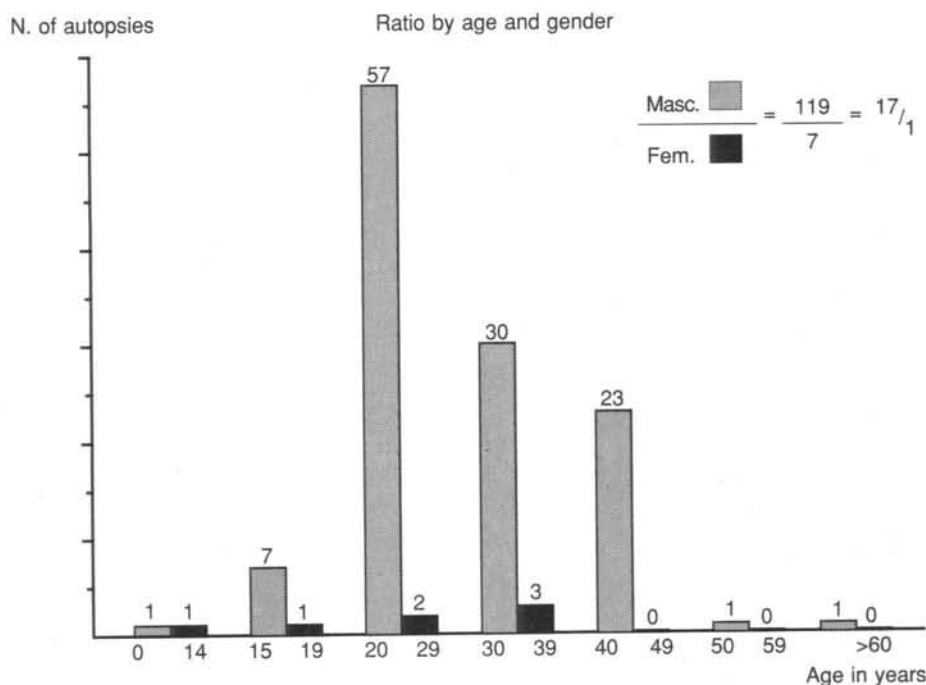


Figure 1 – Morgue of the city of São Paulo
Autopsies of subjects with the Human Immune Deficiency virus performed from May 1985 through May 1989.

2. Legal Causa Mortis and main pathologies found:

a) Deaths occurred in Penal Institutions

A total of 54 cases were classified in this group which corresponds to 42% of all cases (figure 2).

All deaths were the result of the natural progression of the disease with the exception of one inmate who was strangled in prison.

The majority of the deaths occurred in the penal institution infirmary at the time a presumptive diagnosis of AIDS had already been formulated. Yet, some of the inmates in custody in local police stations were transferred to a local public hospital due to deterioration of their clinical condition and death took place before a final diagnosis could be reached.

Autopsy studies of these subjects frequently disclosed the presence of disseminated Mycobacterial diseases. Disseminated granulomatous infiltration was recorded more remarkably in the abdominal organs. Spleen, liver, lymph nodes and peritoneal serosa were invariably involved (figure 3).

b. Suicides

A total of 29 cases were classified in this group which corresponds to 23% of all cases (figure 2).

The suicides were committed in many different ways: hanging; gunshot wounds, headlong falls, drug overdose, self-inflicted burns.

The majority of the cases of suicide victims disclosed signs of the disease in the initial stages. Additionally, positive serologic reaction for HIV and enlarged liver, spleen and cervical adenopathy were recorded. Histopathological analyzes produced lymphoid depletion and other peculiar changes usually found in AIDS.

Subjects who committed suicide during an in-hospital stay (headlong falls, self-injury with a blunt weapon) were an exception. They were in the final stages of the disease and the trauma did not significantly contribute to cause death. For instance, a patient injured himself with a pair of scissors producing only superficial wounds reaching the epidermis only. Nonetheless death occurred.

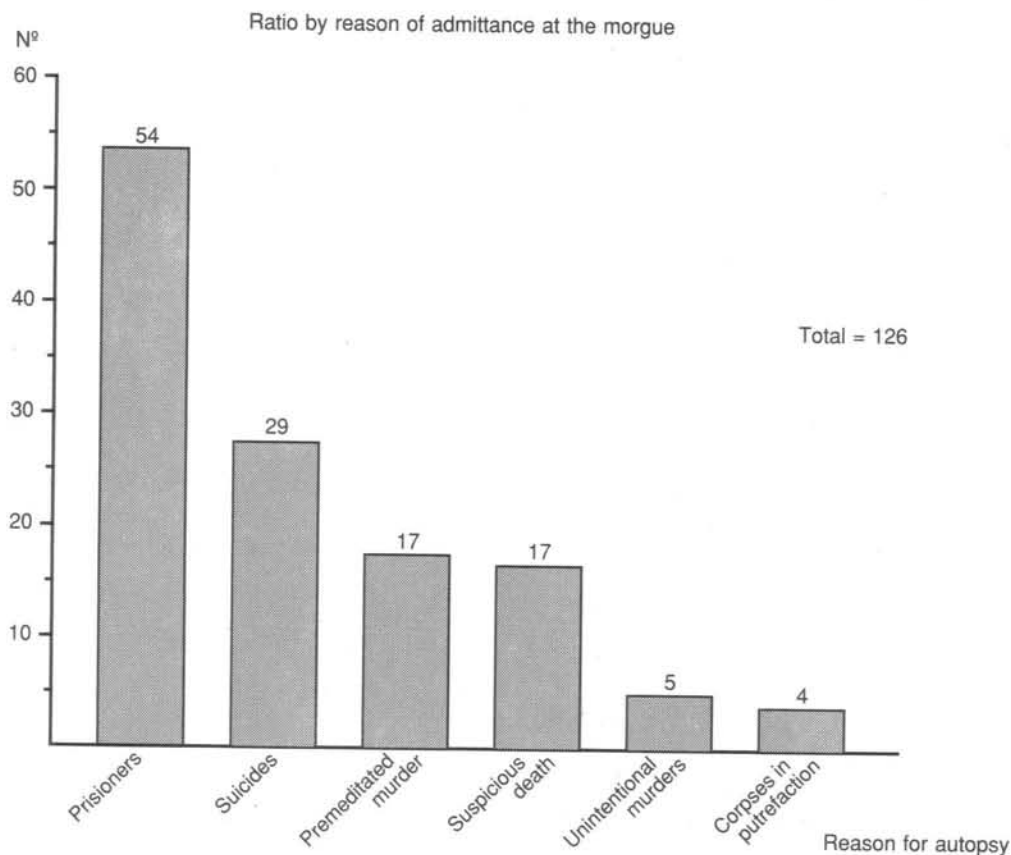


Figure 2 – São Paulo City Morgue.

Autopsies of subjects with the Human Immune Deficiency virus performed from May 1985 through May 1989.

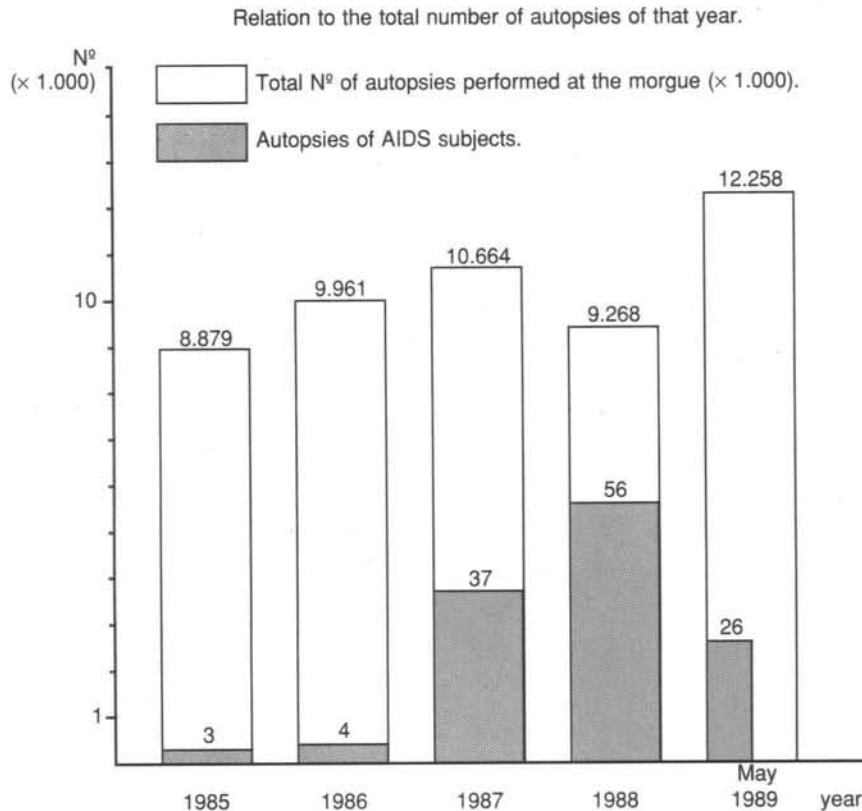


Figure 3 – São Paulo City Morgue. Autopsies of subjects with the Human Immune Deficiency virus performed from May 1985 through May 1989.

c. Premeditated Homicides

A total of 17 cases were classified in this group which corresponds to 13.5% of all cases.

Premeditated deaths resulted either from firearms wounds or blunt weapon injuries and in most cases death did not occurred immediately. Victims were taken to local hospitals and died days later from septic complications. Autopsy studies disclosed widespread suppurative process associated to opportunistic infections commonly seen in AIDS patients, such as monoliasis, herpes and Pneumocysti (6).

d. Suspicious deaths

A suspicious death was considered when the logical and/or chronological sequence of events is disrupted or a death taking place under unusual circumstances.

A total of 17 cases were classified in this group which corresponds to 13.5% of all cases (figure 2).

All subjects died from the disease's natural progression. Autopsy studies were made necessary because the

subjects were not under any medical care and because death was unexpected.

A rather elucidative autopsy case was the case of a 26-year-old fashion designer who was found dead in his beach house. Neither were his family members and friends conscious of any health problems nor were they cognizant of any medical treatment. The autopsy study revealed an advanced stage of abdominal tuberculosis involving the liver, spleen, kidneys, intestines and lymph nodes.

e. Unintentional Murders

A total of 5 cases were classified in this group which corresponds to 3.8% of all cases (figure 2).

Death resulted in all five cases from traffic accidents such as running over, car crashes. AIDS was documented to be in its initial phase and in most cases, family members were aware of the victim's medical diagnosis.

In certain cases, the possibility of a suicide was not ruled out. The authors were not informed about the conclusions of the police investigation. On the basis of the extent of the wounds produced by the accident and the

circumstances surrounding the occurrence of those accidents, the possibility of suicide could not be ruled out on a definite basis.

f. Putrefied corpses

A total of 4 cases were classified in this group which corresponds to 3.8% of all cases.

The discovery of putrefied body warrants a police investigation. All cases included herein died from natural causes, as expected, from the progression of the disease. The four subjects were former patients who chose seclusion, most likely because of the strong discrimination they were suffering. All bodies were found because of the intense foul smell produced by putrefaction gases.

3. Relation between the remaining deaths caused by AIDS and the remaining forensic autopsies.

Between May 1985 to May 1989, a total of 31.606 autopsies were performed at the São Paulo City Morgue. Out of that total, 126 autopsies were performed on AIDS victims. A stepwise year-to-year increase in the number of subjects with AIDS was recorded. This is possibly related to the national and worldwide AIDS epidemics behavior (24).

The total number of deaths due to AIDS in the same time period in the State of São Paulo amounted to 4,163. Out of that number, only 126 corpses were autopsied, thus performing 3%.

DISCUSSION

Any violent death either obvious or suspicious has to be investigated by means of a forensic autopsy.

The high rate of inmates with AIDS and other variables such as grounds for suicides and their relationship to subjects at risk of violence are strong reasons to require an autopsy.

The medical literature points out that relevant ethical and legal features encompass subjects with AIDS (2,3,13,15,23,37) and as presented in the study herein, the legal issues might last until death.

The severity of the spread of AIDS among inmates is a source of deep concern in different countries where AIDS has reached an epidemic proportion. Likewise, in Brazil, the spread of AIDS among inmates is reaching alarming proportions possibly because of the precarious conditions encountered in our penal institutions.

Moreover, spread of tuberculosis in HIV positive inmates, a frequent finding in autopsies, it is not an exclu-

sive Brazilian phenomenon. In the US where tuberculosis is steadily decreasing, its relationship to AIDS and the high incidence of this association among inmates has led that country's health authorities to sponsor strong prevention campaigns (10, 31, 34).

Psychiatrists have extensively analyzed the determining factors of the higher risk of suicide in HIV positive subjects (12,19,26). Suicidal tendency is not related to the presence of encephalopathy or psychosis. Both usually develop later in the course of the syndrome (17,28). The information supplied by the families of the victims of suicide verified that all nine subjects were in their full minds at the time of death.

The relationship of AIDS and homicides might well be explained by the relationship with substance abuse and sexual deviations as both are closely linked to criminality.

A more recent survey from the São Paulo City Morgue (21) revealed that 8% of all cadavers taken for autopsy because of murder exhibited positive serology for antibody anti-HIV.

Social rejection of a person with AIDS which might lead to death by abandonment which is both a matter of concern and a reality. Education of family members and continued information about the transmission mechanisms of the syndrome should be a routine of the health authorities as a way of avoiding discrimination.

The AIDS epidemics, according to what has been reported, is unquestionably based on social factors and that is the reason its control is so complex and difficult (2,10,13,24,15).

The aforementioned explanations are intended to bring forward such features and to prepare the grounds for a multi-professional discussion on AIDS in the endeavor to find better orienting guidelines for its prevention policies.

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RESUMO

No Instituto Médico Legal de São Paulo, de maio de 1985 a maio de 1989, foram realizadas 126 necrópsias de indivíduos portadores de AIDS cujo óbito foi motivo de investigações policiais.

119 eram do sexo masculino e 17 do sexo feminino e o pico de incidência etária foi dos 20 aos 30 anos.

Foram observadas 54 mortes em estabelecimentos penais, 29 suicídios, 17 homicídios dolosos, 17 mortes suspeitas, 5 homicídios culposos e 4 corpos em putrefação.

Os presidiários, à exceção de um que foi estrangulado, faleceram do curso natural da doença. Chamou atenção nas perícias a alta incidência de micobacteriose extra pulmonar.

Os suicídios se procederam das mais diferentes formas e as vítimas, em sua maioria, apresentavam o quadro inicial da doença.

As mortes suspeitas e os corpos encontrados em deterioração resultaram do abandono dos pacientes pelos familiares.

Nos homicídios, a morte quase sempre ocorreu tardiamente nos hospitais e a doença contribuiu certamente para o agravamento das lesões.

Os autores chamam atenção sobre os problemas jurídicos e sociais que envolvem as vítimas da AIDS e realçam esses últimos como um obstáculo a um controle efetivo da epidemia.