

**Epidemiological Considerations On Hiv In Constanța County Contribution to the epidemiological characterization of the retrospective cohort (1987 – 1993) from Constanta**

Research Article

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**Abstract**

The chosen theme is relevant to show the progress in addressing public health services currently in Romania, especially with the care of the patient HIV- AIDS in the HIV- AIDS Regional Centre from Constanta.

We proposed ourself to organize the existing case law in a database, which represents a prerequisite for further steps to elucidate the epidemiological process.

We reviewed the factors that favored the dissemination of infection, unable to specify who the sources were.

The main objective of this paper is to formulate epidemiological considerations of HIV - AIDS in Constanta County, by describing the epidemiological characteristics of HIV - AIDS from Constanta county, retrospective HIV- AIDS epidemiological model locally.

The originality of the study: a descriptive presentation from the registers and studied observation sheets was transformed into a database, which was presented in the study.

Constanta has come to represent a model for surveillance and monitoring of HIV nationally and internationally, many of the models of care, programs, were expanding to other counties and countries.

The chosen theme is important, addresses theoretical and methodological issues in HIV AIDS areas of disaster risk science: emergency response technology and risk management; local risk governance policies and regulations.

**Keywords:** HIV-AIDS; Epidemiological Considerations, Anatomy – Pathological Exam, Hiv-Aids Regional Center Constanta.

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**Introduction**

The global AIDS epidemic is one of the greatest challenges facing our generation. AIDS is a new type of global emergency-an unprecedented threat to human development requiring sustained action and commitment over the long time. [2004 Report on the

global AIDS epidemic, Preface, Kofi A. Annan, [http://data.un-aids.org/Global-Reports/Bangkok-2004/Unaidsbangkokpress/gar2004.html/GAR2004\\_01\\_en.htm#TopOfPage](http://data.un-aids.org/Global-Reports/Bangkok-2004/Unaidsbangkokpress/gar2004.html/GAR2004_01_en.htm#TopOfPage)]

In many parts of the world, HIV/AIDS is still seen as a death sentence, a disease from which there is no recovery. But with the ever improving availability of antiretroviral therapy, HIV is increasingly recognized as a chronic rather than terminal illness. This transition requires special adjustments especially in the pediatric and adolescent populations. [HIV Curriculum for the Health Professional, Kristin L. Close, Andrea K. Rigamonti, Psychosocial Aspects of HIV/AIDS: Children & Adolescents, p.296, [http://aidsdatahub.org/dmdocuments/Psychosocial\\_Aspects\\_of\\_HI-VAIDS\\_Children\\_&\\_Adolescents.pdf.pdf](http://aidsdatahub.org/dmdocuments/Psychosocial_Aspects_of_HI-VAIDS_Children_&_Adolescents.pdf.pdf)]

The epidemiological trend of evolution of HIV-AIDS is a topic of great interest to the scientific community today.

The discovery impact of HIV cases in 1990, with an explosive increase in the number of HIV confirmed cases, without being able to deepen the epidemiologically phenomenon and the lack of accurate explanations on the emergence, development and subsequent evolution of the epidemiological phenomenon caused were determinants on the choosing of the theme.

We proposed to organize the existing case registrations in a database that represents a prerequisite for further steps to elucidate the epidemiological process.

We monitored the factors that favored the dissemination of infection, unable to specify who the sources were.

The chosen theme is relevant to show the progress in addressing public health services currently in Romania, especially with the care of the patient HIV- AIDS in the HIV- AIDS Regional Centre from Constanta.

### Motivation

Lack of available epidemiological studies and circulation of unverified and unsubstantiated scientific information contributed to the uncertainty regarding the onset, causes and HIV AIDS epidemiological development in Romania.

We made an analysis of the course of HIV infection in Constanta for the period 1987-2013. The patients were investigated through epidemiological surveys, clinical examinations, and laboratory and immunological. For statistical analysis we used Microsoft Excel.

This paper aims to formulate bioethical and epidemiological considerations on the evolution of HIV infection based on a retrospective and prospective epidemiological analysis of determined groups of patients from Constanta.

The cohort of children born in the period 1987-1989, which was individualized in Constanta, can be characterized retrospectively from epidemiologically and clinically, in a period (1987-1993). Since in the period under review there were no specific therapeutic means (antiretroviral therapy), results will highlight the natural history of HIV - AIDS in the study area ( Dobrogea ).

### Objective

#### Main Objective

Epidemiological considerations on HIV infection in Constanta County, during 1987-1993.

#### Secondary Objectives

1. Description of the epidemiology of HIV-AIDS from Constanta County during 1987-1993.
2. The local retrospective epidemiological model (1987-1993).

### Materials and Methods

Processing the existing database, records of the consultations, surveys on assessing health status, pathological, laboratory data, clinical observation on multicriterial sheets, the register of deaths and pathological examinations.

In Constanta we have the cohort of children born in the period 1987-1989, as part of the national cohort, the largest in Europe at the moment of 1990.

In this study we have a complex epidemiological investigation of cohort during 1987-1993, an opportunity to study the natural history of a disease, by characterizing the newly identified population at risk of acquiring the disease, from the first moment to the moment of first initiation on therapeutic means.

A database, recorded during 1987-1993, was analyzed. Were first studied 1728 HIV- AIDS cases detected in Constanta.

The vast majority of the population in cohort comes from public care and pediatric wards, dystrophic, premature, infant surgery of Constanta County Hospital.

Organization and data collection was performed, through analysis in terms of ordering data, correlation, and validation: descriptive analysis of the elements which determine the distribution of cases. We have identified characteristics from [1]:

1. Time - tendency , variation , the distribution of the disease by the time variable ( changing age structure over time)
2. Place - geographic (latitude, longitude - Black Sea port, airport, tourist city, ways of introducing in the country: people on the move, traveling. We made the evaluation of HIV - AIDS on geographical level emphasizing geographical distribution, population at risk, prioritizing risk factors, for geographical comparisons we used cartograms), geological, industrial ( petrochemical-Midia Năvodari), agriculture (IAS, CAP), climatic, geopolitical conditions, prior to 1989, blood products, pollution status, place of work (childcare institutions, sex workers, accidental exposure)
3. Are evaluated the determinants of public health problems, are shown to define the characteristics of the affected population, the risk population - variable 'person' (belonging to a group of high - risk, the health providers, travelers, isolated populations, who might - by changing life behavior - to be at risk of infection. Aspects of demography - biological epidemiological indicators like gender / sex [ M, F ], age [age group, adult - children], ethnicity, race, area of origin [U , R], village of origin, place of residence, behaviors [donor blood, MSM, heterosexual, IDU, sex workers], profession, occupation, life style, socio-economic level, and other information - migration, tourism) [1].

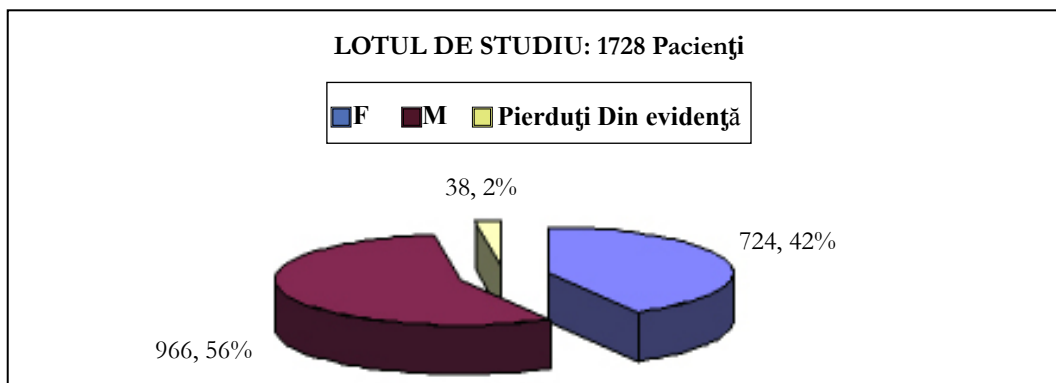
We proposed to observe, to describe cumulative, the explanation of the phenomenon, to monitor, to control (preventive measures, and curative - ARV) and to formulate the considerations based epidemiological verified. We conducted descriptive analysis for categorical data (frequency, percentage) and quantitative (average - homogeneous nature of the cohort, i.e.: median, range, standard deviation, heterogeneous character of the lot). Collection of raw data was ordered and grouped in tables and charts, on chronological criterion. I used tables for their economic character, the most simple and effective explanation of the evidence, because we wanted to present a large number of data. Herds were expressed in distributions, frequency distributions

We established one group of patients:

1. Registered in the period 1987-1993, which is mainly cohort of children infected through nosocomial transmission - included in retrospective study.

Results

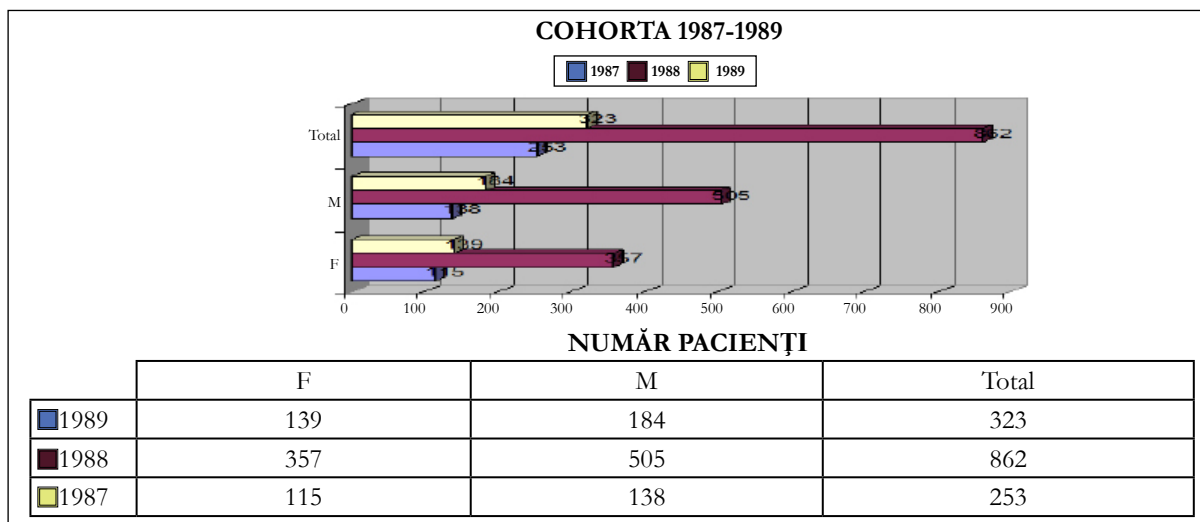
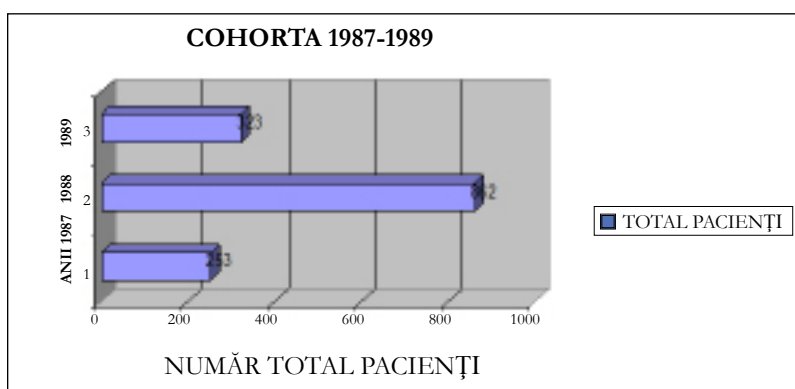
Figure 1. Study group. Groups of patients.



Cohort 1987 - 1989 is 83.218% of the study group.

Figure 2. Cohort 1987-1989.

# COHORTA 1987 - 1989



HIV-AIDS DEATHS RECORDED IN COUNTY steadily between 1987 - 1993

Table 1. HIV – SIDA Deaths Period 1990 – 1993.

Year of the death	Number of Deaths
1990	128
1991	86
1992	59
1993	58
TOTAL	331

Figure 3. HIV SIDA Deaths recorded in Constanța County - period 1990 – 1993.

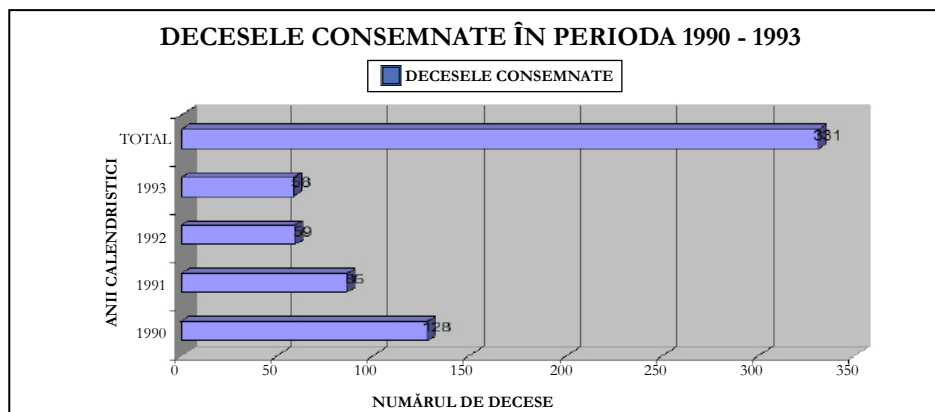


Figure 4 . Pathological examinations recorded in the period 1987 - 1993, distributed by gender and calendar months of recording the death.

**Distribuția examenelor anatomopatologice funcție De genși lini calendaristice ale anului consemării decesului Perioada 1987 - 1993**

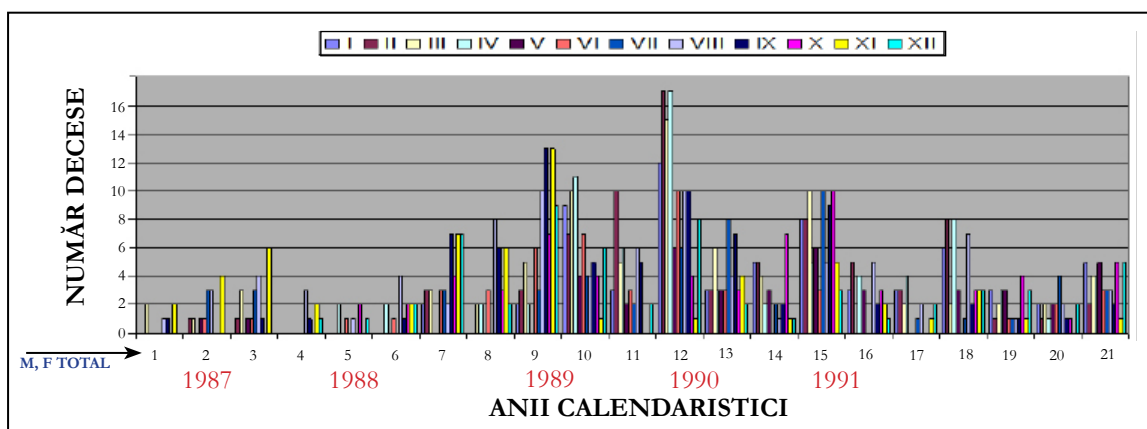


Table 2. Distribution of pathological examinations during 1987 - 1993, stratified according to calendar months of the year recording the death and sex. Register anatomy-pathological, from 1987 -1993.

Year	Gen	Calendar Months											
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1987	M = 6	0	0	2	0	0	0	0	1	1	0	2	0
	F = 14	0	1	1	0	1	1	3	3	0	0	4	0
	<b>Total 20</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>0</b>
1988	M = 7	0	0	0	0	0	0	0	3	1	0	2	1
	F = 7	0	0	0	2	0	1	0	1	0	2	0	1
	<b>Total 14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>
1989	M = 41	2	3	3	0	0	3	3	2	7	4	7	7
	F = 32	0	0	2	2	0	3	0	8	6	3	6	2
	<b>Total 73</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>10</b>	<b>13</b>	<b>7</b>	<b>13</b>	<b>9</b>
1990	M = 72	9	7	10	11	4	7	4	4	5	4	1	6
	F = 44	3	10	5	6	2	3	2	6	5	0	0	2
	<b>Total 116</b>	<b>12</b>	<b>17</b>	<b>15</b>	<b>17</b>	<b>6</b>	<b>10</b>	<b>6</b>	<b>10</b>	<b>10</b>	<b>4</b>	<b>1</b>	<b>8</b>
1991	M = 49	3	3	6	3	3	3	8	4	7	3	4	2
	F = 33	5	5	4	2	3	0	2	1	2	7	1	1
	<b>Total 82</b>	<b>8</b>	<b>8</b>	<b>10</b>	<b>5</b>	<b>6</b>	<b>3</b>	<b>10</b>	<b>5</b>	<b>9</b>	<b>10</b>	<b>5</b>	<b>3</b>
1992	M = 28	3	5	0	4	3	0	0	5	2	3	2	1
	F = 18	3	3	2	4	0	0	1	2	0	0	1	2
	<b>Total 46</b>	<b>6</b>	<b>8</b>	<b>2</b>	<b>8</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>
1993	M = 24	3	1	2	3	3	1	1	1	1	4	1	3
	F = 20	2	1	2	1	2	2	4	2	1	1	0	2
	<b>Total 44</b>	<b>5</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>5</b>

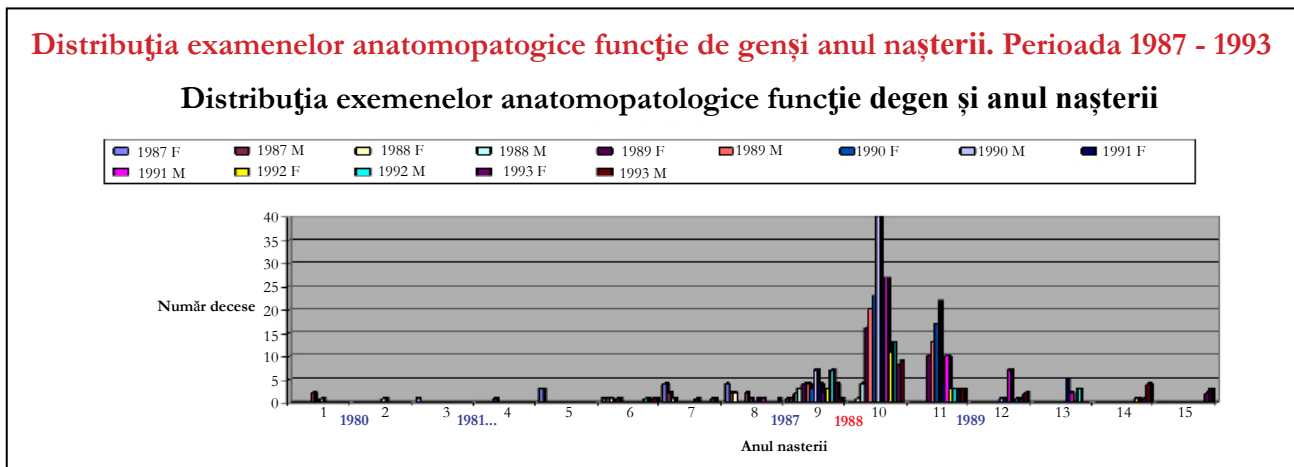
There is a large number of deaths in children. The curve of the mortality becomes upward in August 1989, a peak in April 1990, is constant during the year 1990, on reduced slow start in

1991, for 1992 and 1993. Initial died especially children born in 1987, 1988, and 1989. The more children die after 2-3 days of hospitalization

**Table 3. Distribution of pathological tests, stratified by gender and year of birth. The period from 1987 to 1993.**

Year of born	Distribution of pathological examinations by gender													
	1987		1988		1989		1990		1991		1992		1993	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
?	0	0	0	0	0	2	0	1	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	1	0	0	0	0	0	0
1981	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1982	0	0	0	0	1	0	0	0	0	0	0	0	0	0
1983	3	0	0	0	0	0	0	0	0	0	0	0	0	0
1984	1	1	1	0	1	0	0	0	0	0	0	1	0	1
1985	4	2	1	0	0	0	0	0	1	0	0	0	1	0
1986	4	2	2	0	0	2	1	0	1	1	0	0	0	1
1987	1	1	2	3	4	4	3	7	4	2	3	7	4	1
1988	0	0	1	4	16	20	23	40	17	27	11	13	8	9
1989	0	0	0	0	10	13	17	22	4	10	3	3	3	3
1990	0	0	0	0	0	0	0	1	1	7	0	1	1	2
1991	0	0	0	0	0	0	0	0	5	2	0	3	0	0
1992	0	0	0	0	0	0	0	0	0	0	1	0	1	4
1993	0	0	0	0	0	0	0	0	0	0	0	0	2	3
<b>Total</b>	<b>14</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>32</b>	<b>41</b>	<b>44</b>	<b>72</b>	<b>33</b>	<b>49</b>	<b>18</b>	<b>28</b>	<b>20</b>	<b>24</b>

**Figure 5. Pathological examinations recorded in the period 1987 - 1993, distributed by gender and year of birth.**



The lack of results from previous biopsies performed does not allow correlation with pathological data. And biopsies were subject to the same factors of variability - interobserver variation, invasive methods, percentage of complications, increased overall cost.

Main diagnoses in children deceased are bronchopneumonia, adeno-hepato-spleno-megalic syndrome, weakness stature (HSP), HIV-AIDS confirmed infection, atresie (1990), hypo chronic anemia, dystrophy, pulmonary TB.

**Discussion**

1987-1989 cohort frequent pathology was: herpes zoster (N = 477, 27.604%) debuted in young children, before making chicken-pox, cirrhosis in children, HAV without AgHBs, HAV B and delta, HAV transfusion NANB , severe pneumococcal infection, on the

fund atresie (N = 74, 4.282%), dystrophy (N = 174, 10.069%), MPC (N = 24, 1.389%), severe weakness syndrome (N = 148, 8565 %). Registered number of AgHBs carriers (N = 95, 5.498%) is high in young people from 1987 to 1989 cohort, had the same route of transmission, were infected once. The germs involved in infections: Staphylococcus, Streptococcus, Salmonella, Shigella Flexner, Sonnei, meningococcus, pneumococcus, piocianicul, Proteus, Klebsiella, E. coli, mycobacteria.

The severe evolution has led to:

**Conclusions**

1. During 1987 to 1990 there was an uninformed population on HIV- AIDS phenomenon, which later will become familiar with the existence of infection, transmission patterns and healthcare opportunities (after 1990).

Table 4 . Distribution of pathological tests stratified by gender, year of recording the death and histopathologic exam. The period from 1987 to 1993.

Pathologic Diagnosis	Distribution of pathological examinations by gender													
	1987		1988		1989		1990		1991		1992		1993	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Bronchopneumonia	4	-	1	4	15	16	14	23	28	40	8	21	16	14
Acute interstitial myocarditis. (1989 - hemorrhagic F: M = 5:3) Miocardosis	-	-	1	4	8	4	6	10	16	13	7	14	2	3
Hepatonefrosis	-	-	-	1	7	8	3	5	12	16	2	5	2	3
Spleen Infarction	-	-	1	-	-	-	3	5	8	6	1	5	3	4
Mesenteric Lymphadenopathy	-	-	1	-	4	4	6	7	13	23	4	6	8	7
Generalized poliadenopat	-	-	-	-	1	5	5	16	-	-	3	9	5	6
EA catarrhal colitis, purulent	1	1	-	4	5	8	5	4	5	12	1	5	4	4
ulcero-hemoragic														
Muddy Spleen	-	-	-	-	4	4	-	-	2	4	-	-	2	2
Septic Spleen	-	-	-	-	4	4	-	-	-	-	-	-	1	-
Pulmonary infarction	3	-	3	-	3	3	1	3	5	10	-	8	3	4
Splenic infarction	-	-	-	-	3	4	-	-	-	-	-	-	-	-
Adenohepatosplenomegalie	1	-	3	2	-	-	11	22	21	38	11	18	12	19
HSP	1	1	-	-	-	-	-	-	20	28	-	-	12	11
Fatty liver dystrophy	2	-	-	-	-	-	-	-	5	9	1	2	-	1
Yellow liver dystrophy	2	-	1	2	14	13	2	7	-	-	1	-	-	-
Follicular Spleen	1	-	-	3	4	4	-	2	6	10	4	8	1	7
Atrepsy	-	-	2	1	-	-	-	-	4	4	1	2	-	-
Eutrophic	-	-	-	2	-	2	-	1	-	-	-	-	-	-
Hepatorenal degenerative dystrophic parenchymal lesions, miocardospleenic	-	-	3	2	6	5	4	6	12	15	7	14	9	12
Adrenal hemorrhagic necrosis - acute necrotic hemorrhagic adrenal	-	-	-	-	1	-	-	-	2	1	-	1	1	1
Thrombocytopenic purpura generalized	-	-	-	-	-	-	-	-	3	1	-	1	1	-
Generalized rash (1989, 1992, 1993)	-	-	-	-	-	2	-	-	3	3	1	1	2	3
Scleroemfizem lung	1	-	-	-	1	5	-	-	3	9	4	12	5	6
Visceral Anemia	-	-	1	-	2	2	-	1	4	9	4	2	4	3
Dystrophy degree II – III	-	-	1	2	6	5	-	-	2	2	1	1	-	-
Hypertrophic chronic hepatitis steatosis. Hepatosplenomegaly.	3	-	1	1	14	19	-	-	4	3	3	15	9	13
Superior Digestive Hemorrhage	1	-	1	1	3	11	-	1	-	-	9	18	-	3
Serofibrinosis pleurisy	1	1	-	-	-	-	1	6	1	6	4	4	5	6
TB meningoencephalitis, softening of the brain, cerebellum	-	-	-	-	-	-	-	-	4	2	1	1	-	-
Fibrinopurulent meningitis, edema and hyperemia meningocerebrala	-	-	-	-	-	-	-	-	-	-	11	15	6	6
Hemorrhagic meningoencephalitis	-	-	-	-	4	3	-	1	-	-	-	-	1	2
Cerebral necrosis - acute necrotizing encephalitis, edematous	-	-	-	-	-	-	-	2	-	-	-	-	6	8
Meningoencephalitis - inflammatory leukocyte infiltration, hyperemia, necrosis	5	-	1	1	3	3	1	1	8	8	-	-	-	-
Seborrheic Dermatitis (1989 - pyoderma)	-	-	-	-	-	1	-	-	1	1	-	-	-	-
Internal hydrocephalus	-	-	-	-	6	2	1	1	6	9	5	11	8	5
Bilateral suppurative otitis media, pus in the antrum, Proteus and Pseudomonas secretory otitis	-	-	-	-	-	3	1	1	-	1	-	-	-	2
Pneumocystosis	-	1	-	-	-	2	1	-	1	2	-	-	-	1
Acute cerebral edema	-	2	-	4	8	6	-	-	8	9	-	-	7	9
Ulcerative pulmonary TB (1993-nodular become infected)	-	-	-	-	-	-	-	-	2	3	2	2	1	2



In terms of statistical analysis, Bravais Pearson coefficient shows a good prediction.

**Table 5. Coefficients statistiques: Bravais Pearson.**

FIRST STUDY Factors analyzed Period 1987 - 1989	r	p	CI	rF	Interpretation
The number of births with the year of birth (cohort 1987-1989) and distribution of total pathological examinations during 1987-1993, according to the corresponding year of birth (1987, 1988 and 1989)	r=0,98302 n=2 (degree of freedom) The parametric coefficient of the correlation (Bravais Pearson) by the moment of the products (equivalent)	0.01	99% Confidence Inter- valle	rF =0,99144> r Reliability coef- ficient of the test, method split half	Correlation coefficient is very tight, strong, positive, and direct, those two factors vary simultaneously, and the “cloud of the points” is oriented to the right. Place bisector I is approximated almost 45 gr. in quadrant I

**Risk factors / disease**

Risk factors / disease	HIV +	HIV -	Total
FR +	1696	17	1713
FR -	32	8	40
Total	1728	25	1753

**OR = 99.76471 exposed, unexposed OR = 4, OR = 24.94118 > 1**

- Since at that time exist not etiological treatment, all patients in the studied group received comprehensive medical care, including improved care, which have been applied in both hospital and ambulatory, until death. The clinical course of this group represents a segment of the natural history of HIV - AIDS in Constanta County.
- The route of transmission, injections (parenteral, 84.549 %). The treatments were performed in pediatric wards (transfusions - Pediatrics I - N = 78, 4.514 % and Pediatrics II - N = 337, 19.502, accumulating a total of N = 415, 24.016 %), and the parenteral treatments in other sections (dystrophic, premature baby, swings).
- The discharge diagnoses for children were: atrepsy (N = 74, 4.282 %), dystrophy (N = 174, 10.069 %), MPC (N = 24, 1.389 %), severe weakness syndrome (N = 148, 8565 %). Co- infections HIV-HVB/HVC is explained by simultaneous transmission (same route of transmission).
- Orphan patients came from wards dystrophic and premature, mostly being institutionalized or abandoned children.
- The epidemic was characterized as follows: rural type ( N = 635, 36.748 %), which , together with the percentage of the institutionalized children ( 14.12 %), forming about 51 % ( 50.868 %), the rest being found in urban ( 49.132 %). After 1989, rural- urban social mobility is an explanation of urbanization trend, which persists in 1990, 1991 and 1992, with a better detection of infection in city.
- In the studied cohort, pediatric population prevails, within it a number of N = 21, 1,215 %, from multiple pregnancies (twins, trigemelare).
- The determinant virus is “wild”, new in circulation, with no immunity in the population.
- There was an epidemic, due to the number of cases diagnosed within a very short time.
- The evolution of the epidemic had imposed unprecedented organizational measures of health services, to ensure optimal

- support of a large number of cases (creation of additional space for pediatric population near Constanta Municipal Hospital, where they were brought all HIV-positive children from orphanage, to ensure their uniform assistance).
- The diagnosis of the cases in this period was mainly clinical and initially reduced only to HIV testing by ELISA, then gradually was expanded the scope of biological investigation, trying to standardize them.
- Was an initial high mortality, which best defines the “pattern “of development of infection in the study group (rapid and profound impairment of the immune system with rapid deterioration and death).
- HIV can be a model for monitoring other chronic infections (oncology, hematology, hepatology).

**Initial characteristics in Constanta**

between 1988-1990 was AIDS diagnosed a group of children with severe malnutrition and weight loss syndrome, the existence of the group of children with encephalopathy, with difficult etiologic diagnosis: fetal distress at birth, HIV, other infections, evolving extremely particular, in the absence of specific antiviral therapy.

**Subsequent peculiarities in Constanta County**

HIV infection has spread with great intensity in Constanta. Constanta important epidemiological outbreak involved children with birth year in a period of three years (1987-1989), representing the cohort from 1987 to 1989 in Constanta County. There was a high initial mortality. Epidemiological data have shown that infection developed is "African type", rapid extension units' children under congestion, limit supply to sanitary materials and medical maneuvers deficient. We note the presence of several adults in lot.

## The limits of the study

The study was made only retrospectively, describing the evolution of disease under existing data in the database. The HIV database was created through a lengthy process and during the period studied there is lack of information, so that affected the complexity of analysis, it not obtained data extremely accurate, enabling very valid epidemiological considerations.

The study have their limitations, they could deepen epidemiological investigations in the light of modern molecular diagnostics, allowing generation of parentage cases, but have their own importance to this point in the investigation, paving the way for future research, that will elucidate correctly the epidemiological natural history of HIV infection in our country and will give the expected response of thousands of parents of deceased children.

The limitations of the study are in the fact that can not yet elucidate the overwhelming presence of the F subtype in Romania in general, "an island in a sea of B subtype", and specially in Constanta, that shows a possible infection through "single source" which contradicts the route of transmission by transfusion, which was presented by the existing epidemiological surveys, approved at this time. The epidemiogen potential of F1 strain is important, given the large number of cases and the epidemic character. The import infection remains undervalued, as demonstrated phylogenetic relationship between strains HIV1 subtype F1, isolated in Angola and Romania, presented by Paraschiv S, Oțelea D. - "HIV - 1subtypes and resistance in Romania" on 2 - 4 September 2010 at the International School" HIV Medicine 2010' edition - II, Constanta, Hotel Ibis, organized by Baylor College of Medicine, Texas Children's Hospital, University Ovidius University Carol Davila Bucharest, citing the study" Close phylogenetic relationship between Angolan and Romanian HIV-1 subtype F1 isolates", authors: Monick L Guimaraes, Ana Carolina P Vicente, Koko Otsuki, Rosa Ferreira, FC da Silva, Moises Francisco, Filomena Gomes da Silva, Ducelina Serrano, Mariza G Morgado, Gonzalo Bello.

Subsequent epidemiological studies may explain this particular distribution, demonstrating the need to develop in-depth epidemiological studies.

## Contributions

the originality of this study is to update the data base from early

period, with extremely valuable data, entirely untapped in terms of epidemiological analysis of the phenomenon. This paper brings original features that allow completion of some major research areas, important for understanding the epidemiological characteristics of HIV in Constanta.

## Originality

The originality of the study: a descriptive presentation from the registers and studied observation sheets were transformed into a database, which was presented in the study. The originality of this study is to update the incipient data base with extremely valuable data, unused entirely from the perspective of the epidemiological phenomenon.

These results generate special concern in future epidemiological studies in depth to give the actual size of the phenomenon of HIV - AIDS in Constanta, and in Romania.

The chosen theme is important, addresses theoretical and methodological issues in HIV AIDS areas of disaster risk science: emergency response technology and risk management; local risk governance policies and regulations.

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