

## EPIDEMIOLOGICAL ASPECTS OF HIV/AIDS IN IRAQ

\* Dr.Atheer Kadhim Al-Ibadi

\*\* Dr. Usama Abdel Jaleel

### الخلاصة:

أجريت هذه الدراسة في مركز بحوث و دراسات الايدز و المركز الاستشاري الطبي(ابن زهر) في بغداد للفترة من 1 حزيران 2004 و لغاية 1 حزيران 2005. وهي دراسة راجعة لسجلات المرضى , و تهدف إلى وصف أهم الصفات الوبائية لمرضى الايدز في العراق و نسب شيوعه حيث أن الدراسة اعتمدت على معلومات المراكز المتضمنة( سجلات المرضى في مستشفى ابن زهر). كان عدد المرضى الكلي هو (247) الذي يمثل الحالات المسجلة من (1986الى2005)، وكانت نسبة شيوع المرض (0.00095/100.000) مع تغلب نسبة الذكور (86.2%) للفئات العمرية 20 سنة أو اقل حيث كانت (34.8%)، و أن نسبة العزاب كانت(74.5%) اما المتزوجين كانوا (32,5%). الأطفال كانوا يمثلون أعلى نسبة(44,9%) اما الوظائف : كانت نسبة ألكسبه (29,1%)،العسكريين (14,2%)، ممتهني الجنس (0,4%). كانت أهم طريقة للإصابة بالمرض هو العامل الثامن المختبر الملوث للدم و مشتقاته و بنسبة (84,6%) , و الإصابة بواسطة الطريقة الجنسية هي (11.3%) . أما الطور الرابع لمرض الايدز فيشكل (84.6%) من مجموع حالات الإصابة . من المجموع الكلي للمرضى البالغ (247) ، (64) منهم فقط أحياء و الباقي أموات.

الدراسة توصي:

- بالاستمرار بالرصد الوبائي لكل المجاميع المعرضة للخطورة .
- طرق الرصد الوبائي يجب أن تتكيف مع الأنماط الموجودة و أي تغيرات مستقبلية بالأنماط المرضية.
- التثقيف الصحي الذي يعتمد وسائل الإعلام المختلفة و التي تستهدف المجاميع المعرضة للخطورة و المناطق عالية الإصابة.
- التأكد من سلامة الدم و مشتقاته بواسطة استخدام فحص( الاليزا) للتأكد من خلوهما من الفيروس.
- الرعاية الفعالة لكشف الإصابة مبكرا و تقديم الاجراءت الفعالة للام و الطفل

### Abstract:

This work was carried out at the AIDS Researches and Studies Center and Medico Consulting Center (Ibn Zoher Hospital) in Baghdad from 1st June 2004 to 1st June 2005, by retrospective study of patients records, aiming to describe the epidemiological features of AIDS cases in Iraq and its prevalence.

\* Assistant lecturer of Community Health dep. , Al – Kufa Medical Institute MSC. Community Health .

\*\*Consultant Dermatologist in Al-Diwanya Teaching Hospital , Diwanya , Iraq Head of Dermatology Dep. in Al-Diwanya Medical College , Iraq

The total number of patients was (247) which only represented the registered cases from (1986 up to 2005), The prevalence of disease was (0.00095 per 100.000) with evident preponderance of males (86.2%) and age group < 20 years was ( 34.8%) .

Most of the patients were single (74.5%) ; married (23.5%), Patients' occupation were as follows : most of the cases are child (44.9%) followed by earner (29.1%), officers (14.2%) and lastly sex workers (0.4%), The patients were more in urban (95.1%) than in rural area (4.9%), The most common route of transmission was the parenteral route (84.6%), then sexual route (11.3%) , The highest percentage of cases were diagnosed in phase (4):(84.6%). As declared that the number of cases were 247, only 64 patients are alive and the rest were dead.

The study recommended : on-going surveillance of all risk groups, health education campaign using different mass media particularly targeting high-risk groups and highly prevalent areas, ensuring safety of donated blood and blood products by proper screening for HIV/AIDS provision of effective antenatal care for early detection and active management of pregnant women and their babies, provision of diagnostic facilities and active antiretroviral drugs in addition to increasing staff efficiency by regular training courses.

## **Introduction:**

Acquired immune deficiency syndrome (AIDS) is caused by a lymphotropic retrovirus, now know as the human immuno-deficiency virus (HIV).The virus is acquired either by sexual intercourse (homosexual & heterosexual) or from the accidental introduction of material contaminated by the HIV into the systemic circulation. It was most common in homosexuals, drug addicts and the recipients of contaminated blood and blood products in the form of transfusion or concentrates, but is now spreading via heterosexual contact. The virus incapacitates the T-helper lymphocytes and thus prevents proper functioning of the cell mediated immune response .It uses the T4 antigen as its receptor and employs the T cells genomic apparatus to replicate, destroying the cell as it does so. It can also infect reticuloendothelial cell (including langerhans cell) and B-cell lymphocytes, <sup>(1)</sup>

UN AIDS (2002-B) estimated prevalence rates for HIV infection ranging from less than (1 per 10,000) sexually active adult population to (18 per 100) (18%), with median prevalence of (14 per 10,000) .

The lowest estimated prevalence rate was seen in central and east Asia, and the highest in central and southern Africa . Around (80%) got HIV during sex ; (10%) got HIV during injection drug use ; (5%) are children infected by mothers who have HIV and around (5%) got HIV through blood.

<sup>(2)</sup> stated that the number of people with HIV in different parts of the world is around (23) million in Africa, around 1 million in north America, around (1) million in Latin America, around (7) million in Asia and around (1) million in Europe. By the year 2000, a total of (40) million men, women, and children will be living with HIV <sup>(3)</sup>

By the year 2000, a total of (40) million men, women, and children will be living with HIV (UN AIDS, 2002-C).

In Arab world, Iran, Israel, and Turkey, there were 740,000 adults and children living with HIV/AIDS (Sandy et al, 2003) . In Iraq, the number of AIDS cases was less than 1000 cases in 2003, (UN AIDS, 2004).

### **Aim of the study :**

By retrospective study of patients' records, we were aiming to describe the epidemiological features of AIDS cases in Iraq and its prevalence.

### **Patients and Methods :**

All information about AIDS have been under strict governmental restrictions and only two centers in Baghdad were authorized to deal with AIDS patients .These two centers are :

- 1- AIDS researches and studies centre (Baghdad).
- 2- Medico-consulting centre for AIDS patients (Ibn – Al-Zuher Hospital).

The study started from 1 /5/ 2004 to 31 /5/ 2005 utilizing the documents and registries from those two specialized centers.

The epidemiological aspects included : (( age, Gender ,Occupation , Marital status (single, married, widow, divorced) , Geographical position and Residential area (rural, urban), Mode of infection ( parental route : blood and blood products) , Sexual route , Perinatal route))

**Results :**

The total number of patients was (247) which only represented the registered cases in the last years from (1986 up to 2005), with males preponderance (86.2%) compared with females (13.8%), figure(1)

The cases were most frequent within the age group (< 20 yrs) and least frequent within the age group ( $\geq$  50 yrs), with the bulk of cases occurring up to the age of (below 40 yrs). figure (2)

Regarding marital status, most of the patients were single (74.5%) followed by those who were married (23.5%), widowed (1.6%) and lastly divorced (0.4%), figure(3)

Patients' occupation were found as follows: most of the cases are child (44.9%) followed by earner (29.1%), officers (14.2%), housewife (8.1%), drivers (2%), retired (1.2%) and lastly sex workers (0.4%), figure (4)

The residential area of the patients showed that they were more frequent in urban (95.1%) than in rural area (4.9%), figure (5)

The most common route of transmission was found to be the parental route (84.6%), followed by sexual route (11.3%) and perinatal route (4.0%), figure (6)

The highest percentage of cases were diagnosed in phase (4):(84.6%), followed by phase (3):(10.9%) and phase (2): (1.2%) as shown in figure (7)

As declared that the total number of cases were 247. only 64 patients were alive and the rest were dead, figure (8)

The figure (9) shows that the highest percentage of death occurred in Age group ( $\leq$  20 years) (42.6%), the lowest percentage occurred in Age group (41-50) years (4.37%), the bulk of cases occurring between (0 – 40 years), with no death occurring after (50 years) of age.

**Discussion :**

The total number of cases were (247) which only represent the registered cases from (1986 up to 2005).The majority of them were males (86.2%) and it was found that (34.8%) of the patients were of age group (>20 years). In comparison, world estimates of the HIV & AIDS epidemics at the end of 2004 show that the majority of cases were males (37.2%); AIDS & HIV statistics summary for Australia shows that until 30th September 2004, the majority of patients is in Age group (>20 years) (81%).

Regarding the age and sex group, this study revealed nearly similar results to other world estimates, reflecting no specific difference. Nevertheless, the higher percentage of male patients can be explained by: most of ADIS patients are hemophiliacs who should be male.

The overall prevalence in Iraq is (0.00095 per 100000). According to the UN AIDS estimates of HIV and AIDS in world 2002, prevalence of cases in north Africa and middle East (0.1%), Africa below the Sahara (8.0%), Australia and new Zealand (0.1%) and world wide Average (1.1%).

The prevalence of HIV infection is very low, when religion plays the major role and influence in the social communities and when prostitution and drug abuse behavior are illegal and not accepted socially. (Ahmad,2002)

In Iraq, the main mode of transmission of HIV infection is among patients of blood disease through importation of blood products from out side the country. A study was conducted by Al. Hussein (2004) stated that more than half of the HIV cases in the early years of surveillance with slight fluctuation of incidence during some years, through 1994- 1996, may be via the comers to the country.

The majority of AIDS cases were transmitted by parentral route (84.6%) followed by sexual route (11.3%) and perinatal route (4%). Whereas, the estimation of UN AIDS for HIV 2002, around (80%) got HIV during sex, (10%) got HIV during injection drug use, (5%) are children infected by mothers who have HIV, (5%) got HIV through blood.

While the Eastern Mediterranean Region estimates 2002, the regional epidemic is being driven largely by heterosexual transmission, which represents almost (80%) of the total of AIDS cases.

Regarding marital status, the majority of cases are single (74.5%). As long as the sexual route of transmission is low compared with other routes and the Iraqi community is under customs, traditional and religious obligations, this condition can not be related to the cases belonging to the productive age.

However, UN AIDS estimates of the HIV& AIDS epidemics at the 2002 shows that most people infected with HIV are married, While the Eastern Mediterranean Region statistics 2002, in Iran (94.3%) were unmarried. (Wang et al. 2001) mentioned that the majority of the sample (69%), was unmarried.

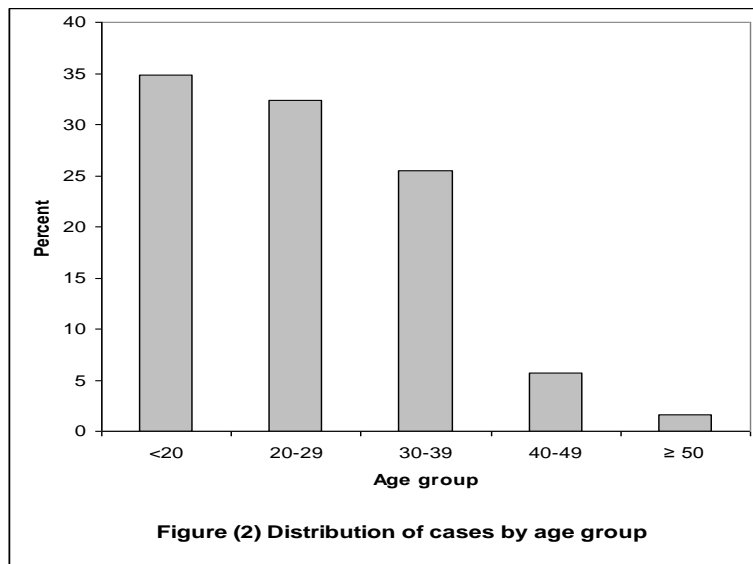
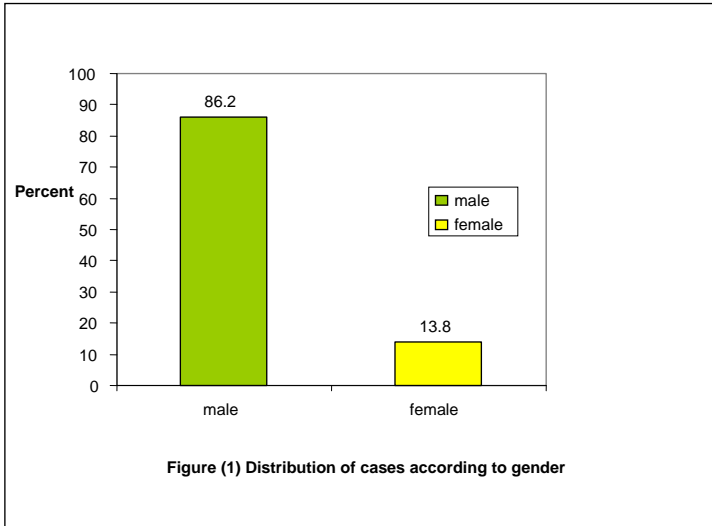
Being single does not mean necessarily that it is a risk status. As long as the majority of the cases are infected with factor (8) contamination, the previous disease of the case e.g. hemophilia etc may itself be responsible for preventing or at least delaying marriage. That is why we found that the vast majority of cases were single.

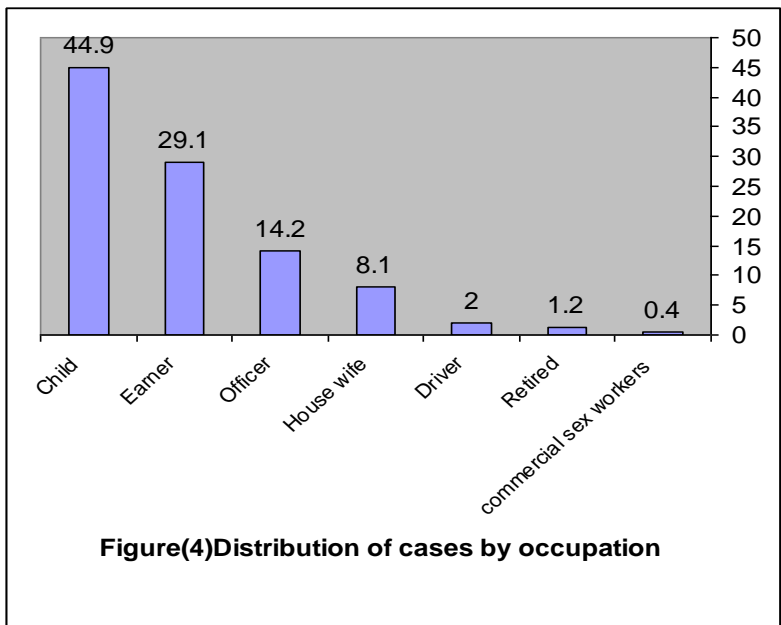
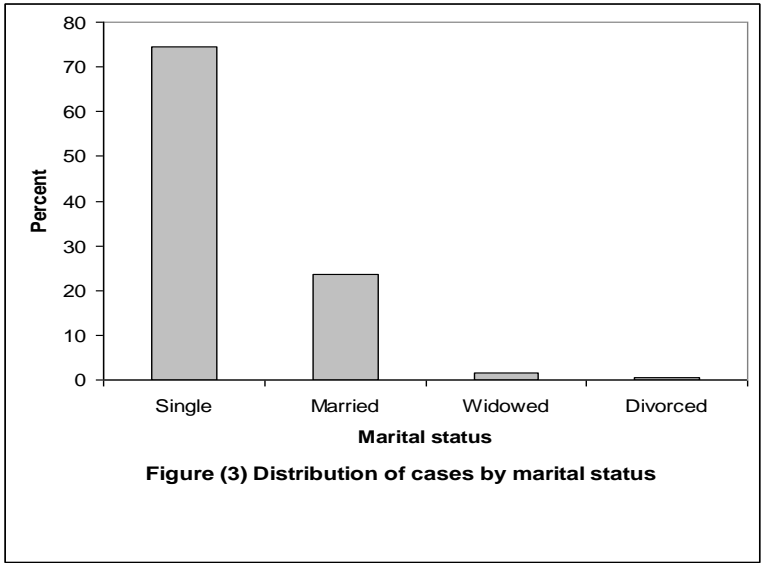
In regard to the geographical sectors, the majority of cases are in the urban (95.1%) more than rural (4.9%). The people in the country and from urban area were exposed to the risk of HIV / AIDS more than others and the Iraqi community is under such customs, tradition & religious obligations especially in rural area. In Addition, the areas in the center and urban are relatively well equipped for early detection and most of patients have hemophilia disease. In agreement with these findings, all estimations in WHO, UN AIDS and E.M.R.O statistics, the majority of cases occur in cities.

Concerning the occupation, the majority of cases are prior to any responsibility, namely children (44.9%). Approximately, these findings were presented through the Eastern Mediterranean Region statistics 2002, in Iran (73%) were unemployed including children. As it's found that AIDS is a disease of early adult life, we could expect that most of patients are prior to any responsibility (children) and not the employees who come in later age period.

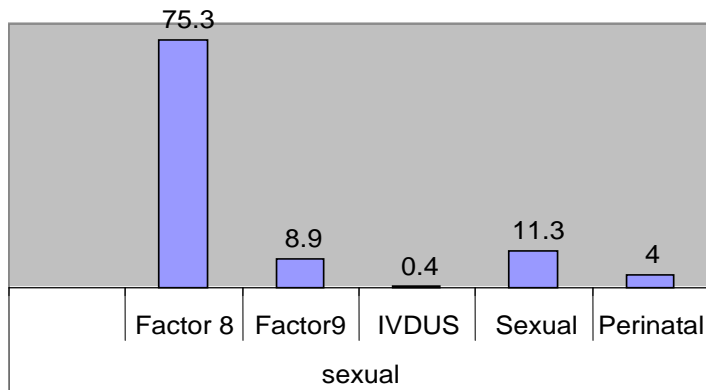
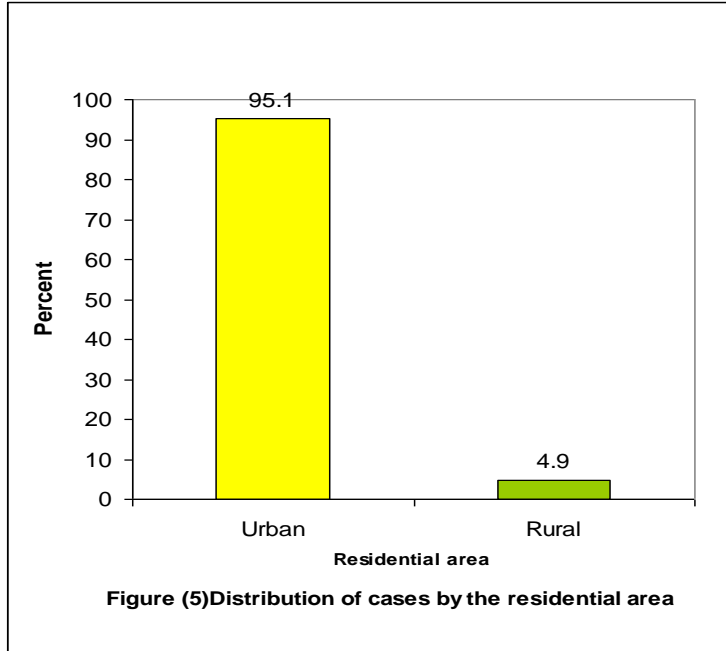
The highest percentage of disease detection occurred in Age group (5-9 years) and the cases in age group (< 20 year) represented the highest percentage in distribution of cases. However, the UN AIDS (2002) estimates most people newly infected with HIV are under the age of (25) years, and according to the world HIV & AIDS statistics summary of 2004, young people (15-24) years accounted for half of all new HIV infection world wide more than 6.000 become infected with HIV every day. The situation in Iraq may be nearest to the world estimation in regard to age.

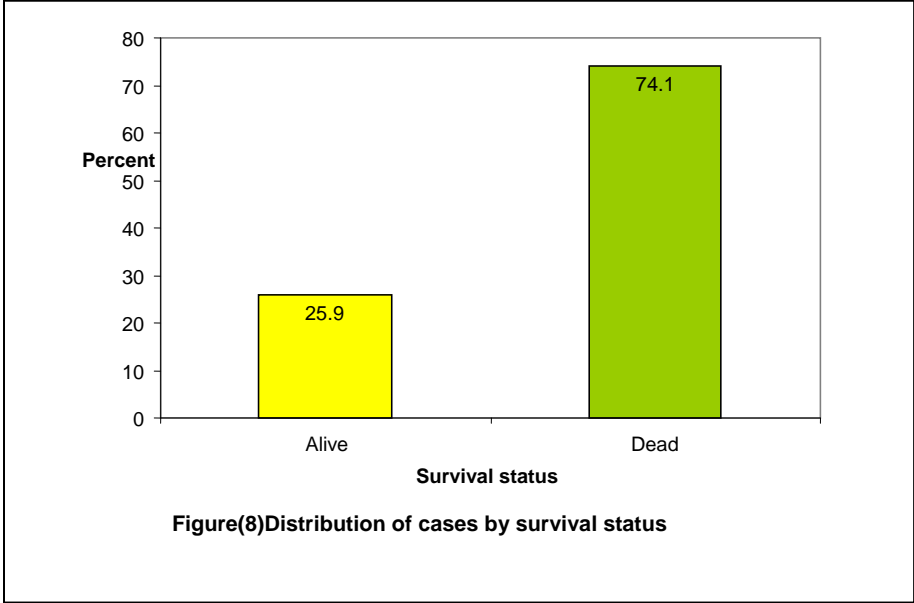
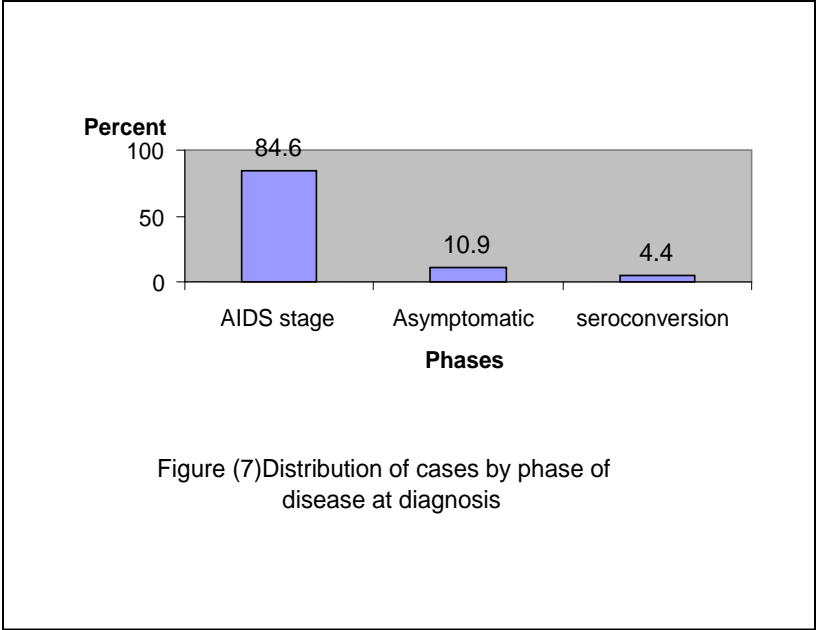
The majority of cases were in phase (4) (84.6%), and this may be attributed to the natural history of the disease since it's difficult to recognize and diagnose the disease, the shortage or even the absence of the developed methods of the early diagnosis of the disease, as long as most of the patients have blood disease and got AIDS through direct blood transmission in addition to frequent needs of possible transfusion of contaminated blood products may be responsible for transformation into stage.

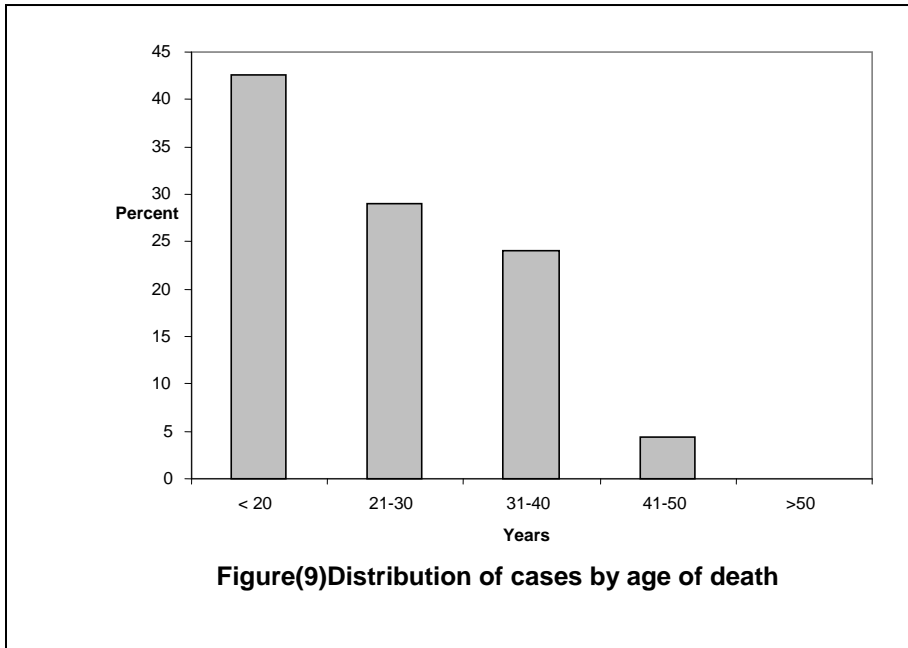












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