EPIDEMIOLOGY OF BLOOD TRANSMISSIBLE DISEASE IN THE MALTESE ISLANDS

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ACQUIRED IMMUNODEFICIENCY SYNDROME

The Acquired Immunodeficiency syndrome (AIDS) is caused by a retrovirus known as the Human Immunodeficiency Virus (HIV). Patients infected with HIV do not necessarily suffer from AIDS. The following data refers to maltese persons who have suffered from the clinical disease of AIDS. Further to these, it can be estimated that a further 50 to 100 Maltese residents carry the HIV virus but have not so far developed AIDS.

Situation till the end of 1991

Number of cases/deaths [Figure 1]: The first case of AIDS in the Maltese community was reported in 1984. A total of twenty-two cases of AIDS have since been reported in Maltese residents. All these cases who have developed the disease by the end of 1991 have died, while five of those developing the disease in 1991 are still alive. It appears that the pattern of reports is spread in two waves. The first wave occurring in 1984-88 was made up predominantly by cases infected inadvertently by infected blood products, together with some cases of homosexual practice. The decrease in the number of cases after 1988 and the gradual rise subsequently reflects the elimination of infected blood products as a source of infection with the reported cases now being solely due to sexual activity.

YEAR	Number of cases arising during year	Number of these that have died
1984	1	1
1985	1	1
1986	3	3
1987	2	2
1988	7	7
1989	0	0
1990	1	1
1991	7	2

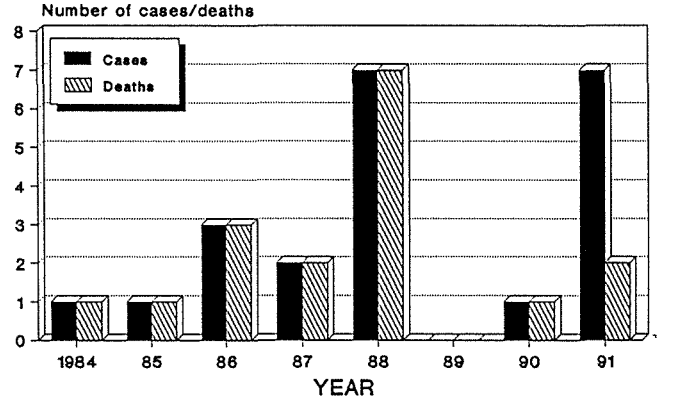
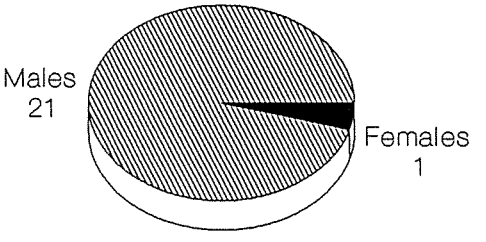


FIGURE 1: INCIDENCE TRENDS OF AIDS IN MALTA

Sex distribution [Figure 2]: Of the 22 cases of AIDS reported by the end of 1991, 21 were males while 1 was female. The reason for the male preponderance is explained by the transmission routes of the disease in these cases, namely haemophiliacs and homosexuals.



Situation as on 31.12.91

FIGURE 2: SEX DISTRIBUTION - AIDS CASES

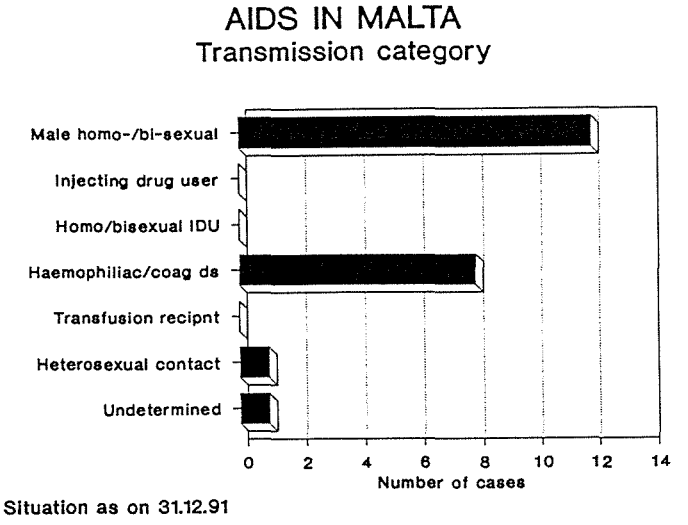


FIGURE 3: TRANSMISSION CATEGORY DISTRIBUTION

Distribution by transmission category [Figure 3]: Eight maltese haemophiliacs were accidentally infected with the HIV when they received blood products that were essential for the treatment of their condition. This happened at a time when the existance of the HIV was not yet recognised.. This route of transmission has now been completely eliminated.

In practically all the other cases of AIDS, the HIV was transmitted sexually. In 12 cases this was the result of a male homosexual relationship, while one case was a heterosexual contact.

There have been to date no cases of AIDS reported in intravenous drug users (IDUs). If IDUs share needles there is a risk of rapid spread of HIV within this group of persons, and those who have sexual contact with them. If IUDs develop AIDS, one may also expect to have cases of transmission of HIV from mother to child (transplacental or "vertical" transmission). This would eventually lead to babies and young children developing AIDS.

TRANSMISSION CATEGORY	NUMBER OF CASES
Male homo-/bisexual	12
Haemophiliac	8
Heterosexual contact	1
Undetermined	1

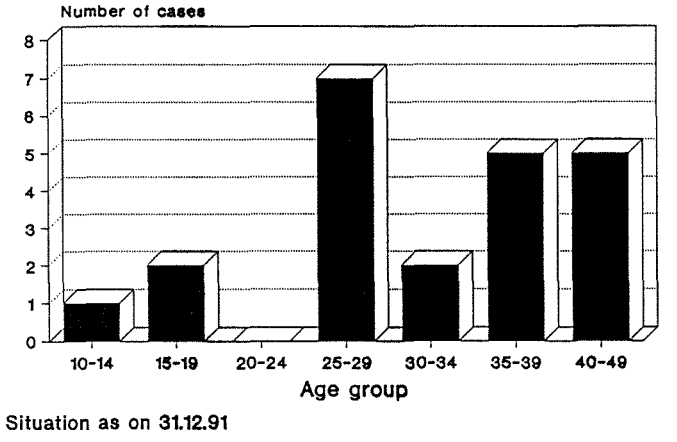


FIGURE 4: AGE DISTRIBUTION - AIDS CASES

Age distribution [Figure 4]: The age distribution of the reported AIDS cases in the maltese reflect the mode of transmission of the virus. There were only three cases reported under the age of twenty years, the majority of cases occurring in sexually mature individuals.

Age Group (yrs)	Number
10-14	1
15-19	2
20-24	0
25-29	7
30-34	2
35-39	5
40-49	5

1992 update

Up to 4th February, there has been one further case of AIDS reported in a male individual. It is not possible at this stage to furnish further information.

HEPATITIS B

Number of cases: Data about the annual incidence of "Infectious Hepatitis" has been published in the Malta Demographic Review since 1967 (Figure 5). The term "infection hepatitis" is a non-specific one referring to all forms of viral hepatitis, including hepatitis A, B and non-A non-B. The incidence spike in 1975 was almost certainly due to an outbreak of Hepatitis A.

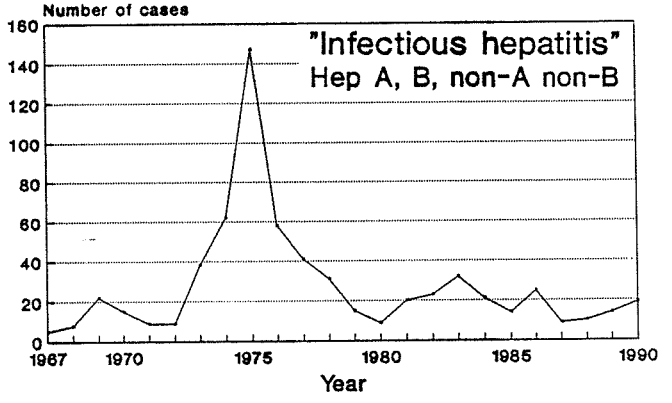


FIGURE 5: INCIDENCE TRENDS IN MALTA

Source: Malta Demographic Review

Since 1987, separate statistics have been kept for the various forms of hepatitis, and a clear distinction has been made in records between Hepatitis B infection and Hepatitis B virus positivity. The number of reported cases of Hepatitis B infection has tended to increase in the past five years (Figure 6).

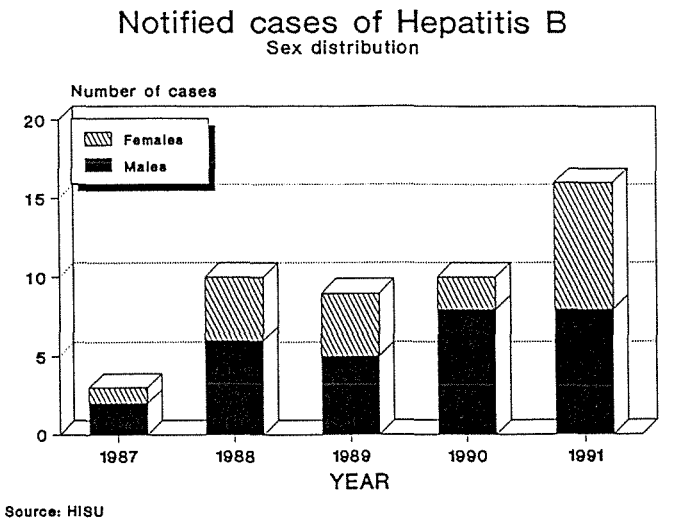


FIGURE 6: INCIDENCE TRENDS IN MALTA - HEPATITIS B

Regional distribution of cases: It has been suggested in the past that there is a preponderance of Hepatitis B infection in the south of Malta. The available figures since 1987 were analyzed by the three Medical Officer of Health (MOH) Regions. It appears that, although there is a slight excess of cases in the Southern region, there is no statistical difference from the incidence in the Central and Northern regions (Figure 7). The overall number of cases, however, is small, so the possibility of a significant difference cannot be excluded with greater numbers.

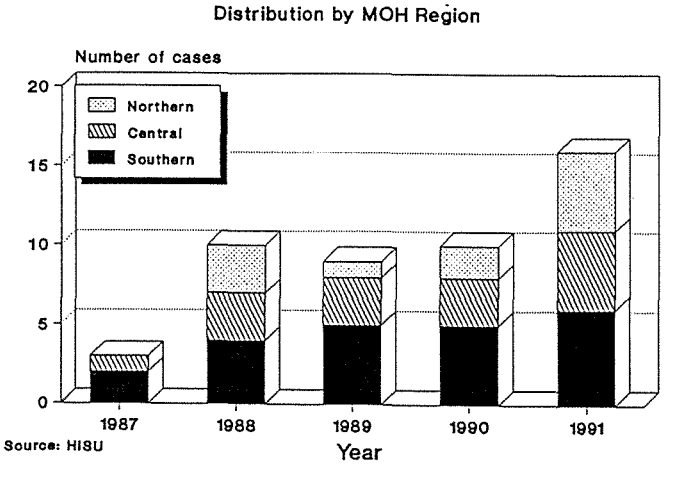


FIGURE 7: REGIONAL DISTRIBUTION IN MALTA - HEPATITIS B

HBV positivity: Information on HBV positivity is scarce. Moreover, little research has been carried out on the modes of HBV transmission in Malta. The medical staff at the Health Information Systems Unit has recently (Jan 1992) studied a random sample of 23 records relating to investigated cases of HBV positivity. The suspected transmission categories are depicted in Figure 8. In almost half of the cases, no mode of transmission could be indicted. Sexual activity, stick injuries, tattoos, shaver sharing, blood transfusion, and perinatal body fluid contact were considered to be the likely risk factors in the rest. The factor in this list which is relevant to health care delivery is, of course, stick injury.

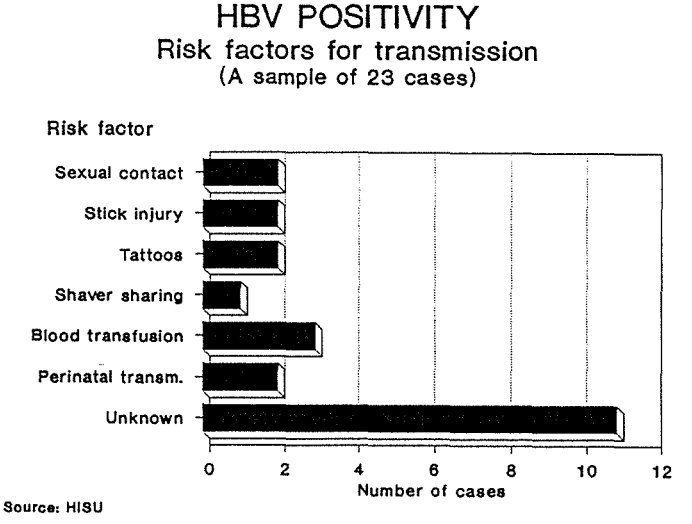


FIGURE 8: MODES OF TRANSMISSION of HEPATITIS B

Transmission of HBV and HIV from patient to health-care worker

Hepatitis B virus (HBV) spread: The spread of HBV is proportional to the degree of blood exposure. For highly exposed workers, e.g. surgeons and laboratory personnel, the lifetime risk of HBV infection reaches 30 to 50 percent.

Human immunodeficiency virus (HIV) spread: HIV circulates in the blood at much lower concentrations than HBV, and is not able to survive as well as HBV outside the body. It is therefore uncommon that HIV infection is acquired through health care.

Immunization and Universal Precautions

Nowadays, health care workers can be immunized against HBV, and therefore no longer need to run the risk of acquiring Hepatitis B. "Universal precautions", namely precautions that are taken at all times, are the cornerstone of the prevention of blood transmissible disease in general. They are particularly important for the prevention of AIDS, as immunization against HIV is not yet available. Universal precautions are based on the assumption that all blood is potentially infectious, regardless of its source, and of results of tests on it. The components of Universal Precautions include:

- Handwashing
- Careful handling of sharps
- Proper sterilization, disinfection or disposal of instruments after use
- Appropriate use of gloves, masks, gowns, etc

Reference should be made to the "Report on the Consultation on Prevention of HBV/HIV Transmission in the Health Care Setting", published by WHO (Geneva), which includes specific recommendations on this subject.