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## HIV infection possibly due to unusual mode of transmission

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*The author discusses two possible cases of human immunodeficiency virus (HIV) due to an unusual mode of transmission. The first case was a case of HIV infection believed to have been transmitted by permanent eyebrow tattooing in a beauty salon. This case might imply the importance of possible risk for HIV exposure among women who visit a beauty salon. The second case was a case of HIV infection believed to have been acquired rescuing severely injured patients from a car accident. This case might imply the importance of possible risk for HIV virus among high risk occupations such as policemen, low level health care workers and rescue teams. Promoting basic knowledge about primary prevention of HIV infection by these unusual possible modes is suggested.*

**Key words:** HIV infection, Beauty salon, Rescue.

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**วิโรจน์ ไววานิชกิจ. การติดเชื้อเฮช ไอ วี ที่อาจเกิดจากวิธีติดเชื้อที่ไม่พบบ่อย. จุฬาลงกรณ์-  
เวชสาร 2544 ก.ค; 45(7): 597 - 601**

ผู้นิพนธ์ได้อภิปรายกรณีการติดเชื้อเฮช ไอ วี ที่อาจเกิดจากวิธีติดเชื้อที่พบไม่ได้บ่อย จำนวน 2 ราย กรณีแรกเป็นผู้ป่วยหญิงที่อาจติดเชื้อจากการสักคว่ำถาวร และกรณีที่สองเป็นผู้ป่วยชายที่อาจติดเชื้อจากการช่วยผู้ป่วยสาหัสจากการประสูติเหตุรถยนต์ได้อภิปรายถึงความเป็นไปได้ของการติดเชื้อเฮช ไอ วี ที่ไม่พบบ่อยเหล่านี้ โดยเน้นถึงมาตรการป้องกันและวิธีให้ความรู้แก่ประชาชน

**คำสำคัญ :** การติดเชื้อเฮช ไอ วี, การเสริมสวย, การช่วยเหลือผู้ประสูติ

Human immunodeficiency virus (HIV) infection, a worldwide infection, is a serious problem in the present day. The two major routes of transmission of HIV are blood-borne and sexual propagation. Each episode of this infection implies loss of resources for society. A high rate of infection can be found in many parts of the world, including Southeast Asia.

In Thailand, a tropical country in Southeast Asia, HIV infection is a major problem. About half a million people are proved to have HIV infection,<sup>(1)</sup> and the incidence is possibly higher due to undetected HIV infection in the community. For infection control of this serious hazard many precautionary methods and protocols have been introduced.<sup>(2)</sup> But control strategies for the risk of occupational contact with blood products seems limited only within medical personnel.

Apart from the major two routes of HIV transmission, blood and sexual contact, other unusual modes of HIV transmission such as acupuncture, tattooing and other underestimated accidental exposures to blood have also been described.<sup>(3-6)</sup> In this article, two cases of HIV infection possibly due to unusual modes of transmission are discussed. The first case was the cases of possible HIV infection after eyebrow tattooing. The second was a case of HIV infection possibly due to rescuing an injured person from an accident. Although these cases cannot be confirmed as case reports they can imply preventive action against these unusual modes of HIV transmission in Thailand.

## Case series

### Case 1

A previous healthy 37 – year old single female

tested Anti HIV positive at a routine annual check up program. She revealed that she had never received blood products nor used intravenous drugs. She had been HIV seronegative at previous check ups.

Physical examination of this patient reviewed no abnormality. She had no sexual intercourse, infections or operations during the previous several years. She had never travelled out of Thailand. She also had not been in jail.

From further history taking , the only one likely episode of risk contact to HIV was eyebrow scarification tattooing at a beauty salon the year previously. A beautician performed the procedure using no sterilization process for needles. Furthermore, this worker had shared her own scarification needle set with the clients' and she had died from AIDS in the last year.

### Case 2

A 36 – year old urban male sheriff tested Anti HIV positive at a routine check up according to his health insurance program. He revealed that he had never received blood products nor used intravenous drugs. The year before, he had attended his annual check up and tested HIV seronegative. He denied any history of drug abuse or sexual contact with prostitutes or other women except for his wife. His wife, was negative at Anti HIV testing but unfortunately seroconverted to HIV positive three months later. Physical examination of this patient reviewed no abnormality.

From further history taking, the only one likely episode of risk contact with HIV was working as a head member of the district rescuing team. He revealed that he had to lift blood soaked injured people many

times without any protective device. He revealed that he had never known that HIV transmission was possible by skin contact with blood products.

## Discussion

### Case 1

This case of HIV infection is interesting. In this case, it is believed that the HIV infection was due to eyebrow tattooing. This route of infection is unusual. Although the possibility of HIV transmission via body tattooing<sup>(3-6)</sup> has been mentioned, there has been no report of HIV infection due to permanent eyebrow tattooing.

The case in this article is the first case report of HIV infection in Thailand possibly due to beauty salon treatment. The infection is believed to be due to contact with blood-borne infectious particles from non-sterile usage of an eyebrow tattooing needle. However, this case was diagnosed based on patient history, therefore, some error from human bias can be expected. In this case, definitive diagnosis by comparing the HIV DNA sequence of the case and the beautician could not be performed.

It is impossible to be sure that this patient had never had sexual intercourse or abused drugs. However, two experienced physicians carefully questioned this patient about these points on several occasions. It may be useful to pay attention to this possible route of HIV infection and to encourage studies aimed at approving or disproving it by definite epidemiological methods.

This case implies the importance of the possible risk for women in visiting a beauty salon. With the increasing rate of HIV infection in Thailand, the possibility of contact with HIV infected people is

also increased. Health promotion concerning HIV prevention should not focus only on sexual contact or drug abuse but also other unusual possible modes of HIV transmission. Developing specific strategies to control these possible unusual routes of HIV infection is recommended.

### Case 2

Apart from sexual contact, blood-borne transmission of HIV is an important mode of transmission of HIV in Thailand. This is the first case report of HIV infection in Thailand due to rescuing an injured patient. The infection is believed to be due to contact with blood from the injured patient. However, this case was diagnosed based on patient history, therefore, some error from human bias can be expected. In this case also, specific diagnosis by comparing the HIV DNA sequence of the injured people and the case could not be performed.

This case implies the importance of the high risk for a rescue team member in daily practice. Preventative methods for medical personnel especially for emergency unit, in coping with injured people have repeatedly been stated. But do other occupations coping with injured patients as public safety workers receive basic knowledge of how to cope with blood products?

Health promotion about HIV prevention should not focus only on sexual contact or drug abuse but also on other, possibly overlooked, routes of HIV infection. Knowledge of procedures to use when rescuing or aiding injured people must be provided.<sup>(7,8)</sup> for occupations at risk, especially for prehospital providers such as rescue teams, police and fire fighters.

### Conclusion

The author reported these two cases in order to promote awareness of the unusual possible modes of HIV transmission in this era.

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### References

1. Sarasiengsunk S, Kiranandana S, Wongboonsin K, Garnett GP, Anderson RM, van Griensven GJ. Demographic impact of the HIV epidemic in Thailand. *AIDS* 1998 May; 12(7): 775 - 84
2. Hiransuthikul N. Health care workers and occupational exposure to blood and/or secreta of patients. Risk and prevention of Hepatitis B virus. Hepatitis C virus and human immunodeficiency virus infection. *Chula Med J* 1996 Jan; 40(1): 73 - 83
3. Chamberland ME, Conley LJ, Buehler JW. Unusual modes of HIV transmission. *N Engl J Med* 1989 Nov 23; 321(21): 1476 - 7
4. Vittecoq D, Mettetal JF, Rouzioux C, Bach JF, Bouchen JP. Acute HIV infection after acupuncture treatments. *N Engl J Med* 1989 Jun 26; 320(4): 250 - 1
5. Castro KG, Lifson AR, White CR. Investigations of AIDS patients with no previously identified risk factors. *JAMA* 1988; 259: 1338 - 42
6. Loimer N, Werner E. Tattooing and high-risk behaviour among drug addicts. *Med Law* 1992; 11(3-4): 167 - 74
7. Baker JL, Kelen GD, Sivertson KT, Quinn TC. Unsuspected human immunodeficiency virus in critically ill emergency patients. *JAMA* 1987 May 15; 257(19): 2609 - 11
8. Crutcher JM, Lamm SH, Hall TA. Procedures to protect health-care workers from HIV infection: category I (health - care) workers. *Am Indus Hyg Assoc J* 1991 Feb; 52(2): A 100-3