Star health

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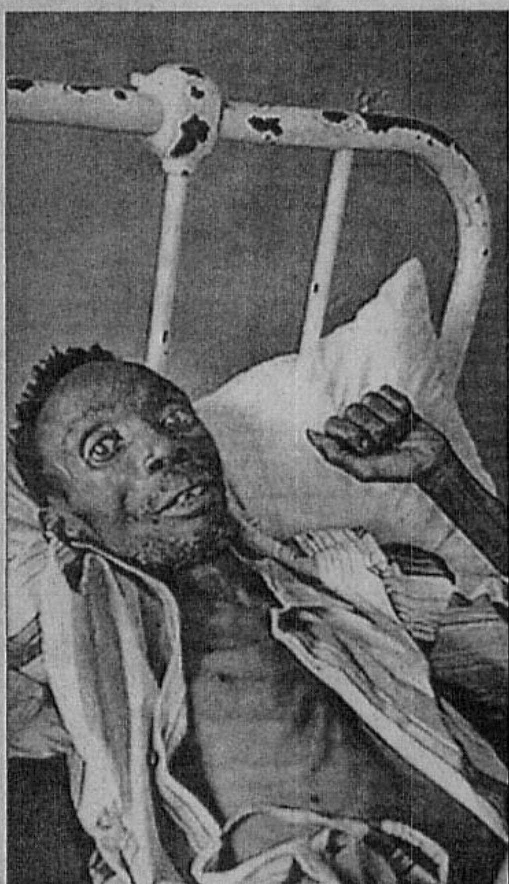
HIV in Bangladesh: The present scenario

The HIV epidemic in Bangladesh, from an epidemiological perspective, is evolving rapidly. While still a low prevalence country for overall HIV rates, a small pocket of IDU (Injecting Drug Users) under second generation surveillance has shown an HIV prevalence increase from 1.4 per cent to 4 per cent to 8.9 per cent (in one locality) in the past three years. Simultaneously recent Behavioral Surveillance Survey (BSS) data indicate an increase in risk behaviors such as sharing of injecting equipment and a decline in consistent condom use in sexual encounters between IDUs and female sex workers. BSS data also indicate that the IDU population is well integrated into the surrounding urban community, socially and sexually, thus raising grave concern about the spread of HIV infection. Over the rounds, the total HIV prevalence remained below 1 per cent.



Bangladesh is a low prevalence nation for HIV and therefore, according to the guidelines of the Second Generation Surveillance system for HIV, surveillance should concentrate amongst selected groups of individuals who are known to be most at risk to HIV and some of the population groups that may bridge the epidemic into the general population. Therefore during all rounds of surveillance conducted so far in Bangladesh, including the 5th round, the population groups selected were confined to those considered to be most vulnerable and some bridging populations.

Most at risk populations

Injecting drug users: Injecting drug users (IDU) had the highest rate of HIV infection with 4 per cent prevalence in Central Bangladesh and in one neighbourhood of Central-A, 8.9 per cent of IDU were HIV positive. While HIV prevalence in IDU increased significantly in one specific area (Central Bangladesh), there were no changes between the 4th and 5th rounds in the rest of the country. Bangladesh, therefore, still remains a low prevalent nation for HIV. Furthermore active syphilis rates declined significantly in IDU over the rounds in Central Bangladesh. However, Hepatitis C (HCV) prevalence in IDU remained high.

HCV prevalence was high in IDU from most sites. The highest rates were recorded in IDU from Northwest-B2. The HCV rates were surprisingly low in two sites Northwest-F and Central-H. In Central-A where the HIV prevalence was 4 per cent, HCV prevalence was 59.2 per cent. Overall, out of 1619 IDU sampled, 54.2 per cent tested positive for HCV.

The 5th round BSS showed that needle/syringe sharing continued to be routine among IDU especially among those in Central-A. However, sharing was comparatively lower in the Northwest region than in Central-A. Most IDU used other modes of taking drugs before they started injecting. A large proportion of IDU had commercial and non-commercial female sex partners and condom use was infrequent. A proportion of IDU (4.3-6.7 per cent) sold blood in the last year. IDU were highly mobile. IDU from other cities traveled to Central-A where they injected drugs. Injecting drugs while abroad was more commonly reported by IDU from Northwest-B and B1 (10-12 per cent).

A considerable proportion of heroin smokers injected in the last six months and most shared needle/syringe during their last injection. More than half of the heroin smokers had commercial and non-commercial female sex partners in the last year and those who did had multiple sex partners. Condom use, both in the last sex act and consistently in the last month, was very low with both commercial and non-commercial partners.

Sex workers: HIV prevalence remained low in female sex workers. Casual female sex workers in one of the northwest border areas had the highest rate of HIV prevalence, which is 2 per cent but the total numbers of sex workers sampled were less than 400 (n=101). Active syphilis rates remained high among the female sex workers. However, active syphilis rates declined significantly over the rounds in most of the brothels and in the street based sex workers from Central-A. Female sex workers in the border areas were considerably mobile and sold sex across the border to India.

Hotel based sex workers were comparatively younger and had highest number of clients among all female sex worker groups. Consistent condom use in female sex workers remained low in all groups.

Males who have sex with males: HIV prevalence was low in males who have sex with males (MSM), male sex workers (MSW), Hijra and partners of Hijra. In Central-A, changes in the active syphilis rates in MSM and MSW over the rounds were not significant.

Almost all of the MSW and Hijras reported that they had new clients in the last week. Some MSW sold sex to females in the last month. Hijras reported that more clients in the last week than MSW while condom use was low in this group.

All groups of sex workers reported violence in the last year. Both being raped and beaten was most commonly reported by Hijras and female street based sex workers from Central-A. Violence was reported to have been committed by both police and mastans.

Summary

The relatively low level of HIV in Bangladesh today does not guarantee low prevalence tomorrow. Experience teaches us that early epidemics do not show their magnitude at first and place few demands on the health sector. All the risk factors which give birth to explosive HIV epidemics are present in Bangladesh today. In the absence of good quality and high coverage intervention programmes, HIV prevalence may jump to very high levels within months. Once HIV prevalence crosses the 10 per cent level, epidemics become very difficult to control. Policy makers and programmers within the Government of Bangladesh, bi-lateral agencies, national and international NGOs have a key role to play in recognising the urgency of the situation and taking immediate action.

The data from the 5th round of the serological surveillance confirm the fears from the pervious 4th round that there is an impending epidemic among the injecting drug users in Central Bangladesh and one neighborhood in that city is already experiencing an epidemic.

Source: ICDDR,B

DID YOU KNOW?

Who are the high risk mothers?

High risk pregnancy means pregnancy with added risk for complications of mortality and morbidity to be faced by the mother and her coming baby.

There are some criteria of high risk mothers. Learning the facts sometimes reduce the rate of mortality and morbidity. Followings are the criteria of high risk mothers --

Biological factors

- Elder age, 35 years or more and very young, 18 years or less
- Height 140 cm or less
- Weight 10 per cent below for the height
- Women who become pregnant in quick succession (within 1 year)

Past obstetrical factors

- Previous still birth
- Intra uterine death
- History of previous caesarian or instrumental delivery
- Manual removal of placenta
- Previous repeated abortion
- Prolonged labour
- History of long standing infertility

Current pregnancy complication

- Antepartum haemorrhage (Bleeding during pregnancy)
- Postpartum haemorrhage (Bleeding after delivery)
- Threatened abortion
- Eclampsia
- Multiple pregnancy
- Malpresentation of coming baby
- Prolonged pregnancy (14 days after the expected date of delivery)

Medical and surgical factors

- Anaemia (Where haemoglobin level is 50 pre cent of less)
- Cardiovascular disease like hypertension, ischemic heart disease etc.
- Renal disease
- Diabetes Mellitus

Socio-economic factors

- Low socio-economic condition
- Women deserted by their husbands
- Remote rural area

Preventive measures of high risk

It is obvious that all abnormalities do not carry the same risk, some factors are more important than the others. The pregnant of high risk condition is assessed at the initial antenatal examination.

Measurement of high risk cases

Antenatal measure

- Early in pregnancy, routine and special laboratory investigations should be done
- Complete investigation for hypertension, kidney and thyroid disorder and proper treatment in non-pregnant state
- Sexually transmitted diseases should be treated before another pregnancy
- Case having previous unsuccessful pregnancy should be investigated before another conception occurs
- Necessary advice should be given regarding rest, activities, diet and medicine like

-- Avoidance of journey, sexual intercourse in early pregnancy

-- Patient with premature labour, still birth, intra uterine death are benefitted by prolong rest

-- Women with lower socio-economic groups are specially benefitted by rest and nutrition

-- Minimum medicine should be taken during pregnancy particularly in early months

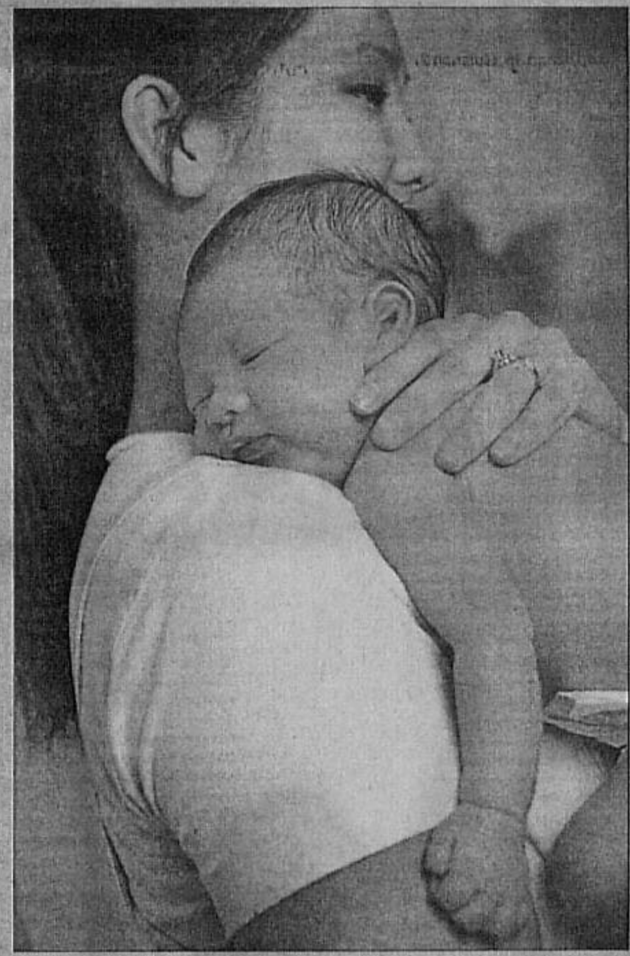
-- Folic acid therapy should be started in non-pregnanct state and throughout in whole pregnancy

Measurement during labour

- Elective cesarean section is necessary in high risk cases
- Some cases may need induction of labour or close monitoring during labour for the assessment of labour or fetal distress

Postnatal measure

The condition of the new born baby should be assessed immediate after delivery.



Dental aspects of cardiovascular diseases

DR MD MUJIBUR R HOWLADER

Dental infections such as gingivitis, periodontitis, periradicular pathosis are known to be strongly associated with factors that also elevate cardiovascular risk, such as smoking. It has been suggested by many authors that dental treatments may lower the risk of coronary heart disease.

Cardiovascular disease, particularly hypertension and ischemic heart disease are the most common causes of death globally.

Dental procedures or drugs used in dentistry (e.g. local anesthetics) sometimes can aggravate heart disease or possibly even provoke a heart attack. It can also precipitate bacterial endocarditis (Bacteria reaches into the heart from the mouth via the blood stream and causes heart infection), specially when it is done without antibiotic coverage and other prophylactic measures. Myocardial infarction is one of the most serious emergencies that can also happen in the dental surgery.

Dental aspects of hypertension

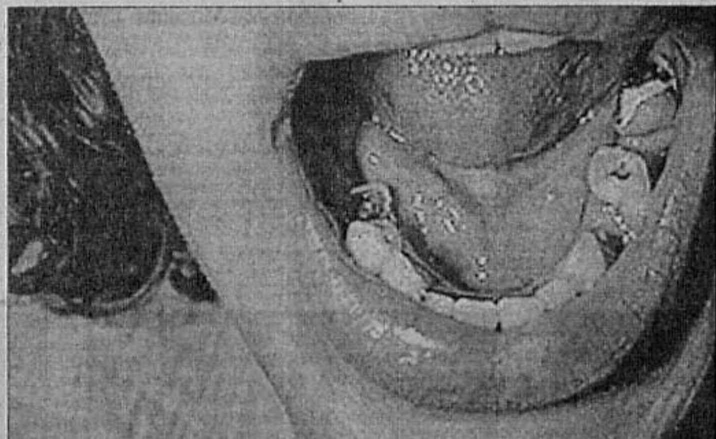
There are no recognised oral manifestations of hypertension, but anti hypertensive drugs can sometimes cause side-effects like

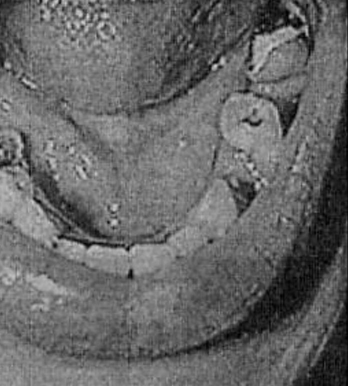
- Xerostomia (Dryness of the mouth)
- Salivary gland swelling
- Pain in oro-facial region
- Lichenoid reactions (white mucosal ulceration)
- Gingival hyperplasia (gum swelling)
- Sore mouth (oral ulcers)
- Disturbance of oral sensation
- Paraesthesia of oro-facial region
- Facial palsy (Facial paralysis, specially in malignant hypertension)

In this circumstances, hypotensive drugs should not, however, be stopped, as rebound hypertension can result.

Dental aspect of coronary heart disease

Myocardial infarction is the most severe and lethal form of coronary heart disease, as between 30-50 per cent of the patients die within the first hour of attack and other 10-20 per cent within the few days, which eventually may occur during any dental surgical procedures.





Angina pectoris is another acute manifestation of ischemic heart disease, which may be misdiagnosed as pain on jaws, teeth, tongue or palate due to dental infections.

Dental aspect of cadiac pacemakers

Dental surgical procedures should be done very cautiously in patients who use cardiac pacemaker. High frequency external electromagnetic energy can interfere with the sensing function of pacemaker when following instruments are used

- Electro surgical equipments (diathermy)
- Ultrasonic scales
- Pulp testes
- Dental induction casting machine
- Belt-driven motors in dental chairs
- Microwave ovens
- Television transmitters
- Faulty or badly earthed equipments etc.

Dental aspects of congenital heart disease

Oral abnormalities associated with cyanotic congenital heart disease include --

- Delayed eruption of teeth
- Enamel hypoplasia
- Malocclusion
- Bluish-white or skimmed milk teeth
- Gross vasodilatation in pulps
- Increased incidence of caries and periodontal disease
- Small-white non-ulcerated mucosal lesions
- Bleeding gum (due to defective platelate function and increased fibrinolytic activity in cyanotic congenital hearth disease)
- Cleft lip & palate.

Other associated problems such as brain abscess, infective endocarditis, Down's syndrome, Turner's syndrome or idiopathic hypercalcaemia may affect dental management.

Dental aspects of hearth surgery

Dental infections may be a threat to patients having cardiac surgery as infective endocarditis can nullify any benefits from the operation and frequently cost the patient's life. Therefore, following factors in relation of dental aspect should be considered before surgery --

- A meticulous pre-operative oral assessment (dental clearance)
- Optimal oral hygiene
- Eradication of potential source of infection (removal of dental plaque and calculus by scaling)
- Dental treatment should be completed before surgery (at least two weeks).

Dental procedures require antibiotic prophylaxis

- Tooth extraction
- Scaling
- Oral surgery involving the periodontal tissues
- Periodontal surgery
- Endodontic (Root canal) manipulation through apex of tooth
- Endodontic surgery
- Sub gingival procedures
- Re-implantation of avulsed teeth (accidental falling & re-positioning)
- Re-positioning of teeth after trauma
- Use of orthodontic bands (not brackets)
- Dental implants & other invasive prosthesis etc.

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Celecoxib may be best therapy for Osteoarthritis

Although acetaminophen is recommended as initial treatment for osteoarthritis of the knee and hip, celecoxib may be more effective, and just as well tolerated, researchers report in the Annals of the Rheumatic Diseases.

However, the findings do not mean all osteoarthritis patients should be given celecoxib, Dr Theodore Pincus of Vanderbilt University School of Medicine in Nashville, the study's lead author, told. He said there is "a group of patients who do better with acetaminophen and we should recognize that."

Acetaminophen is recommended for osteoarthritis patients because of concerns about the gastrointestinal side effects of non-steroidal anti-inflammatory drugs (NSAIDs) and because of studies suggesting that the drug is as effective as ibuprofen and naproxen.

However, the researchers point out that recent reports indicate acetaminophen may be less effective for the disease than previously thought, and COX-2 inhibitors, such as celecoxib, have fewer gastrointestinal side effects than other NSAIDs.

In two studies, patients were randomly assigned to receive six weeks of 200 mg celecoxib daily, 1,000 mg acetaminophen four times daily or placebo. Patients were then switched to a second treatment. The first study involved 524 patients and the second, 556 patients.

Among patients in all three groups, the rate of adverse events reported ranged from 23 to 29 percent. No significant difference was seen among the three groups for gastrointestinal side effects.

On average, patients on celecoxib showed a 22 per cent improvement in osteoarthritis scores. Scores improved by 13 per cent in patients on acetaminophen and by 8 percent in patients on placebo. Patients' pain scores improved 28 percent with celecoxib, 18 percent with acetaminophen, and 10 percent with placebo.

More patients preferred celecoxib than acetaminophen, and more preferred acetaminophen than placebo. In the first study, 53 percent preferred celecoxib versus 24 percent for acetaminophen. In the second study, 50 percent preferred celecoxib and 32 percent preferred acetaminophen.

Patient preference for acetaminophen versus placebo was 37 to 28 percent in the first study and 48 to 24 percent in the second.

Source: Annals of the Rheumatic Diseases, July 2004.

Heart drugs can cause Potassium overload

Drugs used to treat high blood pressure and other conditions can cause a dangerous build-up of potassium and patients taking them need to be watched closely, U.S. researchers cautioned recently.

The drugs, angiotensin-converting-enzyme or ACE inhibitors and angiotensin-receptor blockers, can raise potassium levels in about 10 percent of patients, especially those with weak kidneys, said Dr Biff Palmer of the University of Texas Southwestern Medical Center at Dallas.

"Because a third to half of patients with congestive heart failure have kidney complications, a large proportion of patients being treated with ACE inhibitors and angiotensin-receptor blockers are at increased risk for hyperkalemia (high potassium)," Palmer said in a statement.

Potassium is normally excreted by the kidneys, with levels in the blood affecting the way cell membranes work and governs the action of the heart and pathways between the brain and muscles.

High potassium levels can disrupt the heart's normal rhythm.

Doctors need to take note, Palmer advised.

"The patient's medication profile should be reviewed and drugs discontinued that impair excretion of potassium in the kidney, such as over-the-counter non-steroidal anti-inflammatory drugs like ibuprofen and naproxen," he said.

"Patients should be asked about the use of herbal remedies, as herbs can be a hidden source of potassium."

Patients at risk should avoid foods high in potassium such as orange juice, melons, bananas and salt substitutes.

Source: New England Journal of Medicine