



## Outbreak of HIV/Aids in Very Low Risk Population in District Larkana, Pakistan: Cross Sectional Study

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### ABSTRACT

District Larkana of Sindh Province of Pakistan is experiencing outbreak of HIV/AIDS in low risk population, majority of children below five years. Out of 28,315 individual screening 812 have suspected HIV positive. There are 668 children and 144 adults. This cross sectional study tried to find the epidemiologic links for this outbreak in respect of index case. First most evident fact during this study was possible use of contaminated syringes in local clinics by both authorized unauthorised medical practitioners. Home based circumcision, reuse of razor blades by local barbers and possible use of contaminated instruments during delivery are other most probable links for this outbreak. It is matter of serious humanitarian crises for communities in Pakistan to deal with this matter swiftly.

**Key words:** HIV/AIDS, Epidemic, Children, Developing countries, Reusable syringes, WHO, Sindh, Larkana, Pakistan.

### INTRODUCTION

HIV/AIDS is not mere a disease; it has become a nightmare for a large portion of population of developing regions, who lack basic understanding of this disease process. Around 90% of the AIDS victims are living in the developing countries where the incidence rate is aggravated by poverty, hunger, disease, lack of medical facilities, illiteracy and under-development<sup>2</sup>. With 20000 new HIV infections

in 2017, Pakistan has the second fastest growing AIDS epidemic in the Asia Pacific region, with the virus disproportionately affecting the most vulnerable and marginalized<sup>3</sup>. Recently in February such an outbreak was highlighted largely by national and international media. This unusual outbreak of HIV/AIDS in children below 5 years in District Larkana of Sindh Province of Pakistan.

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Till date general screening for HIV has been done 28,315 individuals from general population in Taluka Ratodero of District Larkana. Till now 812 have suspected HIV positive during this screening. There are 668 children and 144 adults. All suspected HIV cases were referred to HIV treatment center for confirmation. Till date 515 Children have been confirmed positive and linked to HIV Treatment center. Similarly, 108 adults have been declared HIV positive and linked HIV treatment center[1].

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#### MATERIALS AND METHODS

We gathered information through 6 cluster of surveys from 6 villages of Taluka Ratodero of District Larkana in the month of June 2019, each cluster carrying information from 14 patients with positive HIV on screening. We got information from 84 total HIV positive patients including 75 children with age < 12 years and 9 adults. 53 children were male and 22 children were females. 3 adults were male and 6 were female patients. We asked multiple questions in a set of questionnaire form

regarding their past medical history, previous intravenous medicine use by any doctor, history of blood transfusion, HIV status of parents, sexual behavior of adults, intravenous illicit drug use, birth history, use of instruments during delivery of baby and home based circumcision in boys[4]. and use of razor at barbers in the vicinity etc.

#### RESULTS

Out of six clusters of surveys in the 6 villages populations, 90% of parents told that they had got treatment for their children from same group of local authorized and unauthorized medical practitioners multiple times in last 3 years and they infused some medicines by syringes, they were not sure that those syringes were packed. Nearly all adults got intravenous infusions at same group of physician in last 3 years. 90% of interviewed mothers delivered their babies at local clinics, out of which 66% of females have HIV +ve on screening. Sterilization techniques of these clinics are very questionable. Another important clue was home based circumcision of 41% of male children with +ve HIV on screening. 49% of children and 100% of adult males with +ve HIV on screening used razor blades at same barbers' shops in the neighborhood in last 3 years. Nobody had history of blood transfusion, illicit drug use and homosexuality.

#### LIMITATIONS

We could not reach all patients so accuracy of results we got may carry some uncertainty.

| Associated factors   | Number of HIV +ve children with age < 12 years | Number of HIV +ve adults |
|--|--|--------------------------|
| Previous Intravenous Medicine use by medical Practitioner "A"* | 51   | 6                        |
| Previous Intravenous Medicine use by medical Practitioner "B"* | 41   | 4                        |
| Previous Intravenous Medicine use by medical Practitioner "C"* | 39   | 8                        |
| History of Blood transfusion                                   | 0  | 1                        |
| History of home based circumcision in male children            | 31   | 0                        |
| HIV status of Mother in case of minors                         | 0  | 0                        |
| Gay sex in adults  | 0  | 0                        |
| Use of razor at local barbers shops                            | 37   | 3                        |
| Use of Instruments during delivery in Mothers of minors        | 0  | 4                        |

\*"A" "B" "C" medical practitioners working in area

## DISCUSSION

This kind of outbreak in majority of children population is very unusual phenomenon as World Health Organization declared this outbreak as “Grade 2 Emergency”[3,7]. Mostly HIV infection is acquired through sexual intercourse, exposure to infected blood, or perinatal transmission<sup>5</sup>. One of the reasons might be the use of contaminated syringes. Unqualified health practitioners are filling the gap in these areas left by the government's failure to cater to the health-care needs of residents[8]. Additionally, barbers contribute to the spread of HIV by the reuse of razors. Extramarital affairs, sexual intercourse with sex workers, particularly male and transgender individuals, injection drug use, and same-sex relationships are possible reasons for the HIV/AIDS spread in rural Pakistan[8]. Transmission through sexual intercourse is theoretically zero in this case of majority of children population. Also vertical transmission through mother is factually zero because no any single mother was found positive, this is leaving theoretically the other factors for transmission of HIV like exposure to infected blood through reusable syringes, use of contaminated instruments during delivery, home based circumcision, history of blood transfusion and reuse of contaminated razor blades by local barbers. Use of same syringes for multiple infusions, use of unsterilized instruments at maternity care hospitals and home based circumcision and reuse of razor blades by barbers are by far more prevalent practices throughout rural areas of Sindh. Index-case could be approached through one of these ill practices by extensive targeted epidemiologic tools and techniques.

## CONCLUSION

This outbreak not only makes physical sufferings unbearable for the people but psychological implications of HIV stigma are far worse. Proper disease awareness, treatment, preventive measures are needed in

full extent to counter this outbreak prevailing in underprivileged communities of rural Sindh.

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