

Ocular and Pulmonary Manifestations in Addicts at AAS Center Daska

Ocular and Pulmonary Manifestations in Addicts

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ABSTRACT

Objective: To find out serious communicable or non-communicable ocular and pulmonary manifestations in addicts to reduce the morbidity or mortality in addicts.

Study Design: Cross-sectional study

Place and Duration of Study: This study was conducted at the AAS Center Daska, Sialkot for one month study from 21.10.2021 to 20.11.2021.

Materials and Methods: 60 samples were selected through non probability purposive sampling technique. History was taken. Ocular and general physical examination was performed. The collected data was analyzed by using SPSS version 25.

Results: The results of this study indicate that maximum percentage of age was from 30 to 60 years of age 80 %. Then age group within 20 to 30 years 15% and least was below 20 years with only 5 %. The illicit drug maximally used was heroin with 43.3%. Then was ice with 20 %.

Conclusion: Main ocular health problem seen was constricted pupils. HIV AIDS with pulmonary complications was leading pulmonary health hazard.

Key Words: AAS Rehabilitation center, Ophthalmoplegia, HIV AIDS, COPD.

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INTRODUCTION

Addiction is an irresistible impulse motivating someone for non-prescribed and recreational usage of pharmacological ingredients regardless of causation of deleterious effects on body¹. Two main components of addiction are strong urge and irresistibility². Over and over again non pharmacological utilization of illicit drugs leads to addiction. It is also affected by DNA sequences of that person along with external environment especially the behavior of other community members³.

Many substances are used for this purpose including but not limited to opiates, cocaine, ice, ethyl alcohol and cannabinoids⁴.

All these illicit drugs lead to structural and functional changes in the body. To certain level these can be reversed⁵. Almost all body organs are affected by the non-prescribed and recreational use of drugs of addiction. Ocular effects of these drugs are very dangerous and causing morbidity. There may be ocular infection, corneal ulcers, retinopathies and optic nerve abnormalities⁶. Endogenous endophthalmitis is one of drastic complication of intravenous or intramuscular use of illicit drugs. It may also result in occlusion of circulation leading to ischemic injury to retina^{7,8}.

Most of the addicts take ethyl alcohol either along with other drugs or single. Double and blurred vision are the main symptoms seen in acute use. Use of alcohol over a long period may cause Ophthalmoplegia, toxic Amblyopia and loss of thickness of retina⁹. It may also cause dry eye¹⁰. Chronic use leads to double images in both eyes along with loss of alignment of eyes¹¹.

Ischemia and new blood vessels formation on retina has been a feature in addicts using opium derivatives. Abnormality of platelets has also been correlated with its use¹². Chronic use of cocaine corneal, retinal and optic nerve abnormalities. It also causes nasal septum and epithelial defects¹³. It may lead to double vision and bulging of eyes¹⁴. Other than ocular effects pulmonary manifestations of addicts are also very deleterious. Intravenous injections of illicit drugs causes embolism and pneumothorax in both lungs¹⁵. It may lead to COPD, pulmonary tuberculosis and diseases of blood vessels of lungs¹⁶. Lungs swelling

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can be seen on postmortem examination in all types of addicts.¹⁷

MATERIALS AND METHODS

Study Design: It was cross sectional study.

Study Center: AAS rehabilitation center Daska and Sialkot medical college Sialkot.

Study Samples: 60 male addicts admitted in the center.

Inclusion Criteria: Only male admitted in the AAS rehabilitation center, Daska.

Exclusion Criteria: Anyone having any ocular or pulmonary disease before he started to take drug of abuse was excluded from the study.

Data Collection: After taking the consent from authority all the admitted addicts were examined for any ocular and pulmonary problem. Before examination a thorough history was taken. Both eyes were examined thoroughly. Any problem of sclera, cornea, iris, choroid, vitreous and retina were noted. Examination was performed by naked eye, ophthalmoscope and retinoscope. Evaluation related to lungs was performed with history, clinical examination, laboratory investigation and radiological examination where needed.

Data Analysis: Data was analyzed by using SPSS version 25. Descriptive data related to total addicts, drug of abuse and ocular as well as pulmonary

manifestations was obtained. Their percentage was deducted. Tables were formed.

RESULTS

The results of this study indicate that maximum percentage of age was from 30 to 60 years of age 80 %. Then age group within 20 to 30 years 15% and least was below 20 years with only 5%.

Table No 1: Descriptive data of age

	Number	Percentage
Below 20 years	3	5
20-30	9	15
30-40	23	38.4
40-50	16	26.6
50-60	9	15
Total	60	100%

Table No.2: Routes of administration of illicit drugs

	IV/IM	Oral	Inhalation	Total / %
Heroin	20	02	04	26 / 43.3
Opium	-	04	01	5 / 8.3
Ice	-	05	7	12/ 20
Alcohol	-	4	-	4 / 6.7
Cannabino ids	-	01	03	4 / 6.7
Cocaine	-	05	04	9 / 15
Total	20	21	19	60 /100%

Table No 3: Ocular manifestations in addicts

Ocular Manifestation	Opiates	Ice	Alcohol	Cocaine	Cannabinoids
Ocular Fungal infection	1	-	-	-	-
Bacterial infection	1	-	-	-	-
conjunctival	-	-	-	-	-
corneal	-	3	-	3	-
Optic nerve	-	-	1	-	-
Diplopia	1	-	1	-	-
Constricted pupils	13	-	-	-	-
Macular Degeneration	-	-	1	-	-
Retinal venous occlusion	1	1	-	1	-
Talc Retinopathy	1	-	-	-	-
Transient visual loss	-	2	-	-	-
Impaired Oculomotor Function	-	-	-	-	1
Dry Eye	-	-	1	-	-
Dilated Pupils	-	3	-	1	-

Table No 4: Pulmonary manifestations in addicts

Pulmonary Manifestation	Opiates	Ice	Alcohol	Cocaine	Cannabinoids
Pulmonary Tuberculosis	2	-	-	3	-
HIV/AIDS	8	-	-	-	-
COPD	9	3	-	8	4
Pulmonary Talcosis	2	-	-	-	-
Lung Malignancy	-	-	-	-	-
Nasal Mucosal/septum	-	2	-	5	-
Pulmonary edema	2	-	-	-	-

DISCUSSION

The illicit drug maximally used was heroin with 43.3%. Then was ice with 20%. The ocular sign which was the most prevalent was constricted pupils seen in opiate addiction as seen in another study¹⁸. Corneal ulcers were seen to be present in cocaine and ice addiction¹⁹. As seen in study alcohol consumption caused optic nerve damage in one addict²⁰.

Fungal endophthalmitis was caused in intravenous heroin abuser which was in accordance with another study²¹. Talc retinopathy was evident in heroin addict. Although only a single patient was seen yet with very serious consequences⁷. Keratitis was another ocular manifestation being seen in cocaine and ice abuse as seen in another study¹⁸. This was seen in drug sniffers. Macular thickness was reduced in one patient. Optic nerve atrophy was also seen. It was in accord to a study performed in China²².

With respect to pulmonary manifestations the most drastic outcome of intravenous abuse of heroin was HIV AIDS. 8 patients were referred to HIV Center Islamabad. Many studies in the past have indicated this grave complication among heroin intravenous addiction²³. Pulmonary tuberculosis was second most abundant pulmonary complication seen in cocaine and opiate addicts. As cocaine is sniffed and opiates sometimes inhaled²⁴. The maximum cases were that of COPD especially in cocaine and opiate poisoning. This finding was in accordance with many previous studies^{15,16,17}. Nasal septum inflammation along with erosion was evident in cocaine^{18,19} and ice²⁴ sniffers.

CONCLUSION

Among drug abusers life threatening complications are seen. These complications are not only deleterious to addicts but also a grave public health hazard. Ocular and pulmonary manifestations seen also cause in morbidity and hence financial burden on society.

Author's Contribution:

Concept & Design of Study:	Shahid Anwar Bhatti
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Data Analysis:	Shamshad Ali, Muhammad Asif
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Conflict of Interest: The study has no conflict of interest to declare by any author.

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