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Volume 4 Number 2, April - June 2011

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Indian Journal of Forensic Medicine and Pathology

April - June 2011
Volume 4 Number 2

Contents

Indian Journal of Forensic Medicine and Pathology
Volume 4, Number 2, April - June 2011

Schizophrenic chained to tree for 15 years: where we stand under Mental Health Act 1987?

Behere Prakash B. *
Reddy Srikanth M. **
Yadav Richa ***
Behere Shashank P****

After 64 years of independence the situation in India still seems very bleak as far as mental illness is concerned. Mr. SRG, a resident of Ajansara, Hinghaghat Taluka of Wardha District was chained to a tree for 15 years like an animal in the courtyard outside his house. Many of the villagers would visit the temple near their house and look at him, but nobody rescued him.

CHAINED FOR 15 YEARS IN VILLAGE AJANSARA, TALUKA HINGHANGHAT

HIS SUMMARY OF ILLNESS

Mr. SRG, a 45 years old divorced male, a resident of Ajansara, Taluka Hinganghat, District Wardha was brought by his younger brother Valmik and mother Sitabai on 30th April at 2 a.m. Shockingly, he had been chained by his hand to a tree outside their house for the last 15 years.

The duration of his illness was 20 years and his predominant symptoms were of withdrawn behavior, fearfulness, abusiveness, aggressiveness, suspiciousness, sleep disturbance and poor personal care. The patient had 2 suicidal attempts in the past-once by insecticide poisoning (18 years ago) and once by jumping into a well (17 years ago). He was admitted 4 times to regional mental hospital in Nagpur, Maharashtra (once for 3 years and 3 times for 1 year each). He underwent faith healing as well. He was violent towards the villagers and his family members. With the consent of, and possibly support of the villagers, he was tied by a chain to a tree like an animal. He had not showered or practiced basic personal hygiene for almost 15 years. He was disheveled and had a shaggy beard and wild, overgrown hair. He came to be known amongst the villagers as "**Bedi wale Baba**"**(Chained Baba)** for the last 13 years. Villagers would come and ask him questions during the village fare at a nearby temple. When he would slap the villager who was asking the question, they considered it an omen that their work would be done.

There was a family history of mental illness in his grandfather. He had an 18 years old daughter living with his divorced wife.

On mental state examination on the day of admission, the patient was a middle aged male of average built sitting comfortably on a chair with hair and beard grown and soiled. The patient smelled very badly, his clothes were soiled and dirty. He had a metal chain around his left hand and had a scar mark around his right hand. His behavior was withdrawn and he had reduced psychomotor activity. Rapport couldn't be established. He had a monotonous speech with a low volume and productivity. His thought

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(Received on12.10.2010, accepted on 20.04.2011)

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stream was retarded and his affect was blunt. He demonstrated echolalia (Repeating the words) as well. On cognitive testing the patient was in clear consciousness and fully oriented. However the patient did not cooperate for further mental state examination. He had no insight towards his illness.

He was hospitalized in Psychiatry ward of Mahatma Gandhi Institute Of Medical Sciences, Sevagram on 30th April, 2011 at 2:00 A.M., whilst brought in chain.

In psychiatry ward on day of admission

He was put on medication and the chain was removed.

At the time of discharge from Psychiatry Ward

He was commenced on injection of long acting drugs along with oral medication. Advantage of injection is that the medication will be released in the body continuously for almost 1 month as it is oil based & this is very cheap. The cost of treatment per day comes to Rs.1.40/-. His family was counseled for illness & drug compliance & regular drug intake for indefinite period.

Psychoeducation was given about the illness, treatment & rehabilitation. The family was advised not to restrain him in future and in case of help to contact us unhesitantly round the clock. We have also written to Collector, Civil Surgeon Wardha to support the family by providing free medications to the patient.

In case in the future, family members cannot cope with the patient and his aggressive behavior, then he should be hospitalized in Regional Mental Hospital, Nagpur under reception order of the magistrate under Mental Health Act of 1987.

After discharge he expressed that he wants to do farming with his brother.

Chained for 15 years in village Ajansara, Taluka Hinghanghat

In psychiatry ward on day of admission

He was put on medication and the chain was removed.

At the time of discharge from Psychiatry Ward

DISCUSSION

Whilst he was chained for 15 years. No NGOs, Human Rights organizations, government and even Andhashraddha Nirmoolan Samiti did anything to rescue him. In India in 2001, there was a tragic incident resulting in the death of 25 chained mentally ill in Erwadi, in a private asylum in Tamil Nadu, which shook the nation.(Behere et al., 2001)

Indian lunacy act of 1912 modified to Indian mental Health Act, 1987. Chapter VIII deals with protection of human rights of mentally ill persons.(Behere et al., 2010) The section 81 states (1) No mentally ill person shall be subjected during treatment, to any indignity whether physical or mental or cruelty. Even this act could not help prevent the chaining of the mentally ill.

There is an amendment to this act which is in a draft stage known as Mental Health Care Act 2010. In this act there is proposal in section 9 : Right to protection from Cruel, Inhuman, and Degrading Treatment which states that

i. All person with mental illness have a right to live with dignity.

ii. No person with mental illness shall be subjected to any cruel inhuman or degrading treatment in a mental health facility.

iii. Protection from cruel inhuman and degrading treatment means that all persons have the following minimum rights in mental health facilities:

a) to live in safe and hygienic environment

b) to have adequate sanitary conditions

c) to have facilities for leisure, recreation, education and religious practices

d) Protection of privacy, in particular for women

e) Not to be forced to undertake work in a mental health facility they do not wish to do and appropriate remuneration for work when undertaken.

f) to have adequate provision for preparing the person for living in the community

g) to have adequate provision for food, space, and access to articles of personal hygiene. In particular, women's personal hygiene needs shall be adequately addressed by providing access to items that may be required during menstruation.

h) to not be subject to compulsory tonsuring (shaving of head hair).

i) to wear own personal clothes and not be forced to wear uniforms provided by the facility.

j) to be protected from all physical, emotional and/or sexual abuse

Moreover **Section 53: Restraint and Seclusion** further proposes

i. Physical restraint or seclusion may only be used when it is the only means available to prevent imminent and immediate harm to person concerned or to others.

ii. Physical restraint or seclusion may only be used if it is authorized by the psychiatrist in charge of the person's treatment at the mental health facility.

iii. Physical restraint or seclusion shall not be used longer than is absolutely necessary to prevent the immediate risk of significant harm.

iv. The medical officer in charge of the mental health facility shall be responsible for ensuring that the method, nature of restraint or seclusion, justification for its imposition and the duration of the restraint or seclusion are immediately recorded in the person's medical notes.

v. In no case will restraint or seclusion be used as a form of punishment.

Though the Mental Health Care Act of December, 2010 addresses the issues of basic rights of mentally ill more clearly, still it is not perfect and it needs several modification before it becomes a law to safeguard the interests of mentally ill patients.

ACKNOLEDGEMENT

I am thankful to Dr Shashank P. Behere for going through the manuscript and do the necessary edit.

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Indian Journal of Forensic Medicine and Pathology
Volume 4, Number 2, April - June 2011

Determination of Personal Height from the Foot Lengh in Maharashtra Region

Pawar Sudhir E*

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ABSTRACT

Aims and objective: In this study an attempt is made to find out the correlation between foot length and total body height in Maharashtra region and to derive a regression formula for estimation of total body height from foot length**. Materials and methods**: The study is done on 212 medical and paramedical students from Maharashtra region. The age of the subjects ranged between 18 and 25 years. The length of the foot is measured between the back of the heel andthe tip of great toe or second toe whichever is longer using spreading calipers. **Results**: The results obtained were statistically analyzed and attempt was made to derive alinear regression formula between foot length and total height of an individual. The results of this study show a definite correlation between foot length and height of an individual. The data from the present work may be useful for anatomists, anthropologists, and forensic expertsduring forensic identification.

Key words: Foot length, Total height, Correlation, Regression formula, Forensic experts.

INTRODUCTION

"Height" has remained a pertinent area of interest for researchers in the past. Height can be estimated from different parts of body. Numerous studies have reported the relation between height and different long bones of our body. These help us to find out the height of an unknown individual when only a few long bones are available for examination. This observation is very important not only for the anatomist but also for the forensic medicine experts in the analysis of medico legal cases (MLC) that are carried out routinely to establish the identity of an unknown.

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(Received on 10.09.2010, accepted on 12.02.2011)

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When muddemal (bones and masses of human body) are obtained by the police, they are invariably sent for forensic investigation to Medical Colleges as medico legal cases (M.L.C.). The medical expert is expected to comment on a series of questions put forth; such as if the bones belong to human being, the time since death, possible cause of death, any possibility of poisoning, and possible race / sex / age / height of and unknown individual. In this regard, estimation of the possible height from human remains (bones or body parts) becomes pertinent. Earlier studies by Singh & Sohal (1951)[1], Singh & Singh (1956)[2], Charnalia (1961)[3], Ahawale (1963)[4], Joshi et al (1964)[5], Qamra et al (1979)[6], Shroff & Vare (1979)[7] have reported formula for calculating the stature from bones, but no universally applicable formula has been derived, as the relationship between long bones and height differs according to race, age, sex and side of body[8]. However, long bones are not always available for examination. Foot measurements have been shown to be reliable parameters for the prediction of height as reported in earlier

studies [3, 6, 9-10, 13] in different populations of India. It is shown that each race requires its own formula for accurate estimation of stature. For the Maharashtrian population only a few studies by Chavan et al (2009)[12] conducted in the rural area of Maharashtra are available. An attempt hence is made to derive regression formula to calculate height of an individual from the foot length in a Maharashtrian population.

MATERIALS AND METHODS

In the present study the parameters like "Foot length" and "height" were considered. These were measured on 212 subjects (107 males and 105 females).The subjects included in the study were medical and paramedical students belonging to various regions of Maharashtara .The subjects were from similar socio economic background. The age group of students ranged from 18 to 25 years. The measurements were taken between 2 to 5 p.m. to eliminate the discrepancies due to diurnal variation. The Foot length was measured using sliding calipers. The Foot length was defined as the direct distance from the most prominent point of back of the heel to the tip of the big toe or to the tip of second toe when the second toe is longer than the big toe. Foot lengths were taken independently on left and right side of each individual. The height of individual was measured using height measuring instrument. Results were analyzed to find out mean, standard deviation (S.D.), standard error (S.E.), and coefficient of correlation (r), and the regression equation to calculate height of unknown individual from foot length was derived. The regression equation for the estimation of height was derived as 'Y = a + b X', where Y= Height (cm), a= constant value, b= slope & X= Foot length.

RESULTS

Table I: Descriptive statistics for foot length and height in males (n= 107)

Parameters	Foot length(cm)	Height (cm)
Range	23.0 -27.7	160-178
Mean	25.46	170.09
S.D.	1.02	5.19
S.E.	0.09	0.50
Correlation-coefficient (r)	**0.530**	

Table I shows the descriptive statistics for foot length and height and the correlation coefficient between the foot length and height in males. The range of foot length in male is 23.0 to 27.7 cm and for height is 160 to 178 cm. The mean foot length is 25.46 cm and of the mean height is 170.09 cm. The Correlation Coefficient factor (r) for males is found to be 0.53.

Table II: Descriptive statistics for foot length and height in females (n= 105)

Parameters	Foot length(cm)	Height (cm)
Range	20.5-26.5	142-172
Mean	22.90	155.80
S.D.	1.26	6.63
S.E.	0.12	0.64
Correlation-coefficient (r)	**0.705**	

Table II shows the descriptive statistics for foot length and height and the correlation coefficient between the foot length and height in females. The range of foot length in female is 20.05 to 26.5 cm and for height is 142 to172 cm. The mean foot length is 22.90 cm and means height is 155.80 cm. The Correlation Coefficient factor(r) for females is found to be 0.70.

Table III: Descriptive statistics: Foot length & height in males & females together (n= 212)

Parameters	Foot length(cm)	Height (cm)
Range	20.0-27.7	142-178
Mean	24.19	163
S.D.	1.71	9.30
S.E.	0.11	0.63
Correlation-coefficient (r)	**0.840**	

Table III shows the descriptive statistics for foot length and height and the correlation coefficient between the foot length and height when the data is considered together for both males and females. The range of the foot length is 20.0 to 27.7 cm and for height is 142-178 cm. The mean foot length is 24.19 cm and means height is 163 cm. The Correlation Coefficient factor(r) is found to be 0.84 Mean foot length and stature in males is found to be larger than females.

REGRESSION FORMULA FOR STATURE ESTIMATION FROM FOOT LENGTH

For males: Y= 101.61 + 2.69 (Foot length)

For Females: Y=71.53+3.68(Foot length)

For both male and female (combined):

Y= 52.7+4.56 (Foot length)

DISCUSSION

The correlation coefficient between stature and foot length was found to be statistically significant and positive indicating strong relationship between the two parameters. Regression equation for estimation of height was formulated later on using foot length in our study. The result indicates that the foot length provides reliable means in reconstructing the height of an unknown individual. The results from the present study shows that the correlation coefficient factor for male is 0.53, for female are 0.70 and 0.84 for males and females combined, which are similar to that reported in the past studies. The results obtained from various studies that attempted to reconstruct stature from various dimensions of feet demonstrated a higher correlation coefficient and a lower standard error of estimation between the stature and foot length. A study carried by Charnalia (1961)[3] in Pondicherry state shows a significant correlation between height and foot length, where correlation coefficient was 0.46. Qamara et al (1980)[6] have conducted study in northwest India and derived a correlation coefficient for males (r= 0.69) and females (r= 0.70). A study done by Krishna & Sharma (2007)[9] in North Indian Rajput population shows a correlation coefficient for males (r=0.732) and females (r= 0.739). Similarly Kanchan et al[11] have reported a significant correlation between stature and foot length in North Indian Gujjar population for males and females and for males and females taken together. Our findings with regard to the correlation for male and females together were similar to that reported by Kanchan et al [11]. Kanchan (2010) [13] has reported the utility of universal regression formula in stature estimation from foot lengths. Another study carried in Sri Lankan population by Ilayperumaet et al (2008) [14] shows a positive relation between height and foot length where the correlation coefficient for maleand female was 0.724 and 0.719 respectively. Thus, findings of our study are in accordance with that shown in earlier studiesthat show statistically significant correlation between height and foot length.

CONCLUSION

Correlation coefficient between height and foot length was found to be statistically significant and positive indicating a strong relationship between the two parameters. Hence, it can be concluded that the foot length provides reliable means of reconstructing the height of an unknown individual. The regression models derived in our study can be applied successfully for estimation of personal height in Maharashtrian population.

ACKNOWLEDGEMENTS

We are thankful to our deputy Director and Principal Sir for giving permission to carry out this study in our college (PDVVPF's Medical College, Ahmednagar, Maharashtra). We are also thankful to our statistian Mr. Lokhande for statistical analysis of the data.

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Indian Journal of Forensic Medicine and Pathology
Volume 4, Number 2, April - June 2011

Reformation of Juvenile in conflict with Law: An Indian Study

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ABSTRACT

Juvenile delinquency is a major challenge to the present society all over the world. Societal views and response towards it is changing from time to time. Reformation of the juvenile delinquents through educational and vocational training, and psychological counseling in the Remand home is one of the methods currently practiced in India. Present study on thirty inmates and thirty ex-inmates of Remand home indicated that the reformative method had some positive influence on their social life, for bringing back them to main stream of the society.

Key Words: Juvenile delinquent, Juvenile in conflict with law, Remand home, Reformation, Rehabilitation

INTRODUCTION

Juvenile delinquency has posed problems from the time immemorial, and what has changed is the nature and definition of behavior considered undesirable, from time to time. Definition of Juvenile Delinquency differs from sociologist's point of view as well as legal point of view. Again, the legal definition differs from country to country and from time to time. [1]

In Indian context, as per Juvenile Justice Act (1986), juvenile delinquency means commission of offence (any act or omission punishable under law in force at a given time) by a boy less than 16 years of age or a girl less than 18 years of age. However, the amendment brought to Juvenile Justice Act, 1986 that came into force as the Juvenile Justice (Care and protection of Children) Act, 2000 defines juvenile as a person who has not completed eighteen years of age irrespective of gender and the term Juvenile delinquent has been replaced by Juvenile, in conflict with the law. [1, 2]

Number of Juvenile delinquency is increasing year by year in India. In the years 2001 and 2002, the total number of juveniles apprehended in India for cognizable crimes under the Penal code were 16509 and 18560 respectively, besides 5154 and 8332 cases reported under Local and special laws in the same corresponding years.[1, 2] Involvement of female juveniles in crimes was also increasing. The ratio of girls to the boys arrested for committing offences under IPC was 1:12 for the year 2001 against 1:16 in the year 1978 in spite of the fact that since the year 2000 the upper age limit of boys had been raised from 16

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(Received on 30.01.2011, accepted on 24.04.2011)

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to 18 years, that means inclusion of more number of male offenders under juvenile delinquents than before. The number of violent crimes like murder, rape, robbery and rioting were quite substantial though much smaller compared to non-violent crimes like theft. Similarly, taking the juvenile delinquency in the state of Maharashtra for the years 2001, 2002, 2003 and 2004 the figures were 4990, 5379, 5070 and 5496 respectively. On the year 2004, in Maharashtra, 117 juveniles apprehended for murder,73 for attempt to murder, 63 for rape, 96 for robbery, 1195 for theft, 6 for criminal breach of trust, 22 for causing death by rash and negligent act and 148 for gambling. During that year, the number of juveniles apprehended under various crimes in the Pune district under the regions Pune city, Pune railways and Pune rural were 523, 4 and 88 respectively.[3] In that year, 939 juveniles were admitted to Remand homes situated at Pune .[4]

Again, it is worth to mention here that the above-mentioned figures are not the true figures and represent only the tip of iceberg as many cases might have went unreported due to various reasons.

The basic logic behind putting the juvenile delinquents in Remand home are: 1) To isolate them away from influencing other youngsters who are on the proper paths along with rest of the law abiding society 2) To reduce their interface and relationship with serious adult offenders and 3) To isolate them from stigma and negativity of being incarcerated. [5, 6]

Traditionally, the juvenile justice system has emphasized the goals of treatment and rehabilitation of young offenders, while protecting them from punishment, retribution, and stigmatization.[7]

A youth entering the Juvenile Justice System has the opportunity to receive intervention assistance from the state. In the care of the state, a youth may receive drug rehabilitation assistance, counselling, and educational opportunities. The success of the Juvenile Justice System is measured by how well it prepares youth to re-enter the community without committing further crimes. Optimally, all juvenile detention facilities would catch youths up on their education, provide them with job training, give them the experience of living in a safe, stable environment, and provide them with assistance to break harmful habits. [8]

In the Remand home at Pune, inmates were given regular educational and vocational training and psychological counseling on weekly basis. When they became offensive, they were given additional tasks like cleaning of the Remand home, serving food to all other inmates and gardening. The present study was an attempt to know the effects of reformation at Remand home, considering it is a small step towards making crime free society.

AIMS AND OBJECTIVES

i. To know the effects of present approach of reformation upon the inmates of Remand home, Pune.
ii. To study the effects of reformation upon the ex-inmates of Remand home, Pune who were released at least two years ago.

MATERIALS AND METHODS

For the present prospective study, necessary written permission was obtained from the District Judge, Pune, the higher authority of Remand home. Thirty male inmates and thirty male ex-inmates of Reformatory School run by the District Probation and After-Care Association, Pune were individually interviewed using two separate predesigned open ended, structured questionnaire formats from May 2005 to November 2005. As there were no female inmates at the Remand home, no study was conducted upon female juvenile delinquents. Prior to interview, informed consent was taken from the individuals/ competent authorities after gaining their confidences. Ex-inmates who had been released from the Remand home at least two years back were only considered for the present study. The Remand home authority helped us to trace them. Those who were reluctant to participate were excluded from the present study. While evaluating the alleged juvenile delinquents, especially the ex-inmates of Remand

home, the effects of reformation and post reformation social life were also assessed to know the advantages, disadvantages of such reformation and rehabilitation programmed.

RESULTS

Table 1: Age and nature of juvenile delinquency of inmates of Remand home

Age of inmates of Remand home	Ticketless traveling	Theft	Robbery	Physical assault	Gambling	Murder	Rape	Total
7-10 years	0	0	0	0	0	0	0	0
10-12 years	0	3	0	0	0	0	0	3
12-14 years	0	2	1	0	0	1	0	4
14-16 years	0	5	1	0	0	1	1	8
16-18 years	1	5	1	2	1	5	0	15
Total	1	15	3	2	1	7	1	30

Table 1 shows out of thirty inmates interviewed at Remand home, 50% (N=15) were involved in different types of thefts, followed by involvement in serious offence like murder in 23.33% (N=7) cases. Rests of them were involved in offences like ticket less traveling, robbery, physical assault, gambling, and rape. Age group 16-18 years were responsible for 50% (N=15) of juvenile delinquency, followed by age group between 14-16 years, who were responsible for 26.66% (N=8) of juvenile delinquency. No single case of juvenile delinquency could be found in the age group between 7-10 years.

Table 2: Duration of stay of inmates at Remand home on date of interview according to nature of offence

Duration of stay	Ticket less traveling	Theft	Robbery	Physical assault	Gambling	Murder	Rape	Total
1-15 days	0	4	1	0	0	3	0	8
15-30 days	0	2	1	0	0	2	1	6
1-3 months	0	5	1	1	0	2	0	9
3-6 months	0	3	0	0	0	0	0	3
6months-1 year	0	0	0	1	1	0	0	2
1-2 years	1	0	0	0	0	0	0	1

Table-2 shows range of duration of stay at Remand home by the inmates on the date of interview that varied from 1 day to more than 3 years. Nine inmates (30%) were staying since last 1-3 months whereas 8 inmates (26.66%) were admitted recently within 1-15 days. Out of 30 cases, one inmate admitted under the offence of theft had spent more than 3 years at different Remand homes with history of running away from the Remand homes on several occasions.

Table 3: Opinion of inmates about effects of reformation at Remand home distributed as per nature of offence

Opinion about reformation	Ticketless traveling	Theft	Robbery	Physical assault	Gambling	Murder	Rape	Total
Good effect	1	9	1	1	1	4	0	17
No effect	0	2	1	0	0	2	1	6
Un-determined	0	4	1	1	0	1	0	7
Total	1	15	3	2	1	7	1	30

Table-3 shows seventeen inmates (56.66%) had opinion that the undergoing reformative process at Remand home was beneficial for them. Six inmates (20%) said it had no effect and one out of them admitted 22 days ago under the offence of theft, and previously involved in offence of murder, expressed his desire to continue criminal activities in future. Seven inmates (23.33%) were undetermined about the effects of reformation.

Table 4: Age and nature of juvenile delinquency of ex-inmates of Remand home

Age of juvenile delinquency	Theft	Robbery	Physical assault	Attempt to murder	Murder	Rape	Rash & Negligent Act	Fraud	Total
7-10 years	0	0	0	0	0	0	0	0	0
10-12 years	2	0	0	0	0	0	0	0	2
12-14 years	2	1	2	1	1	0	0	0	7
14-16 years	1	1	0	1	1	1	0	1	6
16-18 years	0	3	2	2	5	2	1	0	15
Total	5	5	4	4	7	3	1	1	30

Table-4 shows out of thirty ex-inmates of Remand home, 23% (N=7) were admitted under the offence of murder, 16.66% (N=5) were admitted for theft, 16.66% (N=5)) were admitted for robbery, 13.33% (N=4) were admitted for physical assault, 13.33% (N=4) were admitted for attempt to murder, 10% (N=3) were admitted for offence of rape. However, out of those thirty ex-inmates of Remand home, 13.33% (N=4) of them claimed that they were not involved in the alleged offences. 70% (N=21) of them admitted to the Remand home during their age of 14-18 years.

Table-5 shows out of thirty ex-inmates of Remand home, except 10% (N=3) ex-inmates who were neither employed or nor studying on the date of interviews, 20% (N=6) were continuing their education, while the rest 70% (N=21) were engaged in some sort of job or work ranging from

Table 5: Current occupational status of ex-inmates of Remand home distributed as per their earlier offences

Current occupation	Theft	Robbery	Physical assault	Attempt to murder	Murder	Rape	Rash and Negligent act	Fraud	Total
Student	1	3	1	0	1	0	0	0	6
Part time job	0	1	0	2	0	0	0	1	4
Regular low profile job	2	1	1	0	1	0	0	0	5
Regular middle/high Profile job	0	0	0	0	1	0	0	0	1
Other works	2	0	2	2	3	2	0	0	11
Doing nothing	0	0	0	0	1	1	1	0	3
Total	5	5	4	4	7	3	1	1	30

unskilled labor to middle profile job. Out of those 21 engaged individuals, 10% (N=3) had been rehabilitated by the Remand home authority.

Table-6 shows 43.33% (N=13) ex-juvenile delinquents had undergone reformation at Remand home between 6months to 1 year, 30% (N=9) had between 3 to 6 months, 23.33% (N=7) had between 1day to 3moths. Out of those thirty ex-juvenile delinquents, only 1 (3.33%) had undergone reformation at Remand home between 1-2 years.

Table 6: Duration of reformation undergone by ex-inmates of Remand home distributed as per

Duration at Remand home	Theft	Robbery	Physical assault	Attempt to murder	Murder	Rape	Rash and Negligent act	Fraud	Total
1day-3 months	1	1	1	0	1	1	1	1	7
3- 6 months	2	3	2	1	1	0	0	0	9
6months-1 year	2	1	1	3	5	1	0	0	13
1-2 years	0	0	0	0	0	1	0	0	1
Total	5	5	4	4	7	3	1	1	30

Table-7 shows out of thirty ex-juvenile delinquents, except 10% (N=3), rests 90% (N=27) ex-juvenile delinquents opined that the reformation undergone at Remand home had positive influences in their later social life.

DISCUSSION

Regarding the efficacy of reformative process, it has been said that human beings are not putty that can be remolded at will by benevolent intentions. The records of juvenile delinquents showed that reformation of even young offenders was not always possible.[1] In our present study, 76.66% (N=23) inmates and 70% (N=21) ex-inmates of Remand home were adolescents, between age of 14-18 years, either during commission of juvenile delinquency or admission to the Remand home.

Table 7: Opinion of ex-inmates about effects of reformation at Remand home distributed as per nature of offence

Effects of Reformation	Theft	Robbery	Physical assault	Attempt to murder	Murder	Rape	Rash and Negligent act	Fraud	Total
Good	4	4	4	3	7	3	1	1	27
No	1	1	0	1	0	0	0	0	3
Total	5	5	4	4	7	3	1	1	30

A number of studies carried out by Hodges & Tait, and Gaig & Furst showed that there were no difference regarding future criminal careers of juvenile delinquents given treatment and those not exposed to any treatment.[1] Urbaniok F et al. reported that overall, 71% of offenders reoffended, and 29% with a violent or sexual offence. Results of their study showed that young delinquents sentenced and committed to penal reformative training had a high recidivism risk.[9] Some authors claimed that one of the reformatory schools was 47% successful. That means some of these misled people had been taught the right

attitude to cope with society.[5] Greenwood & Turner reported that aftercare programmed had a modest effect on post release arrest and behavior. Haghighi & Lopez found that 62.5% of the juveniles were rated successful in group home treatment programmed.[10] Cheung CK et al. collecting data from 190 delinquents in Hong Kong reported that developmental group activities were beneficial to delinquents who spent less time with family and/or more time with friends. For delinquents in general, developmental group activities were helpful in diminishing delinquency.[11] In our present study, none of the ex-inmates of Remand home were involved in crime after their release from the Remand home. However, two inmates of Remand home were found admitted to Remand home on repeated occasions.

Alfred C. Schnur reported, psychotherapy time available to each inmate at reformatory school is very less, hence unable to bring any change in young minds. He also pointed out; lavish treatment at reformatory institution may cause the juvenile to return to crime again.[1] In the present study, it was observed that the duration of psychological counseling available to the inmates of the Remand home was very less.

Andrade RC et al. and Gosden NP et al. Reported, psychiatric disorders like attention-deficit/hyperactivity disorder, conduct disorder, oppositional defiant disorder, anxiety disorder and depressive disorder, illicit drug abuse, and regular alcohol use are more prevalent among juvenile delinquents.[12, 13]

MacMahon JR reported, exercise can reduce anxiety, tension and depression, and increase self-esteem. Therefore, recreational sports in the remedial programmed for juvenile delinquents will impart desirable educational, social and personal values.[14]

Petrosino A et al. reported, 'Scared Straight' and other programmes involving organised visits to prison by juvenile delinquents designed to deter participants from future offending through first-hand observation of prison life and interaction with adult inmates have a harmful effect and increase delinquency relative to doing nothing at all to the same youths.[15]

In the Remand home at Pune, there was neither facility for recreational sports activities nor any facility for assessment and treatment of psychiatric disorders of inmates. They were never subjected to programme like 'scared straight'. However, 56.66% juvenile delinquents undergoing educational and vocational training, and psychological counseling at the Remand home and 90% ex-juvenile delinquents undergone the same reformative process opined that reformation at the Remand home had positive influence on their life. However, one inmates of Remand home allegedly involved in theft and murder was adamant to carry out his criminal activities in future. This clearly indicates that juvenile delinquents need more quality and quantity of psychological counseling as pointed out by Alfred C. Schnur.

Ganga N. and Ravichandran P. reported that 62% of juvenile delinquents sought employment and resettlement with parents after being released from the Remand home, whereas 33% wanted to join their parents and continue studies.[16] Lipton, Mortinson and Wilks in their study concluded that with few and isolated exceptions, the rehabilitative efforts have no appreciable effect on recidivism.[1] In our present study, 20% (N=6) ex-inmates of Remand home were continuing their education, while 70% (N=21) were engaged in some sorts of job or work ranging from unskilled labor to middle profile job. Out of those 21 engaged individuals, 10% (N=3) had been rehabilitated by the concerned authority. In our present study, none of the ex-inmates of Remand home were involved in crime after their release from the Remand home. However, two inmates of Remand home were found admitted to Remand home on repeated occasions.

Four ex-inmates claimed that they were innocent but wrongly implicated even under serious cognizable offences like rape and murder and put in the Remand home. If there was any truth, the law agency dealing juvenile delinquency must act cautiously so that no innocent juvenile is incarcerated.

CONCLUSION

1. As per the opinion of 56.66% inmates and 90% ex-inmates of Remand home, Pune, the ongoing reformative process had some beneficial effects to divert them from delinquent path. Therefore, the reformatory programmed should be continued till better alternative method is available for correction of juvenile offenders.

2. Whatever may be observations of different workers in this field regarding reformation and rehabilitation of juvenile delinquents; it is responsibility of the state to keep trying the best available method for correcting juveniles in conflict with law for the betterment of society, as serious antisocial behavior does not develop spontaneously.

3. Under the process of reformation at Remand home, recreational sports, meditation, psychological counseling of the parents should be included for better results.

4. The exact nature and extent of benefits from such reformatory method can only be evaluated by involving large numbers of inmates and ex-inmates of Remand home for longer duration of study.

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Indian Journal of Forensic Medicine and Pathology
Volume 4, Number 2, April - June 2011

Study on Penoscrotal Trauma Cases in North Bengal Medical College

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ABSTRACT

Background: There is very little documentation of Penoscrotal Trauma cases are reported worldwide. The present study was plan to study the incidences of Penoscrotal Trauma related and its related mortality in the North Bengal region. **Material & Methods:** the cases of Penoscrotal Trauma brought between two years (2009-10) to the General Emergency and Department of Forensic Medicine, North Bengal Medical College, was included. The details about the nature, manner etc. were recorded in pre-designed proforma. **Results:** The cases were classified according to their etiology into Occupational, Road Traffic, Coital Injuries, Physical Assault and Animal Attack. The Penile Fracture and frenular tear were more commonly injured during coitus. Avulsion scrotal skin, penile skin and crush injury of scrotum were mostly seen in road traffic accident, while Penile Amputation is found in cases of physical assault as well as Occupational injuries. Amongst all the type of penoscrotal injuries, majority of the victim were died due to avulsion of the scrotum. Amongst the cases admitted to hospital, no patient died when they admitted with penile fracture or frenulum tear. Number of cases comes to postmortem is more than the case admitted to the Hospital. **Conclusion:** Person sustained penoscrotal injuries have high mortality rate.

Key words: Penoscrotum, Penile Fracture, Penile Amputation, Penetrating Injury to Penis, Frenular Tear, Avulsion of Penile & Scrotal Skin, Penoscrotal Crush Injury.

INTRODUCTION

Penoscrotal Trauma cases may not be commonly found in the Emergency as well as Post Mortem Centres. This is due to the well protected position of the penoscrotum in between the Pubic Bones and thighs, though Injury may occur in blunt force and penetrating injuries.[1] Though the major blunt penile injury cases include penile rupture and skin loss from strangulation and degloving, cases of penetrating penile injury due to stab or gunshot injuries are also seen.[1] Self inflicted wounds and bites are also causes of penoscrotal injuries.[1]

Penile fracture is the traumatic rupture of the corpus cavernosum. Traumatic rupture of the penis is relatively uncommon and is considered a urologic emergency.[2] Traumatic rupture of the corpus cavernosum is a relatively rare event; only 110 cases have been reported worldwide.[3] Penile amputation involves the complete or partial severing of the penis. A complete transection comprises severing of both corpora cavernosa and the urethra.[2] Penetrating injury is the result of ballistic weapons, shrapnel, or stab injuries to the penis. Penetrating injuries are most commonly seen in wartime conflicts and are less common in civilian medicine.[2] Penile soft tissue injury can result through multiple mechanisms,

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(Received on 16.12.2010, accepted on 18.05.2011)

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including infection, burns, human or animal bites, and degloving injuries that involve machinery.[2] Penile amputation is rare, with most cases being reported sporadically. This study was undertaken to find out pattern of penoscrotal injuries in relation to its cause.

MATERIAL AND METHODS

In the present demographic study, the Penoscrotal Trauma cases being brought to the General Emergency at North Bengal Medical College & Hospital (NBMC&H) and Department of Forensic Medicine, North Bengal Medical College, in the last two years (2009-2010) are taken into account. The cases were broadly classified into penile fracture, penile amputation, penetrating injury and penile soft tissue injury as per nature of injury. Penile soft tissue injury was further sub-classified into frenular tear, avulsion of penile skin, avulsion of scrotal skin, and penoscrotal crush injury. The cases were further classified according to their etiology into Occupational, Road Traffic, Coital Injuries, Physical Assault and Animal Attack. The information regarding cause of injury is obtained by reviewing case sheet, postmortem records and by interviewing the patient in living cases and from the relative or friends in fatal cases. Study adhered to ethical guidelines of biomedical research. All the cases in which penoscrotal injury is associated with other fatal injuries were excluded from the study.

RESULTS

In the period of two years (2009-10), the number of penoscrotal injury cases admitted in the General Emergency of NBMC&H was 55 out of a total 15843 trauma cases. The total number of cases brought for Post Mortem Examination in the same period was 3567 out of which 102 cases were due to penoscrotal trauma. While the incidence of penoscrotal trauma cases admitted in the hospital was 0.35%, the incidence of cases during Post Mortem Examination was higher (2.8%). Table 1 shows that avulsion of scrotal skin was the most common type of penoscrotal injury, accounting for 26.75%, followed by avulsion of penile skin (21.02%). Table 2 shows the etiology of Penoscrotal Injuries, where Road Traffic Injury is the main contributory factor (46.50%). Table 3 shows avulsion of scrotal skin being the most fatal type injury.

DISCUSSION

There is not much literature available about Penoscrotal Trauma. It is seen that there is a steady rise in the number of penoscrotal injury cases which might be due to underreporting of cases earlier on. In the study conducted between April 1995 to October 2002 in Saudi Arabia, 19 cases of penile fracture were reported which was 12 in the previous years, an increase of 58% [5]. In the present study, 14 cases of penile fracture was seen which accounted for 8.92% of the penoscrotal injuries of which coital injury was the main contributing factor.

The frequency of penile fracture is likely underreported in the published literature. Trauma during sexual relations is responsible for approximately one third of all cases; the female-dominant position is most commonly reported. The mechanism of action may lead to embarrassment, causing patients to avoid seeking treatment and contributing to late presentation. As of 2001, 1331 cases were reported in the literature. The incidence of concomitant urethral injury in reported cases is 10-58%.[2]

Penile Amputation also contributing to 8.92% of the cases in this study was mainly seen in occupational injuries, road traffic accidents and animal attacks. In the present study, avulsion of the scrotal skin and penis were the main types of penoscrotal injury amounting to 47.78% of the total cases. This is in contrast to the earlier studies where soft tissue injury or loss is rare.[2] Penoscrotal crush injury was found to be found in 17.20% of the cases, of which 66.67% was due to Road Traffic Accidents, mainly two wheelers, which is an indication of the lack of safety in two wheelers, especially to the penoscrotal region. In another study in South Korea of 156 patients, trauma to external genitalia, it shows assault is

the most common cause In this study, penetrating injury of the penis and scrotum accounting for only 4.46% of the cases was mainly seen in occupational injuries which tell about the unorganized small scale industry mushrooming in this region where work condition is deplorable.

In the North Bengal Region, due to deforestation, we find human wild animal contact is rising every year, which accounts for the 11.46% of the penoscrotal injury cases caused by animal attack (elephants) and penetrating injury by animal horn.

In the study conducted in 1997 it was found there is a correlation between the frequency of penile trauma of any kind which was found to be significantly greater in both Peyronie's disease (40%) and Impotence (37%) patients than in the controls (11%).[4] The reported cases of Impotence was also seen to be rising in a study conducted by the same authors where a case of erectile dysfunction had trauma to the penis as a contributing factor.

The incidence of penoscrotal injury cases brought for Post Mortem Examination being nearly 3.65 times that of the of penoscrotal injury cases admitted to the General Emergency shows the high fatality of this trauma. The fatal outcome of the penoscrotal trauma cases admitted was also seen to be 5.45% which is also significant. These indicate that penoscrotal trauma is as fatal as injuries caused to other body parts.

Table 1: Showing types of incidences of Penoscrotal Injury

S. No.	Type of Penoscrotal Injury	No. of cases admitted in Hospital	No. of cases brought for Autopsy	Total	Percentage of Cases
01.	Penile Fracture	14	-	14	8.92%
02.	Penile Amputation	02	12	14	8.92%
03.	Penentration Injury	04	03	07	4.46%
04.	Frenular Tear	20	-	20	12.74%
05.	Avulsion of Penile Skin	03	30	33	21.02%
06.	Avulsion of Scrotal Skin	12	30	42	26.75%
07.	Penoscrotal Crush Injury	-	27	27	17.20%
	Total	55	102	157	

Table 2: Showing types of Etiology of Penoscrotal Injury

S. No.	Type of Penoscrotal Injury	No. of cases admitted in the Hospital and brought for Autopsy (2009-2010)				
		Occupational Injury	Road Traffic Injury	Coital Injury	Physical Assault	Attack by Animal
01.	Penile Fracture	-	-	12	2	-
02.	Penile Amputation	7	2	-	5	-
03.	Penentrating Injury	3	2	-	-	2
04.	Frenular Tear	-	-	20	-	-
05.	Avulsion of Penile Skin	3	28	-	2	-
06.	Avulsion of Scrotal Skin	7	23	-	5	7
07.	Penoscrotal Crush Injury	-	18	-	-	9
	Total	20	73	32	14	18
	Percentage	12.74%	46.50%	20.38%	8.92%	11.46%

Table 3: Comparison between cases Admitted and Fatality of Penoscrotal Injury

S. No.	Type of Penoscrotal Injury	Cases admitted in the Hospital	Fatal cases after admission	Cases brought for Autopsy	Fatal cases	Percentage of fatal cases
01.	Penile Fracture	14	-	-	00	-
02.	Penile Amputation	02	-	12	12	7.64%
03.	Penentration Injury	04	1	03	04	2.54%
04.	Frenular Tear	20	-	-	00	-
05.	Avulsion of Penile Skin	03	-	30	30	19.11%
06.	Avulsion of Scrotal Skin	12	2	30	32	20.38%
07.	Penoscrotal Crush Injury	-	-	27	27	17.20%
	Total	55		102	75	47.77%

Fig 1: Photograph showing Fracture of Penis

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Indian Journal of Forensic Medicine and Pathology
Volume 4, Number 2, April - June 2011

Digital Dermatoglyphic and ABO Blood Groups

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Jadhav Ashwini S**

ABSTRACT

Background: Finger prints are considered as the best tool of identification. Digital dermatoglyphic has been found useful in forensic medicine and identification purpose. It is useful in medical diagnosis of genetically inherited diseases and in detection of crimes. **Material & Method:** The present study was carried out to understand the genetic relationship if any, among different blood groups using classical dermatoglyphic marker in 292 subjects. Finger print patterns were collected on a white paper using black endorsing ink. Study was done by counting and classifying their ridge pattern, configuration of arches, loops and whorls. The ridges were counted and patterns were identified using glass hand lens. **Results:** Majority of subjects were 33.90% in the study of blood group of O, 30.82% of blood group B, 23.63% of blood group A and 11.64% of blood group AB. The general distribution of pattern of finger print showed high frequency of loops 53.56% whereas whorls were moderate 39.48% and arches were least 6.95% in frequency, was significant ($p<0.01$) in all blood groups. **Conclusion:** The study suggests that there is an association between finger print pattern and blood groups.

Key words: Finger print, dermatoglyphic, ABO blood group, identification.

INTRODUCTION

Through decades of scientific research, the hand has come to be recognized as a powerful tool in the diagnosis of psychological, medical and genetic conditions. It was in 1926 that Cummins introduced the term "Dermatoglyphic". It the term applied to the study of naturally occurring patterns of the surface of the hand and feet. Cummins found that the configurations of ridge pattern are determined partly by heredity and partly by accidental or environmental influence which produce stress and tension in their growth during foetal life[1]. Finger ridge and ridge pattern are highly heritable, durable and age independent human traits and have been studied a model quantitative trait in humans for over 80 years[2]. Dermatoglyphic traits are those that are inherited as individual specific traits. They are supposed to play an important role in the human biological research. These traits are useful in both population studies as well as estimating distances between the populations. The dermal ridges originate from foetal volar pads composed of mesenchymal tissue starting at the 6th to 7th week of development. Ridges become visible at about 3rd month and are completed by the 6th month of prenatal development[3]. Parkinje for the first time distinguished 9 principal configurations of rugae and sulci present on the terminal phalanges of human hands[4]. Faulds mentioned that the pattern of these papillary ridges remain unchanged in an individuals throughout life[5]. Hersche use fingerprints for personal identification in India[6]. Galton classified the types of finger prints depending upon their primary pattern as loops, whorls and arches[7]. During the past century it

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(Received on 11.11.2010, accepted on 24.04.2011)

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has been apparent that different populations reveal wide variations in the frequency of papillary patterns on the finger ball and also wide variations in the blood groups. These two characters also usefully employed for study of ethnic variation, genetic and human biology[8]. So in the present study inter correlative relation between dermatoglyphics and blood groups have been tackled. It can be used as corroboratory evidence to establish the identity of a person.

MATERIAL AND METHODS

Total 292 subjects were selected to complete the study mainly comprised medical students, and staff member of medical college. For taking dermatoglyphic, ink method suggested by Cummins[1] was used. Black endorsing ink was spread on the hands and the smeared palm and fingers of both hands were printed on a white plain paper. Primary patterns Loops, Whorls and Arches were observed along with the total ridge counting with the help of a powerful hand lens. Screening was done on white plain paper containing prints with the aid of magnifying glass. Different patterns were identified and classified into Loops, Whorls and Arches as in (figure1). Interpretation of patterns was carried out according to Cummins[1]. The parameter analyzed include, pattern frequency, total finger ridge count and individual finger print patterns.

RESULTS

Majority of subjects were belonged to blood group O (33.90%) followed by blood group B (30.82%), blood group A (23.63%) and blood group AB (11.64%) (Table-1). Loops were the most common pattern, registering 53.56% frequency in the study, followed by Whorls 39.48% and Arches 6.95% as in (Table-1).

Frequency of Loops was significantly ($p<0.01$) highest in all subjects of ABO blood group followed by Whorls and Arches. Incidence of Loops varied from 48.08% to 61.76% among different blood groups, of which blood group AB showed highest Loops (61.76%). Whorls showed moderate frequency varying from 24.11% to 46.66% among, O blood group showed highest 46.66%. Arches were ranging from 5.25% to 14.11% among, AB group showed highest 14.11% as in (Table-1).

Pattern of individual finger in different blood groups showed significantly ($p<0.01$) with high frequency of Loops in middle and little finger among all blood groups. Blood group O showed (middle finger-58.58%, little finger-72.72%), blood group-B (middle finger-66.66%, little finger-76.11%), blood group-A (middle finger-68.11%, little finger-74.63%) and blood group-AB (middle finger-72.05%, little finger-85.29%). Whorls were more in thumb and ring finger among all blood groups except in O blood group where it high in index finger. Arches were more in index and middle finger among all blood groups, and are less than 10% in remaining fingers (Table 2).

The number of Radial Loops on left side was high in all blood groups except B where it is high on right side. The occurrence of Radial Loops was more in index finger of all blood groups (Table-3).

DISCUSSION

Bharadwaja A et al[9] revealed that there was an association between distribution of finger print pattern and blood groups. The general distribution of the primary finger print was of the same order in individuals with all blood groups, with high frequency of Loop, followed by Whorls and Arches. The frequency of Arches were more in blood group-AB. Distribution pattern in individual finger had high frequency of Loops in thumb and little finger, whereas ring finger had more Whorls. The index and middle finger presented higher incidences of Arches in subjects of ABO blood groups. Individual of blood group AB had high frequency of Whorls in thumb, index and ring fingers while middle and little finger showed more number of Loops[9].

Ekerette P. et al observed the most prevalent digital ridge pattern type was Ulnar Loops followed by Whorls, Arches and the least prevalent was Radial Loops. Ulnar Loops were

50.09% and Radial Loops 1.13%.Ulnar Loops were the most predominant pattern44.9% followed by Whorls 31.2%, Arches 11.3% the least were the Radial Loop 1.4%.They also studied sex difference in the study and stated that Loops were higher 50.1% in females than males 49.6%. Male had higher value of pattern intensity index15.13 than the females 11.88[10].

Prithvi R et al observed the association of blood group type with finger print pattern in different cohorts. In Northern cohort, about 10% 0f the participants with blood group O were having whorls while a maximumof 19% were with blood group A in the west cohort. Similarly, while 21%participant of the North cohort with blood group O had loops (ulnar+ radial), 26% of the South cohort with blood Owere found associated with loops. Arch pattern was almost rare in each cohort [3].

Nayak SK. & Patel S observed number of whorls more than the loops in I finger of all blood groups, I and IV fingers of persons with groups O,B,A. The highest percentage of whorls occurred in I 53.125 and II 53.125 fingers of AB group whereas in IV O-59.23, B-58.37, A-55.325 fingers of all other groups. The III finger of all groups posses the lowest number of whorls A-26.52, B-25.375, O-26.59, and AB-25.00. The percentage of loops more than whorl in III finger of all groups and II, III,V fingers of group O, B and A persons. The commonest occurrence of loop happens to be in finger V and III; the percentage of loop was lowest in IV finger of all groups except AB group where II finger was at the bottom. The number of radial loop on the left side was more in B, A, O group persons whereas in AB group it was equally distributed[8].

In the present study we observed frequency of Loops was significantly ($p<0.01$) highest in all subjects of ABO blood group followed by Whorls and Arches. Incidence of Loops varied from 48.08% to 61.76% among different blood groups of whom blood group AB showed highest Loops 61.76%.Whorls showed moderate frequency varying from 24.11% to 46.66% among, O blood group showed highest 46.66%. Arches were ranging from 5.25% to 14.11% among, AB group showed highest 14.11% as in (table3).

Pattern of individual finger in different blood groups showed significantly ($p<0.01$) high frequency of Loops in middle and little finger of all blood groups, blood group O showed (middle finger-58.58%, little finger-72.72%), B (middle finger-66.66%, little finger-76.11%),A (middle finger-68.11%, little finger-74.63%) and AB (middle finger-72.05%, little finger-85.29%). Whorls were high in thumb and ring finger of all blood groups except in O blood group, Whorls were high in index finger also, O (thumb-61.11%, index finger-54.04%, ring finger-62.11%), B (thumb-57.22%, ring finger-54.44%), A (thumb-55.07%, ring finger-51.44%) and AB (thumb-38.23%, ring finger-33.82%). Arches were high in index and middle finger in all blood groups, in remaining fingers it is less than 10%, O (index finger-10.60%, middle finger-10.60%), B (index finger-17.22%, middle finger-7.22%), A (index finger-13.04%, middle finger-11.59%) and AB (index finger-32.35%, middle finger-17.64%) as in (table 2).

Table 1: Showing total number of patterns on fingers in different blood groups

Blood groups	No of cases	Patterns						Total	
		Loops		Whorls		Arches			
O	99	476	48.08%	462	46.66%	52	5.25%	990	33.90%
B	90	488	54.22%	356	39.55%	56	6.2%	900	30.80%
A	69	390	56.52%	253	36.66%	47	6.81%	690	23.63%
AB	34	210	61.76%	82	24.11%	48	14.11%	340	11.64%
Total	292	1564	53.56%	1153	39.48%	203	6.95%	2920	

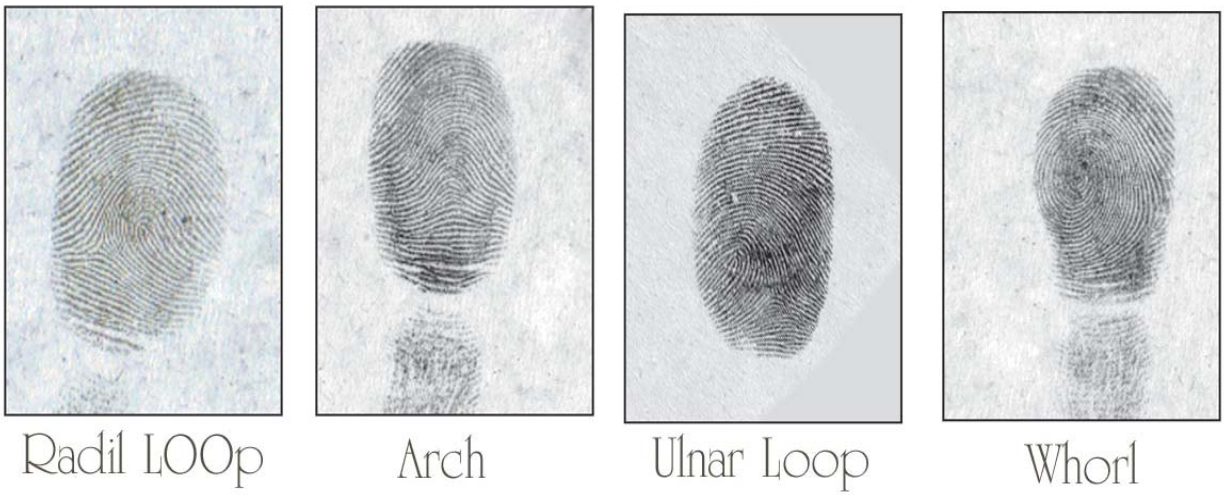
Table 2: Showing percentage distribution of pattern in fingers of different blood group

Blood group	Pattern	Fingers									
		Thumb		Index		Middle		Ring		Little	
O	Loops	75	37.87%	70	35.35%	116	58.58%	71	35.85%	144	72.72%
	Whorls	121	61.11%	107	54.04%	61	30.80%	123	62.12%	50	25.25%
	Arch	2	1.01%	21	10.60%	21	10.60%	4	2.02%	4	2.02%
B	Loops	72	40%	81	45%	120	66.66%	78	43.33%	137	76.11%
	Whorls	103	57.22%	68	37.77%	47	26.11%	98	54.44%	40	20.20%
	Arch	5	2.77%	31	17.22%	13	7.22%	4	2.22%	3	1.66%
A	Loops	58	42.04%	72	52.17%	94	68.11%	63	45.65%	103	74.63%
	Whorls	76	55.07%	48	34.78%	28	20.28%	71	51.44%	30	21.73%
	Arch	4	2.89%	18	13.04%	16	11.59%	4	2.89%	5	3.62%
AB	Loops	32	47.05%	28	41.17%	49	72.05%	43	63.23%	58	85.29%
	Whorls	26	38.23%	18	26.47%	7	10.29%	23	33.82%	8	11.76%
	Arch	*10*	*14.70%*	*22*	*32.35%*	*12*	*17.64%*	*2*	*2.94%*	*2*	*2.94%*

Table 3: Showing distribution of papillary pattern in different blood groups on fingers of both hands

Pattern	Side	Fingers				
		Thumb	Index	Middle	Ring	Little
		'O' blood group (99)				
Loops	Right	37	37=34+3	61	35	71
Ulnar+Radial	Left	38	33=26+7	55	36=35+1	73
Whorls	Right	61	53	29	63	27
	Left	60	54	32	60	23
Arch	Right	1	9	9	1	1
	Left	1	12	12	3	3
		'B' blood group (90)				
Loops	Right	31=30+1	43=36+7	60	39=38+1	66
Ulnar+Radial	Left	41=40+1	38=33+5	60	39=38+1	71
Whorls	Right	57	33	24	49	23
	Left	46	35	23	49	17
Arch	Right	2	14	6	2	1
	Left	3	17	7	2	2
		'A' blood group (69)				
Loops	Right	30=29+1	33=28+5	48=47+1	33	49
Ulnar+Radial	Left	28	39=28=11	46=45=1	30	54
Whorls	Right	37	24	15	34	18
	Left	39	24	13	37	12
Arch	Right	2	12	6	2	2
	Left	2	6	10	2	3
		'AB' blood group (34)				
Loops	Right	15=14+1	15=14+1	25	18	29
Ulnar+Radial	Left	17	13=11+2	24	25	29
Whorls	Right	15	9	4	15	4
	Left	11	9	3	8	4
Arch	Right	4	10	5	1	1
	Left	6	12	7	1	1

Fig 1: Shwoing digital finger print patterns



The number of Radial Loops on left side was high in all blood groups except B where it is high on right side. The occurrence of Radial Loops was more in index finger of all blood groups as in (table 1).

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Indian Journal of Forensic Medicine and Pathology
Volume 4, Number 2, April - June 2011

Fatal case of Misdiagnosis: A case report

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Krishan Kadur****

ABSTRACT

With increased incidence of litigations against doctors even for frivolous/ flimsy reasons, it is pertinent for a practicing doctor to be aware of basic degree of skill and care expected of him while he is fulfilling his professional obligations. In spite of this known fact doctors do error simply neglect the basic level of skill that is required of him and involve in unnecessary litigations. A case is reported where in simple error in diagnosis resulted in the death of a patient posted for elective abdominal hysterectomy.

Keywords: Negligence; hysterectomy; skill; litigation; doctor.

INTRODUCTION

The modern legal provisions identify doctor and patients as partners under a contract. Legal consequences of negligence in surgical procedures Malpractice litigation mostly concerns medical gence. The liability problem in gynecology practice is not insignificant, and has increased in importance in the last several years. This is particularly true in the areas of failure to diagnose and complications of surgery.[1] Medical errors during surgery are usually under-reported and not well studied.[2] We report a case of fatal postoperative hemorrhage as a result of missed/ wrong diagnosis by the treating gynecologist in a 33-year-old-woman.

CASE REPORT

A 33 year old lady with complaints of dysmenorrhea and white discharge per vagina was posted for elective abdominal hysterectomy at a government hospital by a senior Surgeon. Preoperative and intra-operative status was uneventful. The patient's vitals started deteriorating after 4 hrs postoperatively, diagnosed to be in a state of supraventricular tachycardia and was treated with fluids. But the condition worsened and was later shifted to a higher center situated around 200 km from the aforementioned Hospital. Here the patient was diagnosed to be in hypovolemic shock and was immediately treated for the same, but the patient could not be saved and expired. So a case of medical negligence was filed against the operating surgeon and an autopsy was requested to be conducted.

At autopsy the deceased was found to be moderately built and nourished, postmortem lividity could not appreciated, both the sclera were pale and a horizontally placed surgically sutured

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(Received on 10.12.2010, accepted on 30.04.2011)

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wound was present on the lower part of the front of the abdomen 15 cm below the umbilicus. No other external injuries were present other than venesection wounds on either side of the neck. All the internal organs were pale on cut section. But the most intriguing finding was the presence of 4500 ml of both fluid and clotted blood in the peritoneal cavity (Fig.1&2) without any evidence of trauma to any of the abdominal organs. But the hysterectomy ligatures were lax. Routine viscerae were subjected for chemical analysis which was negative for any toxin.

So the cause of death was given as death due to heamorrhagic complications as a result of abdominal hysterectomy.

DISCUSSION

The incidence of medical malpractice litigation is increasing world over, whether this increasing incidence of malpractice litigation gives doctors and hospitals, an economic incentive to provide high-quality medical care by requiring that they compensate patients for harm caused by negligence remains to be seen.[3] In this background, where a Doctor is expected to maintain a minimum standard and degree of skill, if not the highest during his discourse of treatment to the patient, it might strike as an irony that not uncommonly even specialist doctors fail to maintain even a minimum level of skill and care.

Negligence is not susceptible to any precise definition. A physician prescribing drugs with dangerous side effects without informing the patient of risk of those side effects and without carrying out the recommended tests in order to discover whether such side effects are happening is guilty of "carelessness". Secondly, the negligence is a careless conduct without reference to any reference to any duty of care. And lastly, negligence refers to a "breach of legal duty of care".[4,5,6]

Abdominal hysterectomy is one of the most frequent major surgical procedure performed in women.[7] The morbidity rate for hysterectomy ranges from 25% to 50% and mortality is one to two deaths per 1000 hysterectomies performed.[8,9] The most common intraoperative complication is haemorrhage requiring blood transfusion followed by bowel, bladder and ureteric injury7,8.

In the present case the treating surgeon made an elementary blunder of not being able to diagnose primary haemorrhage, a known complication of abdominal hysterectomy procedure. Instead a wrong diagnosis of supraventricular tachycardia was made and referred to a higher center without any proper communication of the patient's condition to her relatives. Here the doctor was not just careless in managing the patient's condition but also shows lack of basic skill to communicate with the patient's kin. Death due to primary haemorrhage could have been avoided if a prudent diagnosis was made by the doctor. There is a direct causal connection between the negligence and the cause of death, without which the patient would have survived. The treating doctor has shown dereliction of duty by not diagnosing the complication arising out of the procedure which was the direct cause of death of the patient making him liable for medical negligence as per Indian Penal code 304 A IPC.[10]

To conclude, we would suggest that, Medical malpractice litigations are commonly brought against doctors involved in patient care. They can be enormously expensive as well as damaging to a doctor's career. While doctors cannot eliminate the risk of lawsuits, they can help protect themselves by providing competent and compassionate care, practicing good communication with patients (and their families), and documenting patient communications and justifications for any medical decisions that could be challenged.[11] But the rule of thumb for a doctor to avoid litigations would be to follow a standard degree of care and skill expected from him. This case reinforces the fact as they say in sporting parlance "that basics should be strong and never be forgotten". The doctor will stay in good stead if he follows this simple rule and keeps himself up-to-date of the recent innovations in patient health care and in addition not to forget the basics.

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Fig 1: Peritoneal cavity showing evidence of Fluid and Clotted blood

Fig 2: Clotted and fluid blood collected from the peritoneal cavity

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Indian Journal of Forensic Medicine and Pathology
Volume 4, Number 2, April - June 2011

Article 377 Indian Penal Code: A Medico-Legal journey of one and a Half Century

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ABSTRACT

Lord Macaulay in 1860 introduced section 377 as part of Indian Penal Code; convictions under this law have been extremely rare. The Naz foundation, an activist group, filed public interest litigation in the Delhi High Court in 2001, seeking legalization of homosexual intercourse between consenting adults. In 2003, the Delhi High Court refused to consider a petition regarding the legality of the law. In 2006 it came under criticism from 100 Indian literary figures. On12th June 2009, India's new Law Minister agreed that Section 377 might be outdated. Eventually, in a historic judgment delivered on 2 Jul 2009, Delhi High Court overturned the 150 year old section, legalizing consensual homosexual activities between adults. Till date there have been no grounds for the fulfillment of any criteria to place homosexuality as a disease or have any claims of finding genetic markers for homosexuality been replicated either. A lot has changed and a lot needs to be changed with regards to India's stand on homosexuality and related aspects. "Any form of consensual sexual act between 'humans' of appropriate age and sound mental health under adequate conditions of privacy and safety" should be considered as "natural" and legal!

Key words: Homosexuality, Unnatural Sexual Offenses, Sec 377 Indian Penal Code, Kamasutra.

INTRODUCTION

Sexual behavior is diverse and determined by complex interactions of various factors. Sexuality is determined by anatomy, physiology, the culture in which the person lives, relationship with others and developmental experiences throughout the life. Sexual orientation refers to a person's erotic response tendency or sexual attractions, be they homosexual, bisexual or heterosexual. Homosexuality refers to an erotic desire for some one of same biological sex[1].

Laws governing sexual practices and offences vary from country to country and from time to time. India is a multicultural, multilingual country with a vast population which is spread over a huge socioeconomic gap .In India, the legal system is largely a gift from the British rulers[2]. The law governing the unnatural sexual offences in India comes under the ambit of section 377 Indian Penal Code (IPC) [3].

Apart from the various homosexual associations, even consensual heterosexual acts

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(Received on 21.10.2010, accept1ed on 14.02.2011)

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such as fellatio, digital penetration and thigh intercourse may be a punishable offense under this law. The furious Indian homosexual community is going round the capital with a slogan 'Angrezchaleygaye 377 chhodgaye,' meaning 'Britishers left India as boon, however they gifted 377 as a bane'[4]. Though this law was recently read down by the Delhi High Court on July 2nd 2009 stating it as unconstitutional and violation of human rights, where in this law can no longer be applied to consensual sex between adults (of any gender) in private, however, the stand of the Indian government on the issue is unclear and the decision of the parliament is kept pending[5].

THE LEGAL TRANSITION FROM 1860 AD TO 2010 AD

Lord Macualay in 1860 introduced section 377 as part of Indian Penal Code, and it reads as: "Whoever voluntarily has carnal intercourse against the order of nature with any man, woman or animal, shall be punished with imprisonment for life, or with Imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine". (Explanation- Penetration is sufficient to constitute the carnal intercourse necessary to the offence described in this section)[3], his main aim was to prevent "unnatural offences"[6]especially the acts of sodomy amongst the homosexual men. This law remained undebated and untouched for more than a century, only recently this decade has seen a considerable change with perception and attitude of people regarding this legislation. Convictions under this law have been extremely rare, and in the last twenty years there have been no convictions for homosexual relations in India. However, Human rights watch group argues that the law has been used to harass sex workers, men who have sex with men, and other groups at risk.[7]SANGAMA a Non Governmental, Nonprofit organization working for upliftment of homosexual/bisexual men, lesbian/bisexual/ homosexual women, hijras and other transgender people particularly from the poor and non-English speaking backgrounds in Bangalore, has published reports of the rights violations faced by sexual minorities and in particular transsexuals in India.[8]

The legal battle for homosexuals in India has been led by the NAZ Foundation, an activist group, which filed a public interest litigation in the Delhi High Court in 2001, seeking legalization of homosexual intercourse between consenting adults.[9]In 2003, the Delhi High Court refused to consider a petition regarding the legality of the law, saying that the petitioners, had no locus standi in the matter. Since nobody had been prosecuted in the recent past under this section it seemed unlikely that the section would be struck down as illegal by the Delhi High Court in the absence of a petitioner with standing. Naz Foundation appealed to the Supreme Court against the decision of the High Court to dismiss the petition on technical grounds. The Supreme Court decided that Naz Foundation had the standing to file a PIL in this case and sent the case back to the Delhi High Court to reconsider it on merit.[10] Subsequently, there was a significant intervention in the case by a Delhi-based coalition of LGBT (Lesbians, Gays, Bisexuals, and Transsexual),women's and human rights activists called 'Voices Against 377', which supported the demand to 'read down' section 377 to exclude adult consensual sex from within its purview.[11]In 2006 it came under criticism from 100 Indian literary figures.[12] The law subsequently came in for criticism from several ministers. [13, 14]In 2008, a judge of the Bombay High Court also called for the scrapping of the law.[15]

However, in 2008 Additional solicitor general of India PP Malhotra stated: Homosexuality is a social vice and the state has the power to contain it. Decriminalizing homosexuality may create a breach in peace, lead to a big health hazard and degrade moral values of society, a view similarly shared by the Home ministry. He argued before the bench of the Delhi High Court that it was

crucial to hold such "unnatural" behavior as a criminal offence and that its deletion would lead to moral degradation. Citing an Orissa court judgment, he also added that such behavior resulted from a perverse mind that needed to be controlled.[16]

In May 2008, the case came up for hearing in the Delhi High Court, but the Government was undecided on its position, with The Ministry of Home Affairs maintaining a contradictory position to that of The Ministry of Health on the issue of enforcement of Section 377 with respect to homosexuality.[17] On 7 November 2008, the seven-year-old petition finished hearings. The Indian Health Ministry supported this petition; while the Home Ministry opposed such a move.[18] But the Centre is likely to repeal a controversial section of the penal law which criminalizes homosexuality. The two key Ministries – Home and Health – have held diverse views on it. Many Christian organizations have raised protests against the government's move to repeal the controversial section of the IPC. The Home Ministry had earlier argued before the High Court that homosexuality is not accepted by Indian society and repealing Section 377 from the IPC would encourage more anti-social activities.[19]On 12 June 2009, India's new Law Minister agreed that Section 377 might be outdated.[21] Eventually, in a historic judgment delivered on 2 Jul 2009, Delhi High Court overturned the 150 year old section,[22] legalizing consensual homosexual activities between adults.[22] The essence of the section goes against the fundamental right of human citizens, stated the high court while striking it down. In a 105-page judgment, a bench of Chief Justice Ajit Prakash Shah and Justice S Muralidhar said that if not amended, section 377 of the IPC would violate Article 14 of the Indian constitution, which states that every citizen has equal opportunity of life and is equal before law.[6]The verdict triggered protests from religious leaders across the spectrum who invoked the 'will of God' to claim that the ruling would lead to the 'ruination' of society and family values. Social workers and psychologists, however, welcomed the order, describing it as 'scientific and humane'. There is almost unanimous medical and psychiatric opinion that homosexuality is not a disease or a disorder and is just another expression of human sexuality, the court observed.[23]

SHOULD HOMOSEXUALITY BE LEGALIZED IN INDIA?

EVOLUTIONARY BASIS

All species require reproduction for their perpetuation. For this purpose the nature has devised its own indigenous mechanism. When it comes to mammals, mating/sexual intercourse is very essential and this act is accompanied with a high quantum of pleasure (in the form of orgasm [1]). Food, shelter and sex as the basic necessities of Human life. Man is intellectual and is gifted with logical thinking and experimentation. Therefore, man experiments and tries to find newer modalities and techniques of deriving and optimizing pleasure, whereas logical thinking results in the concept of morality, the thought of good and bad, the concept of right and wrong. It is the balance between these two forces that decides the attitude of a society towards any trend.

PSYCHOPATHOLOGICAL BASIS

In 1973 American psychiatric association officially accepted a normal variant model and removed homosexuality per se from its diagnostic and statistical manual of mental disorders (DSM) In 1992 World Health Organization followed the American example and made similar change in 10th revision of International Classification of Diseases (ICD-10[1]. In a Survey, 'Study in sexuality of medical college students in India' conducted at a medical college in New Delhi, India; the authors found that 83.40% of the participants opined homosexuality as a normal behavior[24]. Till date there have been no grounds for the fulfillment of any criteria to place homosexuality as a disease or have any claims of finding genetic markers for homosexuality been replicated either[1]

CULTURAL BASIS

As an indicator of the liberal Hindu heritage, Kama Sutra (the literal meaning being ,"the technique of sex"), a classic written in the first millennium by Sage Vatsyayana, devotes a whole chapter to homosexual sex saying "it is to be engaged in and enjoyed for its own sake as one of the arts." Besides providing a detailed description of oral sex between men, Kama Sutra categorizes men who desire other men as "third nature" and refers to long-term unions between men[25]. If proved guilty under section 377 IPC, the person can be charged life imprisonment or up to ten years rigorous imprisonment with or without fine. According to Manusmriti, the most popular Hindu law book of medieval and ancient India. "If a man has shed his semen in non-human females, in a man, in a menstruating woman, in something other than a vagina, or in water, he should carry out the 'painful heating' vow." This peculiar vow, which involves application of cow's urine and dung, over the accused body, was meant not only for homosexuals but also for the errant heterosexuals. The penalty is even milder if the homosexual belongs to an upper caste. As Manusmriti puts it, "If a twice-born man unites sexually with a man or a woman in a cart pulled by a cow, or in water, or by day, he should bathe with his clothes on''[25]. This is another example of the liberal ancient Indian laws with regards to sexual offences.

DEMOGRAPHIC BASIS

No long term studies have been conducted so far to know impact of same sex marriages on demography[26], especially on the population growth and regarding the variation in trends. There is no statistical data available regarding the number of homosexual population in India, however according to Ashok Row-kavi a self acclaimed homosexual activist, the number of exclusively or predominantly homosexual men in India may be over 50 million[27]. A great proportion of participants in a survey conducted amongst the medical students at a medical college at Belgaum, Karnataka opined that homosexuality is on rising trend in India.[28]

RELIGIOUS BASIS

Religious chauvinism is deeply rooted in the subcontinent, any debate or change with stand on issues related with sexuality has always been strongly opposed since time immemorial.

PHILOSOPHICAL BASIS

Nicolaus Copernicus once challenged the geocentric model of universe which followed great resistance and concept was then considered 'unnatural' and against the order of God. Today we know beyond doubt that it's the heliocentric model proposed by him which is the irrefutable scientific truth[29].Most of the concepts once considered eccentric are not only widely accepted today but also form cornerstones of science and technology. Man has always experimented and challenged the nature and most of the times he has won. Contraception, medical termination of pregnancy, organ transplantation and recombinant technology are a few of the examples. Initially they were considered to be unnatural and had the resistance from the society on grounds of morality, today they are all widely accepted and not much heated discussion occurs on these issues.

CONCLUSIONS

A lot has changed and a lot needs to be changed with regards to India's stand on homosexuality and related aspects, though it is the need of the hour, it can only be done gradually, as abrupt changes are unacceptable in India on the basis of social religious and cultural background. Authors are of the opinion that section 377 IPC, need not be abolished, however it needs to be suitably considered and amended. The demographic impact of legalizing same sex marriage is unpredictable as statistical data is lacking. "Any form of consensual sexual act between 'humans' of appropriate age and sound mental health under adequate conditions of privacy and safety" should be considered as "natural"!

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