

DNA: THE CARDINAL STRAND IN RAPE INVESTIGATIONS

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ABSTRACT

In a nation where women are treated an equal to God, rape is a hatred crime perpetrated towards them. To be specific, it's one of the most gruesome and heinous crime, that causes distress and agony not only to the victim and their kin but also to the society. According to NCRB Report, 2021, the total number of cases registered in India amounted to over 31,000. This number had been stirred up compared to the descending years. This iniquitous crime betides through penile-vaginal intercourse. There is a huge certainty of having behind the traces which are biological in nature. At this outset, the role of forensics is inevitable to prove the guilt of the perpetrator. As Justice M Das quotes "*the sophisticated technology makes it possible to obtain conclusive results in case in which other testing had been inconclusive*" very well connotes the essence of DNA as biological evidence to showcase the perpetrator's guilt. Besides, the mantle that DNA holds is highly pertinent to such cases. Having set the context, this paper lays its prime focus on the role of DNA in the light of increasing rape cases. At first, the paper tries to analyse the legal stand of DNA testing, followed by the inquiry into its evidentiary value with the help of recent judgements. Further, this paper attempts to study the significance of DNA as evidence. Towards the end, the paper to analyse the contemporary developments and conclude in a nutshell.

Keywords: Rape, DNA, investigation, Sexual offences, forensics

INTRODUCTION

In the Rafiq case, Justice Krishna Iyer said "*when a woman is raped, what is inflicted is not merely physical injury but a deep sense of some deathless shame.*"¹ This clearly reiterates that rape is a crime more serious than murder as it destroys the very soul of the hapless Female. Speaking of the crime, many rape cases take place in an isolated place making zero hopes for eyewitness. This element increases the probability of lack of evidence against the suspect,

¹ Rafiq v. State of Uttar Pradesh, AIR 1981 SC 559

resulting in their acquittal. However, with the growth of science and technology, there is a rapid shift in many corners of legal system.

With respect to sexual offences against women, biological evidence, especially, DNA, plays a crucial role in their investigations. DNA (Deoxyribonucleic Acid) is a kind of material found in body organs like hairs, skin colour and eyes. The major reason for using the DNA test is that it is different for every person unless the case is of identical twins. This is similar to how fingerprints help to identify the people charged with rape. It is found by trained investigators at the location where the rape is alleged to have happened or any significant place from where the DNA can be traced.

Usually, the investigator would use a swab to collect bodily substance from a suspect's mouth to match it with DNA collected from the crime scene. Prior to the use of DNA, identification of offenders was heavily based on fingerprints, footprints, blood or other evidence that a suspect may have left behind after committing a crime. With the development of DNA profiling put to use in the criminal investigations, it brought justice to several victims. On the other hand, there are many complications in DNA profiling in the light of legal stand. Though there is a lack of separate legislation for use of DNA as evidence in rape cases, there are countable sections in the Indian Evidence Act and Code of criminal Procedure governing it. At this outset, the role of DNA becomes the deciding factor in such cases.

FUNDAMENTAL RIGHTS VIS-À-VIS DNA EVIDENCE

The foremost aspect to look upon is the constitutional validity of DNA evidence.

As DNA evidence is of bodily in nature it contradicts with two fundamental rights, they were right to privacy and right to self-incrimination Art 20(3)². Often the accused take the plea of these two fundamental rights in order to evade from the charges inflicted upon him. The right to privacy was privileged as a fundamental right in the case of R.Rajagopal v. State of TN³ and K.S Puttaswamy v. union of India⁴. It is found to be unethical and immoral if we pave way for loopholes to the accused by escaping from the stringent hands of the criminal justice system. The Apex Court in Govind Singh v. State of Madhya Pradesh⁵ declared that it must be subject

² The Constitution of India art. 20, cl. 3

³ R. Rajagopal and Ors. v. State of Tamil Nadu, 1994 SCC (6) 632

⁴ K.S Puttaswamy v. union of India, (2017) 10 SCC 1; AIR 2017 SC 4161

⁵ Govind v. State of Madhya Pradesh, 1975 AIR 1378, 1975 SCR (3) 946

to specific limitations, if those restrictions are for the public good and are therefore not absolute.

Another question revolves around is whether DNA evidence is of self-incriminatory in nature. By procuring the sample of DNA from the suspect to match the DNA taken from the scene of crime was found to be not of self-incriminatory in nature. In *State of Bombay v. Kathi Kalu Oghad*⁶ held that the term inscribed in Article 20(3) “to be a witness” concerning oral evidence means “imparting knowledge in respect of relevant facts by a person who has personal knowledge of a fact to be communicated in court. It can be inferred that production of DNA sample cannot come in the ambit of the term “to be a witness”.

Besides, Section 139 of Indian Evidence Act⁷ portrays “*a person summoned to produce a document does not become a witness by the mere fact that he produced it and cannot be cross-examined unless and until he was called as a witness.*” A distinction between a witness and a person generating documents is made in the Section. When a witness gives an oral declaration based on knowledge, that person is said to be a witness. Giving "thumb imprints or foot, palm, or finger impressions or samples or showing parts of the body by method of identification is not included in the expression to be a witness" is not considered giving a witness statement. Therefore, lending DNA evidence does not come under the definition of witness and so cannot be held unconstitutional under Article 20(3) of the Indian Constitution.

GENESIS OF DNA EVIDENCE IN CRIMINAL INVESTIGATIONS

The first dispute

DNA testing became valid legally in 1989. The first paternity case in India where DNA proof was sought was *Kunhiraman v. Manoj*. Along with forensic experts, ballistic experts, biological experts, chemical experts, document writing experts, lie detector experts, and expert serological experts, the courts are accepting DNA evidence as an expert's opinion. toxicology specialist, etc.⁸

Law Commission's 185th report

The Indian Parliamentary Affairs Board has established an advisory committee to provide a thorough report on all areas of DNA testing. The Indian Government and Law Commission

⁶ *State of Bombay Vs. Kathi Kalu Oghad & Ors*, [1961] INSC 233

⁷ Indian Evidence Act, 1872, (Act 1 of 1872) s.139

⁸ Mohd. Hasan Zaidi & Yashpal Singh, *DNA Tests in Criminal Investigation, Trial and Paternity Disputes*, p. 36.

have also woken up to the issue. The Law Commission has proposed changing Section 112 of the Indian Evidence Act to include DNA testing in its 185th report.

The petitioner often has financial issues or is unable to pay for the desired or necessary DNA test to support his claim in the majority of situations involving disputed paternity. Such individuals receive assistance from the Kerala Women Commission, which pays Commission8 to have a DNA test performed at the Rajiv Gandhi Centre for Biotechnology in Thiruvanthapur.⁹

According to the 185th Report of the Law Commission of India, the standardisation of new technologies would certainly result in significant changes to the law of evidence. If the judge is unable to recognise the probative significance of new standards and ideas of evidence, he or she will be placed in a difficult position.¹⁰

DNA Testing in Rape Cases: A glance

By emphasising the need for forensic sciences to be used in criminal investigations of rape cases, the "Malimath Committee" advocated for reform of the criminal justice system. Other suggestions were made to include DNA experts under Section 293(4) of the CrPC¹¹, which refers to scientific experts, and which were considered in the modification that followed. They also suggested adding more labs to handle DNA evidence and samples. They also advocated for a unified statute that would include DNA testing, acquisition, admission, and misuse protection. It also suggested changing Section 313 of the Criminal Procedure Code¹² so that if the accused is unable to respond to any pertinent material inquiry against himself, a negative inference can be made against him.

The committee also advocated for the creation of a special law that would give the police clear instructions and standards for gathering genetic data on the parties in question. This would establish sufficient controls to stop any DNA from being misused. It is possible to build a national DNA database, which would be very beneficial in our fight against terrorism. Additionally, if the IEA is followed, Section 45¹³ states that expert testimony is relevant, and Section 51¹⁴ adds that it is pertinent to know the basis for the expert's conclusion. The

⁹ Source: Govt. of Kerala official website (www.Kerala.govt.)

¹⁰ Law Commission of India, 185th Report, 2004 Cr. L.J. 143, Journal Section.

¹¹ The Code of Criminal Procedure, 1973, (Act 2, of 1973), s. 293, cl. 3

¹² The Code of Criminal Procedure, 1973, (Act 2 of 1973), s. 313

¹³ Indian Evidence Act, 1872, (Act 1 of 1872), s.45

¹⁴ Indian Evidence Act, 1872, (Act 1 of 1872), s.51

information concerning the experts' opinions is covered in Section 46¹⁵. So, a comparison that illustrates the importance of DNA profiling may be made here based on the aforementioned sections.¹⁶

The validity of DNA analysis is still in doubt, nevertheless, and Section 53A¹⁷ of the law should be cited in this regard. A medical professional may examine the accused and items from the accused's body for DNA fingerprinting in rape cases, according to the provision.

LEGAL PROVISIONS

Code of Criminal Procedure

Section 53 of the CrPC is the only provision that permits the police and investigating authorities to seek the assistance of a medical expert for their investigation; nevertheless, these sections do not permit the collection of bodily fluids such blood, semen, saliva, etc. In the end, the CrPC Amendment Act, 2005 made revisions to Section 53 and included Section 53A, which permits the investigating officer in rape cases to take DNA samples from the victim's body. Nonetheless, there is still controversy about the admissibility of the results of these DNA testing because of several inconsistencies and ambiguities raised by Supreme Court and High Court judgements.

The general agreement among all court rulings is that they do not contest the veracity and precision of these testing. But they undoubtedly question their eligibility due to a number of statutory and constitutional restrictions, and occasionally even due to public policy.

The Supreme Court noted in the rape case "Krishna Kumar Malik V. State of Haryana"¹⁸ that *"Now, after the incorporation of S. 53A in the CrPC, w.e.f. 23.06.2006, it has become necessary for the prosecution to go in for a DNA test in such type of cases, facilitating the prosecution to prove its case against the accused. Even without the aforementioned particular clause prior to 2006, the prosecution may still have used this process to obtain the DNA test or analyse and match the prosecutor's semen to make it a strong case"*.

¹⁵ Indian Evidence Act, 1872, (Act 1 of 1872), s.46

¹⁶ Malimath Committee, Committee on Reforms of Criminal Justice System Government of India, Ministry of Home Affairs, Report VOLUME I, March (2003)

¹⁷ Indian Evidence Act, 1872, (Act 1 of 1872), s.53A.

¹⁸ Krishan Kumar Malik v. State of Haryana, (2011) 7 SCC 130

The addition of explanations to Sections 53, 53(A), and 54 of the Criminal Procedure Code in 2005, was done to broaden the scope of those clauses to include medical examinations of the accused and the victim, notably with regard to DNA testing.

Indian Evidence Act

The Indian Evidence Act makes no mention of DNA testing or other contemporary technologies. Furthermore, it makes no mention of either its admissibility or its significance as evidence in rape trials. Conjecture on the child's legality and father's parentage in cases of marriage or 280 days of marriage is only mentioned in one part of the Evidence Act. The question of whether the child born during the marriage will be considered the husband's child even if the DNA test reveals that the husband is not the child's father was brought up because this part is unquestionable.

The Supreme Court provided its opinion in the matter of *Nandlal Wasudeo Badwaik v. Lata Nandlal Badwaik & Anr*¹⁹ which addressed the problem. The court case explained that it is important to remember that DNA testing was not included in Section 112 of the Evidence Act because it was not in effect at the time. As the DNA testing show precision, it is possible to refute the "presumption of conclusive proof" cited in Section 112. The court claims that this presumption is unnecessary. The presumption is refuted if there is evidence that shows the opposite consequences.

According to the author, if there is a contradiction between globally acknowledged scientific evidence and the conclusive proof required by law, the former should take precedence. In this instance, the Supreme Court left the presumption of the child's legitimacy intact and left it up to the husband to establish the child's paternity. The court will only grant relief if you can show that he did not have access to his wife at the time the child could have been born. The presumption of legitimacy under Section 112 of the IEA has been superseded in this case by DNA tests using Section 45 of the IEA. Following the fundamental duties stipulated in Article 51A(h) and (j)²⁰ of the Indian Constitution, the Supreme Court came at this conclusion.

ADMISSIBILITY OF DNA EVIDENCE IN RAPE CASES

DNA as Evidence: Conclusive or not?

¹⁹ Special Leave Petition (CRL) No. 8852 of 2008, Date of judgment 6th Jan 2014.

²⁰ The Constitution of India, art. 51A, cl. (h)

It is well observed that there are sufficient provisions to vest the investigating officer the power to use and procure the DNA sample as evidence before the court of law. The question is how much does the court adhere to the DNA evidence and also it is to be noted whether it is accepted as conclusive evidence or not. DNA evidence is acclaimed to be credible evidence when it is put through as an expert opinion under Section 45 of Indian evidence act. Such an opinion is supported by extensive expertise, talents, and experience in rape cases. A biologist is an ideal expert in rape cases since he is familiar with both the inside and exterior scars of the human body. The Supreme Court stated that "the expert evidence is the one who makes the subject about which he talks a matter of specialised study, practise, or observation and he must have unique understanding of the subject" in the case of State of H.P. v. Jai Lal²¹.

Rape Investigations

The purpose of the DNA tests is to clarify a specific fact and facilitate the inquiry, not to provide the ultimate solution. Despite the fact that DNA tests initially seem to be definitive, they only partially resolve the issue. DNA tests may determine if a rape took place or not and may also aid in identifying the offender, but they are not the only factor that should be considered before a verdict can be rendered.

It must be demonstrated that the expert has conducted a special investigation into the matter, possesses specialised knowledge, or has accrued relevant experience in order to compare their testimony to that of a witness. It is not admissible if it is not performed by an expert. A professional's judgement is advised, nevertheless. It is not a factual witness. The expert must give the judge the scientific standards for drawing an accurate judgement so that the judge can use and use the same standards to reach his or her decision. Since an expert opinion is a type of witness, it is subject to cross-examination and can be refuted just like any other piece of evidence. As a result, DNA tests are open to scrutiny and refutation.

Evidentiary value: The catena of cases

- The version of prosecutrix does not inspire the confidence of the court as the former changes the statement from time to time. To support this contradiction of the statement, the DNA isolated from the accused were not similar to that of the DNA collected from the scene of crime. In this case the ocular evidence does not corroborate with medical evidence.²²

²¹ State of Himachal Pradesh v. Jai Lal, SC 1999 9 148

²² Sant Ram v. State of Haryana, Sr. No. 204 Crm-M-23769-2022

- In another scenario a girl was found to be pregnant after filing the charge sheet who is the victim of the rape. But the DNA sample of the foetus doesn't match with sample of the accused. The accused challenged the case on basis of this report.
- The apex court held that DNA test report favouring the accused in rape case is not gospel truth, cross examination of doctor is necessary. It added DNA test cannot be said to be conclusive evidence it can be used as corroborative evidence.²³
- A positive result of the DNA test would constitute clinching evidence against the accused if, however, the result of the test is in the negative i.e. favouring the accused or if DNA profiling had not been done in a given case, the weight of the other materials and evidence on record will still have to be considered.²⁴ Through plethora of judgments it is mandated that DNA evidence is not a conclusive evidence but it can be only used for corroboration.

CONTEMPORARY DEVELOPMENT: THE DNA BILL

The Minister of science and technology had passed the DNA (Use and Application) Regulation Bill, 2019 in Lok Sabha. Previously this bill was passed in 2018 but it lapsed. The Cardinal purpose of this bill is to regulate and authorise the use of DNA technology to meet the ends of criminal justice system. This bill shall be applicable to such statutes inscribed in the schedule of the draft. This draft comprises a total of 9 Chapters holding 61 sections and a schedule. Chapter II mandates the establishment of DNA regulatory board headed by the secretary in the department of Biotechnology. The board supervises and regulate DNA databanks and DNA laboratories and also it empowered to provide guidelines in relation to the functioning of such labs and banks. The board also have the power to revoke or suspend the accreditation of any laboratory. Chapter IV deals with obligations of DNA laboratory. The bill directs the Laboratories to carry out minimum standards for quality assurance in the collection storage and analysis of DNA sample.

Chapter V provides for the establishment of DNA data bank for every state or two or more state by the central government through notification in official gazette. It also directs the regional data bank to share all DNA stored and maintained by it with the National data bank.

One of the most Pertinent features of this act is lays down certain offences portrayed in Chapter VIII. If anyone who is employed in such DNA labs and banks discloses any DNA information

²³ ABC v.State by T.N. Pura police station, 2022 LiveLaw (Kar) 395

²⁴ Sunil v.State of Madhya Pradesh , 2023 Latest Caselaw 1347

relating to an individual and who wilfully obtains information shall be penalised with imprisonment for a term of 3 years and also with fine which is extend to 1lakh rupees. It also penalises any person who tampers, alters, destruct and gains unlawful authorisation to any information of DNA. In 2021, Parliamentary standing committee on science and technology has submitted its report and yet it has to come in force.

CONCLUSION

The DNA test is a powerful tool in the criminal justice system having the inherent power to conclusiveness in a case. The DNA Profiling Bill 2007 is the appropriate legislation we are eagerly waiting for the said purpose. As previously dealt, it specifies the infrastructure, standards, quality-control with assurance obligation of DNA laboratory, information, composition, qualification of DNA profiling board & its members, function and most importantly, the use of DNA technology in matters of human dignity, human right, and human relationship. Although the DNA Profiling Bill of 2007 covers a wide range of DNA issues related to criminal cases, it would be more effective if it included safeguards protecting all people' privacy and dignity.

This measure should be known as the DNA and Dignity Bill. In order to adapt to the new legal issues, the justice administration system must take into account the scientific developments of DNA profiling. The important DNA fingerprint paradigms cannot be left up to the courts to decide using ad hoc, temporary remedies. Thus, Section 112 of the Indian Evidence Act, 1872 cannot be used to assess the child's legitimacy or illegitimacy in cases of disputed paternity. As DNA testing falls under the domain of expert opinion, it is corroborative evidence since it cannot determine whether someone is guilty or innocent. Also, it answers a specific query for future research at the same time and is open to contradictions and cross-examination. In order to draw a conclusion, emphasis should be laid on the importance of revisiting certain types of evidence and their admissibility. The measure of identification should also take into account the match in the current situation, when crimes are committed using a variety of novel techniques and approaches. It should be altered in accordance with the circumstances and not at the owner's discretion, but rather in accordance with the established principles and regulations.

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INDEX OF ABBREVIATIONS

ABBREVIATION	EXPANSION
DNA	Deoxyribonucleic Acid
NCRB	National Crime Records Bureau
Kar	Karnataka
AIR	All India Report
SC	Supreme Court
SCC	Supreme Court Cases
Art	Article
FIR	First Information Report
SCR	Supreme Court Reports
CrPC	Code of Criminal Procedure
IEA	Indian Evidence Act
CRL	Criminal
w.e.f	With effect from