INDIAN JOURNAL OF LEGAL REVIEW [IJLR – IF SCORE – 7.58]

VOLUME 6 AND ISSUE 12 OF 2026

APIS – 3920 - 0001 *(and)* ISSN - 2583-2344

Published by

Institute of Legal Education

https://iledu.in

MEDICO-LEGAL ASPECTS AND THE ROLE OF FORENSIC SCIENCE IN THE ADMINISTRATION OF CRIMINAL JUSTICE

AUTHOR - ABHIRAM B H, SREE NARAYANA LAW COLLEGE, POTHOOTTA AFFILIATED TO MAHATMA GANDHI UNIVERSITY

BEST CITATION – VISHAL KUMAR & DR. MAYA DEVI, ACCESS TO MOTOR ACCIDENT COMPENSATION IN INDIA: LEGAL BARRIERS AND THE ROLE OF CLAIMS TRIBUNALS, INDIAN JOURNAL OF LEGAL REVIEW (IJLR), 6 (12) OF 2026, PG. 148-162, APIS – 3920 – 0001 & ISSN - 2583-2344.

Introduction

"Science is not an encyclopedic body of knowledge about the universe. Instead, it represents a process for proposing and refining theoretical explanations about the world that are subject to further testing and refinement".[486]

Forensic science encompasses all branches of science applied to legal purposes. It aids in the collection and analysis of evidence, including minute traces, while also raising questions regarding its applicability, relevance, and admissibility. Courts may admit forensic evidence if it is direct, non-hearsay, and primary in nature, and if it helps establish the existence or non-existence of a fact in issue, thereby constituting a relevant fact.

The term *medico-legal* denotes the intersection of medicine and law. Given the limited legal knowledge of medical practitioners and the limited medical understanding of legal professionals, medico-legal experts play a crucial role in bridging this gap and facilitating the effective functioning of both fields. Physicians frequently interact with the legal system through activities such as providing expert testimony, handling negligence cases, treating victims of criminal incidents, collecting samples, complying with mandatory reporting requirements, and preserving physical evidence. Forensic Medicine, Medical Jurisprudence, and Toxicology collectively address these interactions between medicine and law.

A medico-legal case (MLC) is a case of injury or illness in which the attending doctor, after examination and assessment, considers legal investigation necessary to determine responsibility in accordance with the law. Consequently, a medico-legal report is prepared for present or anticipated litigation. The responsibility for identifying and classifying a case as an MLC rest solely with the attending medical practitioner.

Article 51A(h) and (j) of the Constitution of India impose a fundamental duty upon citizens to develop scientific temper, humanism, and a spirit of inquiry and reform, while striving for excellence in all spheres of activity. Although India does not have a specific legislation governing DNA evidence, Sections 51 and

[486] Daubert v. Merrell Dow Pharmaceuticals, Inc. 509 U.S. 579. Also referred in Dharam Deo Yadav Vs State of U.P, (2014) 5 SCC 509, SCC (Supreme Court Cases).

53 of the Bharatiya Nagarik Suraksha Sanhita, 2023, implicitly recognize DNA testing, which is extensively used in the investigation and adjudication of complex criminal cases.

Precautions to be Taken

i. Consent

Valid consent is fundamental to the doctor-patient relationship and is mandatory before any medical examination. For consent to be valid, it must be competent, voluntary, informed, and specific to the procedure. In medico-legal cases, informed consent should include information that the examination is medico-legal in nature, that necessary investigations will be conducted, and that the findings may not support the patient's version of events.

However, a person arrested for a criminal offence may be medically examined without consent at the request of a police officer or by court order if there are reasonable grounds to believe that the examination will yield evidence relating to the offence. Under Section 53 of the CrPC and Section 51 of the BNSS, such examination is permissible where: (a) the person has been lawfully arrested for an offence, (b) the examination is likely to provide evidence of the offence, and (c) the request is made by a police officer not below the rank of Sub-Inspector.

In the case of female examinees, examination by a lady doctor is preferable, and where this is not possible, a female attendant should be present during the examination. The Punjab and Haryana High Court has further held that only a lady doctor may examine a woman who is an alleged victim of a sexual offence. In civil matters, no medical examination should be conducted without the individual's consent.

ii. Confidentiality

A doctor is required to keep secret all information regarding the patient that he comes across during the course of his treatment. Medico-legal reports are no exception and are to be treated as strictly confidential. They should not be issued directly to the patient. They have to be handed over to the police official, after getting them duly received on the carbon copy of the same. Copies of the MLR can be handed over to the patient/his relatives, as per the prevailing rules of the doctor's hospital, and after the requisite fee has been paid by the patient.

iii. **Collection and Preservation of Samples**

All relevant specimens should be collected and after proper labeling, are to be sealed under the doctor's supervision. These should be handed over to the police official concerned, along with the medico-legal report and a proper requisition letter detailing the tests to be conducted on such samples. If the samples have been collected on the request of the police, the fact is to be mentioned in the report and no requisition is necessary.

Forensic Science

Forensic Science is defined as "The application of science to those criminal and civil laws that are enforced by the police agencies in a criminal justice system". Forensic Science deals with the application of the knowledge and methodology of various disciplines of science to legal matters. For evidence analysis, it involves the use of multiple disciplines such as medicine, physics, forensic

chemistry and biology, DNA profiling, computer science and engineering. For example, physics is used to recognize the blueprint of a blood scatter; biology helps to establish the basis of an anonymous suspect and chemistry helps us to find out the chemical composition of various drugs. Therefore, the function of forensic science in criminal justice and the legal system is often underestimated and extremely critical in nature.

In ancient India, the idea of forensic science is not a new one as medical belief was regularly applicable to the requirements of the law. Sir William Herschel was one of the first to advocate the use of fingerprinting in the identification of criminal suspects. Fingerprint evidence was first accepted in an Argentine court in the 1890s and in an English court in 1902. Moreover, Forensic evidence is a discipline that works in accordance with the parameters of the Indian legal system. Its function is to provide direction to those conducting criminal investigation and to provide to magistrates/judges the correct information upon which they can have full trust in determining criminal and civil dispute. This is also helpful in resolving the criminal and civil cases.[487]

Further, Forensic science is an incorporation of almost all capabilities of knowledge, a crucial and proficient resource that makes all dispensation of justice in criminal, civil, regulatory and social contexts possible. It helps in defining all the applications of science in responding questions that are of legal significance. In present times, Forensic science is a highly developed scientific procedure that is used in criminal and civil investigations, it is capable of answering important questions and forms an integrated part of criminal justice system.[488] It comprises of all renowned techniques such as fingerprint analysis, DNA analysis, ballistics and explosives, firearms, culture etc. It facilitates to convict those guilty of crime as well as can pardon the innocent.

Role of Forensic Science in Crime Investigation

Forensic science is one of the significant characteristics of criminal justice system. Fundamentally, it deals with exploration of scientific and physical clues gathered from the crime scene. Forensic science explains the distinctiveness (who) of the suspect who committed the crime. The evidence clearly specifies the nature (what) of the crime committed. The circumstantial evidences also speak about the time (when) of the incident. The forensic evidence proves the location of the offence (where/crime scene). The forensic investigation also observes the method (how) of the offender. Finally, comes to conclude the reason behind the crime. The forensic investigators recreate the distinctiveness of the criminal and the victim.[489]

During the whole process of criminal investigation, evidence is gathered from the location of crime or from a person who is an eye witness to the whole incident, examined in a crime laboratory and then the results are presented in the court. Every crime scene is exceptional in nature and each case presents its own challenges.[490] Forensic science plays a crucial role in the criminal justice system by providing scientifically based information through the analysis of physical evidence, the identity of the culprit through personal clues like fingerprint, footprints, blood drops or hair, mobile phones or any other gadgets, vehicles and weapons. It associates with the criminal through objects left by him

[487] Forensic Science Plays a Pivotal Role in the Legal System; ifflab.org
[488] 2. Isha Tyagi and Nivedita Grover, Development of Forensic Science and Criminal Prosecution-India,, 2 IJSRP Vol.4 (2014).
[489] N. B. Narejo, M. A. Avais, Examining the Role of Forensic Science for the Investigative-Solution of Crimes, 252 SURJ (SCIENCE SERIES) Vol. 44(2) 2012.
[490] Forensic Sciences, National Institute of Justice, Office of Justice Programs, http://www.nij.gov/topics/forensics/pages/welcome.aspx

at the sight and with the victim or carried from the scene and the victim. On the other hand, if the clues recovered do not link the accused with the victim or the scene of occurrence, the innocence of the accused is established. Forensic science, thus, also saves the innocent. Due to the emergence of DNA technology as a modern method of forensic science, provides wonderful amount of information to the investigating officers that enable him to find the criminal purely on the basis of scientific evidence which he has left at the location of crime.[491]

Importance of Forensic Science in Law

The word "forensic" has its roots in the Latin word "forenses" which means a forum. Back in early Rome, a forum referred to a public place where judicial proceedings and debates were held. Thus, the origin and the very definition of 'forensic science' points to its close association with the legal system. Forensic Science involves the collection, preservation, and analysis of evidence suitable for prosecuting an offender in the court of law. The application of forensic science in the criminal justice system is, therefore, an apparent picture.[492]

The legal system widely recognizes the role of forensic evidence in the trial of criminal offenders. This is because when scientific techniques and methods are used, there is not much scope for bias or injustice. That is why DNA profiling and a host of other forensic evidence are widely accepted in courts across the world. Interestingly, the first forensic technique ever used to involve finger and palm print identification dates back to the Chinese (650 A.D.). Forensic evidence is extensively used worldwide to both convict and exonerate defendants. Thus, forensic science laboratories have mushroomed up all over the globe in the past couple of decades. In fact, special acts have been enacted in the US, Canada, and Australia to improve the rendering of forensic services. This would ensure that crimes are detected with greater certainty and consequently conviction rates can increase. Such acts place a great emphasis on time-efficient and quality management of crime scene.[493]

In Indian scenario, there has been increased emphasis on the use of such technologies in criminal investigation and trials. The Commissions appointed on reforms of criminal justice have reiterated that the infusion of technology in crime detection can help the system to function efficiently. The relevant laws have been amended from time to time to make way for use of forensic technologies in crime investigation and trial. Yet, it may be said that there are existent flaws in the laws which need to be addressed. The courts are also reluctant to rely on scientific evidence due to their restrictive approach, or certain inherent defects in the evidence as produced in courts which deter them from relying on it entirely. The main motto of criminal justice system is to provide fair justice. Undoubtedly, forensic evidence is more authentic than ocular evidence. Forensic science being scientific evidence is a boon for criminal justice system. We have to overcome the existing flaws to step forward.

It must be learnt from the past, disrupt thinking, strengthen the community and change culture. This means working together towards a resolution of the scientific deficiencies within existing forensic evidence while providing a firm basis for new innovative technologies entering into the forensic science ecosystem. At the same time, we need to ensure that the law enforcement and investigative

[491] Jyotirmoy Adhikary, DNA Technology in Administration of Justice, (LexisNexis, Butterworths, 2007)
[492] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4581010/
[493] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4581010/

communities once again recognize and use forensic science to its full potential as a holistic problem-solving tool (for example, through the use of the case assessment and interpretation methodology).[494] That such a methodology is embedded within a framework which allows for an understanding of the contribution that a specific evidence type could meaningfully deliver in terms of sub-source, source, activity or offence-level propositions for a given set of case specific circumstances rather than restricting it to a siloed one-dimensional reactive process becomes obvious. A contextualized means of evaluative reporting of forensic science data pertinent to a particular case but held in the context of that case where alternative propositions can be attended to and challenged correctly, works to fulfil this problem-solving potential. Such an approach has been suggested by the Association of Forensic Science Providers among others.[495]

Legal Provisions Supporting Criminal Investigation

In India, the application of forensic science to crime investigation and trial has to stand the limitation of law. The predominant questions therein are: viz.

i. How far such techniques are legitimate and supported by any authority?
ii. How far these forensic techniques helpful in crime investigation?
iii. How could we obtain evidentiary importance from the forensic experts?

Article 20(3) of the Constitution of India protects an accused from being compelled to be a witness against themselves and is founded on the presumption of innocence until guilt is proved. The protection extends to all stages of criminal proceedings but applies only to compelled testimony, not to voluntary statements or disclosures.

The Supreme Court in ***State of Bombay v. Kathi Kalu Oghad*** held that the collection of physical evidence such as fingerprints, handwriting samples, blood, hair, semen, or DNA does not amount to testimonial compulsion and therefore does not violate Article 20(3). Consequently, courts may direct the collection of such evidence for investigation and trial purposes.

A distinction has been drawn between physical evidence and cognitive interrogation techniques. Earlier decisions such as ***Ramchandra Reddy*** and ***Dinesh Dalmia*** upheld the use of narco-analysis, polygraph, and brain-mapping tests. However, in ***Selvi v. State of Karnataka***, the Supreme Court ruled that the involuntary administration of these techniques violates Article 20(3) and personal liberty under Article 21, rendering compulsory narco-analysis, polygraph, and brain-mapping unconstitutional.

Section 51 of the **Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS)** authorizes the medical examination of an accused where it may yield evidence relevant to the offence. The provision expressly permits the collection of biological samples, including blood, semen, hair, nail clippings, and DNA, using modern scientific techniques. While this strengthens the statutory basis for forensic investigation, the reliability of DNA evidence remains dependent upon proper collection, preservation, and handling of samples.

Under the **Bharatiya Sakshya Adhiniyam, 2023**, forensic reports constitute expert evidence. The role of the expert is to assist the court by presenting scientific findings and the basis for their conclusions.

[494] A model for case assessment and interpretation. Cook R, Evett IW, Jackson G, Jones PJ, Lambert JA Sci Justice. 1998 Jul-Sep; 38(3):151-6
[495] 2. Standards for the formulation of evaluative forensic science expert opinion. Association of Forensic Science Providers. Sci Justice. 2009 Sep; 49(3):161-4

Courts are not bound by expert opinions and may accept or reject them after evaluating their reasoning, methodology, and reliability.

Recognizing the growing importance of science in criminal justice, the **National Draft Policy on Criminal Justice Reforms** recommended strengthening the evidentiary value of scientific and forensic evidence and moving beyond its traditional treatment as merely opinion evidence.

Prudent to Use Forensic Evidence, to Decide Cases Justly and Conclusively

The **Justice Malimath Committee (2003)** emphasized the need for greater use of forensic science in criminal investigations. Its importance was recently highlighted in the **Sushant Singh Rajput case**, where forensic analysis reportedly found no evidence of homicide, demonstrating the value of scientific investigation.

The significance of forensic evidence is historically illustrated by the **Francisca Rojas case (1892)**, the first recorded conviction based on fingerprint evidence. The case established fingerprinting as a more reliable identification method than anthropometry and laid the foundation for its widespread use in criminal investigations.

Forensic science applies disciplines such as medicine, biology, chemistry, and physics to assist in crime detection, identification of victims, determination of cause of death, and reconstruction of events. When combined with other evidence, it helps courts arrive at accurate conclusions.

Despite its growing importance, forensic evidence remains underutilized in India. Concerns have also been raised regarding its compatibility with **Article 20(3)** of the Constitution, which protects individuals from self-incrimination. However, in **State of Bombay v. Kathi Kalu Oghad**, the Supreme Court held that compelling an accused to provide physical evidence such as fingerprints, blood, hair, or DNA samples does not amount to testimonial compulsion and therefore does not violate Article 20(3).

The Doctrinal Trajectory

The case law may be periodized in five phases: the foundational testimonial-compulsion decisions (1954–1980); the expansion of Article 21 and the law of medical evidence at trial (1980–2005); the neuro-interrogation controversy culminating in Selvi (2006–2010); the consolidation of criminal-DNA practice, specimen powers and the privacy doctrine (2010–2022); and the post-codification phase (2023 onwards). The periodization is analytical, not strictly chronological, but it brings out a pattern: each phase begins with a judicial answer to a problem the legislature had left open, and each is followed by legislative or administrative attempts to catch up.[496]

i. Phase I (1954–1980): physical evidence and testimonial compulsion

The first phase established the physical-testimonial distinction and exposed a legislative gap. In State of U.P. v. Ram Babu Misra (1980) the Court held that a Magistrate had no power, at the investigation stage, to direct an accused to give specimen handwriting, because the evidentiary provision on comparison of handwriting is confined to proceedings in court, and it invited Parliament to legislate. The invitation was accepted only in 2005, when the Code of Criminal Procedure was amended to insert an Explanation to section 53 recognising DNA profiling and other modern techniques, a new section 53A

[496] *See generally Selvi*, (2010) 7 S.C.C. 263; *Kattavellai*, 2025 INSC 845.

INDIAN JOURNAL OF LEGAL REVIEW [IJLR – IF SCORE – 7.58]
VOLUME 6 AND ISSUE 12 OF 2026
APIS – 3920 - 0001 *(and)* ISSN - 2583-2344
Published by
Institute of Legal Education
https://iledu.in

on the examination of persons accused of rape, and section 311A empowering a Magistrate to order specimen signatures and handwriting.[497]

The legacy of this phase is a rule of considerable practical importance. Samples and impressions that merely establish a physical characteristic may be compelled consistently with Article 20(3), provided there is lawful authority; what may not be compelled is the accused's knowledge. The difficulty, which later phases confronted, is that techniques developed after 1961 do not sort neatly into either category.[498]

ii. Phase II (1980–2005): medical evidence at trial

During the second phase the Supreme Court built the evidentiary architecture within which medical and scientific proof is now appreciated. Sharad Birdhichand Sarda v. State of Maharashtra (1984), a poisoning case, laid down the conditions that must be satisfied before guilt can be inferred from circumstances, and remains the leading statement of the standard of proof in cases in which medical and forensic findings supply links in the chain. Laxman v. State of Maharashtra (2002), a Constitution Bench decision, held that a dying declaration is not rendered inadmissible merely because the examining doctor did not certify the declarant's fitness, though the court must be satisfied that the declarant was in a fit state of mind. State of Karnataka v. Krishnappa (2000) is among the decisions in which the Court considered the evidentiary role of medical evidence in a rape prosecution.[499]

Bodily tests also entered civil and family litigation in this period, in maintenance, legitimacy and matrimonial disputes, beginning with Goutam Kundu v. State of West Bengal (1993), Kamti Devi v. Poshi Ram (2001) and Sharda v. Dharmpal (2003), which set the cautious, balancing approach to compelled blood tests, DNA tests and medical examination that later decisions refined. Because those cases concern parentage, the protection of children and the integrity of the family.[500]

iii. Phase III (2006–2010): neuro-interrogation and Selvi

The third phase was prompted by the investigative adoption of narco-analysis, polygraph examination and brain-electrical-activation profiling, especially in high-profile cases. High Courts, including the Madras High Court in Dinesh Dalmia v. State and the Kerala High Court in Rojo George v. Deputy Superintendent of Police, upheld the compulsory administration of such tests, reasoning, broadly, that statements made under drug influence were not 'compelled' in the constitutional sense and that the results resembled physical evidence more than testimony. The position in the High Courts was thus permissive, and investigators began to treat such tests as routine.[501]

The Supreme Court reversed that approach in Selvi v. State of Karnataka (2010), decided by a three-judge Bench. It held that the compulsory administration of narco-analysis, polygraph examination and the Brain Electrical Activation Profile (BEAP) test violates Article 20(3), because the results derive from

[497] *State of U.P. v. Ram Babu Misra*, (1980) 2 S.C.C. 343 (India). *See also* Indian Evidence Act, 1872, No. 1 of 1872, § 73, India Code (1872) (repealed 2024); Code of Criminal Procedure (Amendment) Act, 2005, No. 25 of 2005, India Code (2005) [Act number and commencement date to be confirmed]; Code of Criminal Procedure, 1973, No. 2 of 1974, § 53, India Code (1974) (repealed 2024); Code of Criminal Procedure, 1973, No. 2 of 1974, § 53A, India Code (1974) (repealed 2024); Code of Criminal Procedure, 1973, No. 2 of 1974, § 311A, India Code (1974) (repealed 2024).
[498] *Kathi Kalu Oghad*, A.I.R. 1961 S.C. 1808; *Nandini Satpathy*, (1978) 2 S.C.C. 424.
[499] *Sarda*, (1984) 4 S.C.C. 116; *Laxman v. State of Maharashtra*, (2002) 6 S.C.C. 710 (India); *State of Karnataka v. Krishnappa*, (2000) 4 S.C.C. 75 (India).
[500] *See Goutam Kundu v. State of West Bengal*, (1993) 3 S.C.C. 418 (India); *Kamti Devi v. Poshi Ram*, (2001) 5 S.C.C. 311 (India); *Sharda v. Dharmpal*, (2003) 4 S.C.C. 493 (India).
[501] *Dinesh Dalmia v. State*, [reporter citation to be confirmed] (Mad. H.C. 2006) (India); *Rojo George v. Dep. Superintendent of Police*, [reporter citation to be confirmed] (Ker. H.C. 2006) (India).

the subject's mental processes and amount to testimonial evidence, and that Article 20(3) protection extends to the investigation stage. It held further that compulsory administration is an unjustified intrusion into mental privacy under Article 21, falls short of the requirement of substantive due process, and would also amount to cruel, inhuman or degrading treatment in the language of evolving international human rights norms. The Court did not bar the techniques altogether: they may be administered with the subject's voluntary and informed consent, subject to safeguards modelled on the National Human Rights Commission's 2000 guidelines on the polygraph, including access to a lawyer, recording of consent before a Judicial Magistrate, explanation of the consequences, audio-visual recording and medical documentation.[502]

Three further features of Selvi shape the present law. First, the Court declined to read narco-analysis and similar techniques into the residual words of the Explanation to section 53 of the Code ('such other tests'), holding that the residual clause must be understood in the light of the physical examinations that precede it. Second, the Court held that the test results themselves are not confessions and carry no independent evidentiary weight, though facts discovered pursuant to information elicited in a voluntary test may be proved to the extent permitted by the provision governing discoveries. Third, the Court took note of the unsettled scientific literature on the reliability of the techniques but decided the case on constitutional grounds, leaving the scientific validity question unresolved. The judgment therefore combines a strong rights holding with a deliberately limited statement about evidentiary value.[503]

iv. Phase IV (2010–2022): criminal DNA, specimen powers and the privacy doctrine

The Court's later decisions on DNA testing in civil disputes, namely Bhabani Prasad Jena v. Convenor Secretary, Orissa State Commission for Women (2010), Nandlal Wasudeo Badwaik v. Lata Nandlal Badwaik (2014), Dipanwita Roy v. Ronobroto Roy (2015), Ashok Kumar v. Raj Gupta (2022) and Aparna Ajinkya Firodia v. Ajinkya Arun Firodia (2023), together with the Delhi High Court litigation in Rohit Shekhar v. Narayan Dutt Tiwari, where the 'eminent need' test and its application to children are examined. In civil proceedings no one can be compelled to give a sample and a court may direct a test only on eminent need, whereas an accused's DNA may be taken in a criminal investigation under statutory authority, subject to Article 21.[504]

In criminal cases the Court has treated DNA profiling of an accused as a legitimate form of medical examination, now expressly recognised by statute, and has not regarded it as testimonial. At the same time, it has treated DNA evidence as expert opinion whose value depends on the integrity of the sample and the soundness of the analysis, not as self-proving. The cases of this period, notably Krishan Kumar Malik v. State of Haryana (2011) and Anil v. State of Maharashtra (2014), show the Court grappling with the consequences of statutory DNA profiling for the investigation of sexual offences and with the question of what follows from an investigator's failure to use it.[505]

---

[502] *Selvi*, (2010) 7 S.C.C. 263. *See also* NAT'L HUM. RTS. COMM'N, GUIDELINES FOR THE ADMINISTRATION OF POLYGRAPH TEST (LIE DETECTOR TEST) ON AN ACCUSED (2000).

[503] *See Selvi*, (2010) 7 S.C.C. 263. *See also* Indian Evidence Act, 1872, No. 1 of 1872, § 27, India Code (1872) (repealed 2024); Code of Criminal Procedure § 53.

[504] *See Bhabani Prasad Jena v. Convenor Sec'y, Orissa State Comm'n for Women*, (2010) 8 S.C.C. 633 (India); *Nandlal Wasudeo Badwaik v. Lata Nandlal Badwaik*, (2014) 2 S.C.C. 576 (India); *Dipanwita Roy v. Ronobroto Roy*, (2015) 1 S.C.C. 365 (India); *Ashok Kumar v. Raj Gupta*, (2022) 1 S.C.C. 20 (India); *Aparna Ajinkya Firodia v. Ajinkya Arun Firodia*, 2023 INSC 146 (India). *See also Rohit Shekhar v. Narayan Dutt Tiwari*, [reporter citation to be confirmed] (Del. H.C.) (India).

[505] *See Krishan Kumar Malik v. State of Haryana*, (2011) 7 S.C.C. 130 (India); *Anil v. State of Maharashtra*, (2014) 4 S.C.C. 69 (India). *See also* Code of Criminal Procedure § 53A.

Two decisions of the period reshaped the constitutional setting. Puttaswamy (2017) supplied the proportionality framework within which any compelled bodily sampling must now be justified. Ritesh Sinha v. State of U.P. (2019) decided that a Magistrate may direct a person to give a voice sample for investigation, holding that a voice sample, like a handwriting specimen, is not testimonial, and, in the absence of an express provision in the Code, recognising the Magistrate's power to make such an order until Parliament legislated. The BNSS has since codified the power in section 349, which refers expressly to voice samples and finger impressions and applies to persons not arrested.[506]

The legislature acted in parallel. The Criminal Procedure (Identification) Act, 2022 replaced the Identification of Prisoners Act, 1920, enlarging the 'measurements' that may be taken to include, among other things, biological samples and their analysis and behavioural attributes such as signatures and handwriting, and providing for their retention by a central agency. The Government withdrew the DNA Technology (Use and Application) Regulation Bill, 2019, which would have created a DNA regulatory board and data bank, in July 2023, on the stated footing that the 2022 Act already covered most of its subject matter. India therefore entered the new codification without a dedicated statute on DNA data banks, quality accreditation or forensic standards, although the Law Commission had proposed one in 2017.[507]

v. Phase V (2023 onwards): the post-codification decisions

The fifth phase, still unfolding, is marked by judicial insistence that scientific and quasi-scientific evidence be procedurally verified and independently corroborated. Manoj Kumar Soni v. State of Madhya Pradesh (2023), Vinobhai v. State of Kerala (2025) and Rajendra Singh v. State of Uttaranchal (2025) are not narco-analysis cases: they concern the evidentiary weight of statements leading to discovery and of recoveries unlinked by forensic analysis to the crime. In Manoj Kumar Soni and Vinobhai the Court held that such a statement, uncorroborated, cannot sustain a conviction; in Rajendra Singh the accused were acquitted because recovered weapons had not been forensically linked to the offence by a laboratory report. They are relevant to this article because commentary on Amlesh Kumar v. State of Bihar associates the corroboration principle they apply with the Court's treatment of compelled or semi-compelled disclosures, and they illustrate the sufficiency stage of the four-stage framework.[508]

Amlesh Kumar v. State of Bihar (2025) extended Selvi to the bail stage. The Patna High Court had permitted a narco-analysis test in connection with a bail application; the Supreme Court set the order aside, holding that investigative convenience cannot justify an involuntary test at any stage and directing that the bail application be reconsidered without regard to the proposed test. The decision confirms, in a post-2023 setting, that the Selvi consent requirement is a constitutional precondition that attaches to the procedure whenever it is sought, not an incident of any particular stage of proceedings.[509]

---

[506] *Puttaswamy*, (2017) 10 S.C.C. 1. *See also Ritesh Sinha v. State of U.P.*, (2019) 8 S.C.C. 1 (India); The Bharatiya Nagarik Suraksha Sanhita, 2023, No. 46 of 2023, § 349, India Code (2023).

[507] *See* Criminal Procedure (Identification) Act, 2022, No. 11 of 2022, § 2(1)(b), India Code (2022); Identification of Prisoners Act, 1920, No. 33 of 1920, India Code (1920) (repealed 2022); The DNA Technology (Use and Application) Regulation Bill, 2019 (India) (introduced July 8, 2019; withdrawn July 24, 2023). *See also* LAW COMM'N REPORT NO. 271, *supra* note 1; LAW COMM'N OF INDIA, REPORT NO. 87, IDENTIFICATION OF PRISONERS ACT, 1920 (1980).

[508] *Manoj Kumar Soni v. State of Madhya Pradesh*, 2023 INSC 705 (India); *Vinobhai v. State of Kerala*, 2025 LiveLaw (SC) 127 (India) [neutral citation to be added]; *Rajendra Singh v. State of Uttaranchal*, 2025 INSC 1193 (India). *See also Amlesh Kumar v. State of Bihar*, 2025 INSC 810 (India).

[509] *Amlesh Kumar*, 2025 INSC 810. *See also Selvi*, (2010) 7 S.C.C. 263.

INDIAN JOURNAL OF LEGAL REVIEW [IJLR – IF SCORE – 7.58]
VOLUME 6 AND ISSUE 12 OF 2026
APIS – 3920 - 0001 *(and)* ISSN - 2583-2344
Published by
Institute of Legal Education
https://iledu.in

On DNA, the Supreme Court in Kattavellai @ Devakar v. State of Tamil Nadu (2025) set aside a death sentence and issued directions applicable across the country on the collection, preservation, documentation and chain of custody of DNA evidence, treating the evidence as opinion evidence whose probative value depends on procedural integrity. The Gujarat High Court applied the directions in State of Gujarat v. Gopi @ Bhalabhai Girishbhai Devipujak (2026), setting aside a death sentence where the chain of custody of the DNA samples was broken and the other circumstances, including 'last seen' evidence and an extra-judicial confession, could not supply a complete chain. The directions were judge-made because neither the BSA nor the BNSS prescribes a chain-of-custody protocol, and the fate of DNA evidence in the lower courts now turns on compliance with them.[510]

The Kerala High Court has added an institutional dimension. In Suresh v. State of Kerala (2025), acquitting a murder convict on account of investigative lapses, the High Court directed the State Police to use the e-Sakshya platform or an equivalent to document searches and seizures under section 105 of the BNSS, crime scenes in offences punishable for more than seven years under section 176(3), and statements recorded by video under sections 180 and 183, and linked scientific investigation to the constitutional demand for a fair and effective investigation. The decision reflects the Court's recognition that the new forensic provisions will not operate without institutional change.[511]

Two high-profile prosecutions show what is at stake. In the Nithari cases the Allahabad High Court acquitted Surendra Koli in twelve cases in October 2023, the Supreme Court dismissed the appeals against those acquittals in July 2025, and in November 2025 it allowed a curative petition and acquitted him in the one case in which his conviction had stood since 2011; reports of the curative hearing record the Court's observation that the conviction rested on a statement and the recovery of a knife. In the Talwar case the Allahabad High Court acquitted the accused in October 2017, in a judgment that, as widely reported, criticised the investigation, including the handling of the crime scene and of material evidence. These outcomes are best read as failures at the probative-value and sufficiency stages, of investigation and of proof, rather than as evidence that forensic science is unreliable as such.[512]

Reading the five phases together, the trajectory runs from a narrow doctrinal question (is a physical sample testimonial?) to a broad regulatory one (what conditions must the collection, analysis and appreciation of scientific evidence satisfy?). Constitutional doctrine has been supplied almost entirely by the Supreme Court, from Kathi Kalu Oghad to Selvi and Puttaswamy; the procedural safeguards that give the doctrine effect, namely consent protocols, chain-of-custody rules and health-based limits, have until now been developed by courts case by case; and the legislature has largely confined itself to authorising collection, in 2005, 2022 and 2023, without prescribing the standards under which collected material may be relied upon.[513]

a. Medico-Legal Cases in Practice

The evidentiary value of medical evidence depends on its consistency with other evidence. The Supreme Court has held that a reliable ocular account generally prevails over a medical opinion

[510] *Kattavellai*, 2025 INSC 845; *State of Gujarat v. Gopi @ Bhalabhai Girishbhai Devipujak*, R/Crim. Confirmation Case No. 6 of 2022 (Guj. H.C. Jan. 13, 2026) (India) [neutral citation to be added].
[511] *Suresh v. State of Kerala*, Crim. App. No. 602 of 2019, 2025 LiveLaw (Ker) 456 (Ker. H.C. July 2025) (India). *See also Pooja Pal*, (2016) 3 S.C.C. 135.
[512] *See Surendra Koli v. State of U.P.*, (2011) 4 S.C.C. 80 (India); *Surendra Koli v. State of U.P.*, 2025 INSC 1308 (India) (curative petition decided Nov. 11, 2025). *See also Rajesh Talwar v. Cent. Bureau of Investigation*, [appeal number and reporter citation to be confirmed] (All. H.C. Oct. 12, 2017) (India).
[513] *See Kathi Kalu Oghad*, A.I.R. 1961 S.C. 1808; *Selvi*, (2010) 7 S.C.C. 263; *Puttaswamy*, (2017) 10 S.C.C. 1; *Kattavellai*, 2025 INSC 845.

suggesting only an alternative possibility. However, where medical evidence completely contradicts the ocular version, it may undermine the prosecution's case. Courts must independently assess the reasoning of medical experts rather than accept or reject their opinions mechanically. Thus, medical and forensic evidence is rarely conclusive by itself but can be decisive when inconsistent with the prosecution narrative.[514]

A dying declaration is an important medico-legal instrument. Section 26 of the Bharatiya Sakshya Adhiniyam, 2023, corresponding to Section 32 of the Indian Evidence Act, renders relevant statements relating to the cause or circumstances of a person's death. Following *Laxman*, a medical certificate of fitness is not mandatory, provided the court is satisfied that the declarant was mentally fit and that the statement was made voluntarily. Medical records are commonly relied upon to establish both requirements.[515] In sexual offence cases, medico-legal procedures serve both evidentiary and dignitary purposes. Sections 63 and 64 of the Bharatiya Nyaya Sanhita define and punish rape, while Section 184 of the Bharatiya Nagarik Suraksha Sanhita provides for the medical examination of survivors and accused persons, including DNA profiling, with reports to be submitted within seven days. In *Lillu v. State of Haryana* (2013), the Supreme Court held that the two-finger test violates the survivor's privacy, dignity, and bodily integrity and lacks scientific validity. The decision underscores that Article 21 protects the dignity of survivors throughout the evidence-gathering process.[516]

In homicide cases, Sections 103 and 105 of the Bharatiya Nyaya Sanhita govern murder and culpable homicide not amounting to murder. Medical findings regarding injuries and cause of death are central to proving the physical elements of these offences. In *Sharad Birdhichand Sarda*, the Supreme Court emphasized that circumstantial evidence must form a complete chain pointing exclusively to the accused's guilt and cautioned against substituting suspicion for proof. Medical and forensic evidence therefore constitute important, but not standalone, links in the evidentiary chain.[517]

Forensic psychiatry becomes relevant where the accused pleads unsoundness of mind. Section 22 of the Bharatiya Nyaya Sanhita, similar to Section 84 of the Indian Penal Code, exempts acts committed by persons incapable of understanding the nature or wrongfulness of their conduct due to mental illness. The Supreme Court has clarified that the relevant inquiry concerns the accused's mental state at the time of the act, with the burden of proof resting on the accused on a balance of probabilities. While medical evidence is relevant, it is not conclusive, as legal insanity differs from a clinical diagnosis.[518]

Medical negligence represents the area where criminal law most directly regulates medical practice. Section 106(1) of the Bharatiya Nyaya Sanhita criminalizes death caused by rash or negligent acts not amounting to culpable homicide, while providing reduced punishment for registered medical practitioners performing medical procedures. In *Jacob Mathew v. State of Punjab* (2005), the Supreme Court held that criminal liability arises only in cases of gross negligence or recklessness and not from

[514] *See Solanki Chimanbhai*, (1983) 2 S.C.C. 174; *Jai Lal*, (1999) 7 S.C.C. 280; *Madan Gopal Kakkad*, (1992) 3 S.C.C. 204; *Murari Lal*, (1980) 1 S.C.C. 704.
[515] *See* The Bharatiya Sakshya Adhiniyam, 2023, No. 47 of 2023, § 26, India Code (2023); *Laxman*, (2002) 6 S.C.C. 710.
[516] *See* The Bharatiya Nyaya Sanhita, 2023, No. 45 of 2023, §§ 63–64, India Code (2023); The Bharatiya Nagarik Suraksha Sanhita, 2023, No. 46 of 2023, § 52, India Code (2023); The Bharatiya Nagarik Suraksha Sanhita, 2023, No. 46 of 2023, § 184, India Code (2023). *See also Lillu v. State of Haryana*, (2013) 14 S.C.C. 643 (India).
[517] *See* The Bharatiya Nyaya Sanhita, 2023, No. 45 of 2023, §§ 103, 105, India Code (2023); *Sarda*, (1984) 4 S.C.C. 116.
[518] *See* Bharatiya Nyaya Sanhita § 22; *Dahyabhai Chhaganbhai Thakker v. State of Gujarat*, A.I.R. 1964 S.C. 1563 (India).

mere errors of judgment. Similar principles were affirmed in *Dr. Suresh Gupta* and *Kusum Sharma*, with safeguards introduced against unwarranted prosecutions of medical professionals.[519]

Consent forms the link between criminal and civil aspects of medical law. Sections 26 and 30 of the Bharatiya Nyaya Sanhita exempt harm caused in good faith for a person's benefit with consent, and in certain circumstances even without consent when obtaining it is impossible. In *Samira Kohli v. Dr. Prabha Manchanda* (2008), the Supreme Court affirmed the requirement of informed consent for medical procedures except in emergencies. Unlike therapeutic interventions undertaken for the patient's benefit, forensic procedures primarily serve the State's evidentiary interests and therefore require stricter constitutional safeguards, as recognised in *Selvi*.[520]

b. The Statutory Framework: BNSS, BSA and BNS

The 2023 codification re-enacted most of the existing law with modifications, and the changes that matter for medico-legal and forensic evidence are listed in Table 2.1. They fall into three groups: provisions that authorise collection (BNSS sections 51–53, 176(3), 184 and 349); provisions that govern admission and appreciation (BSA sections 23, 26, 39–41 and 61–63); and the substantive offences and defences that frame medico-legal cases (BNS sections 22, 26, 30, 63–64, 103, 105 and 106).[521]

i. The BNSS

Section 176(3) of the Bharatiya Nagarik Suraksha Sanhita (BNSS) is one of the most significant forensic reforms. It mandates that, in offences punishable with imprisonment of seven years or more, the investigating officer must ensure a forensic expert visits the crime scene, collects forensic evidence, and video-records the process. This transforms forensic investigation from a matter of discretion into a statutory obligation, although its implementation remains dependent on forensic infrastructure and State notification.[522]

Sections 51 to 53 of the BNSS retain the provisions relating to the medical examination of accused persons, including those accused of sexual offences. The provisions expressly authorize the collection of biological samples such as blood, semen, swabs, sputum, sweat, hair, and nail clippings through modern scientific techniques, including DNA profiling. The explicit recognition of DNA profiling strengthens its statutory basis in criminal investigations. However, the Supreme Court's decision in *Selvi* continues to apply, meaning these provisions do not authorize compulsory narco-analysis, polygraph tests, or Brain Electrical Activation Profile (BEAP) examinations.[523]

Section 349 of the BNSS expands a Magistrate's power to obtain forensic specimens. In addition to signatures and handwriting samples, Magistrates may now require finger impressions and voice samples, even from persons who have not been arrested. The provision codifies the position established in *Ritesh Sinha* and reflects the principle laid down in *Kathi Kalu Oghad* that physical characteristics do not amount to testimonial compulsion. However, questions concerning privacy and proportionality

[519] *See* Bharatiya Nyaya Sanhita § 106(1); *Jacob Mathew v. State of Punjab*, (2005) 6 S.C.C. 1 (India). *See also Bolam v. Friern Hosp. Mgmt. Comm.*, [1957] 1 W.L.R. 582 (Q.B.) (Eng.); *Dr. Suresh Gupta v. Gov't of NCT of Delhi*, (2004) 6 S.C.C. 422 (India); *Kusum Sharma v. Batra Hosp. & Med. Rsch. Ctr.*, (2010) 3 S.C.C. 480 (India).
[520] *See* The Bharatiya Nyaya Sanhita, 2023, No. 45 of 2023, §§ 26, 30, India Code (2023); *Samira Kohli v. Dr. Prabha Manchanda*, (2008) 2 S.C.C. 1 (India). *Cf. Selvi*, (2010) 7 S.C.C. 263.
[521] *See* The Bharatiya Nagarik Suraksha Sanhita, 2023, No. 46 of 2023, §§ 51–53, India Code (2023); Bharatiya Sakshya Adhiniyam § 39; Bharatiya Nyaya Sanhita § 106(1).
[522] *See* Bharatiya Nagarik Suraksha Sanhita § 176(3). *See also Suresh*, 2025 LiveLaw (Ker) 456.
[523] *See* Bharatiya Nagarik Suraksha Sanhita §§ 51–53; Bharatiya Nagarik Suraksha Sanhita § 52. *See also Selvi*, (2010) 7 S.C.C. 263.

under Article 21 remain where such specimens are sought from individuals who are neither accused nor arrested.[524]

The BNSS further strengthens forensic investigation through **Section 184**, governing the medical examination of rape survivors, and through provisions mandating audio-video recording of searches and certain statements. Together with Section 176(3), these provisions demonstrate a legislative preference for scientifically assisted and electronically recorded investigations rather than reliance solely on oral testimony .[525]

ii. The BSA

Section 39 of the BSA is the gateway for scientific evidence. By adding 'any other field' to the Evidence Act's list of foreign law, science and art, it dispenses with any argument that a technique falls outside the enumerated categories, and by section 39(2) it makes the opinion of an Examiner of Electronic Evidence relevant. DNA analysis, as the Supreme Court treated it in Kattavellai, is opinion evidence within this provision. The provision answers the question of relevance. It does not prescribe a test of reliability for the technique or the expert, does not distinguish a physical-sample technique from a cognitive one, and does not state how much weight an expert opinion deserves.[526]

Section 23 of the BSA deals with confessions to the police and with the discovery rule. The bar on proof of confession to a police officer and of confession by an accused in police custody is retained, and the rule that so much of the information received from an accused as relates distinctly to the fact discovered may be proved is retained as a proviso. The provision is the doctrinal route through which, under Selvi, facts discovered pursuant to a voluntary test may be proved while the test result itself is not substantive evidence; its dependence on discovery explains why the corroboration cases of Phase V, though concerned with disclosure statements, bear on neuro-forensic evidence by analogy.[527]

Sections 61 to 63 govern electronic and digital records, the evidence on which digital forensics depends. Section 63 requires a certificate in the form set out in the Schedule, which requires the hash value of the record and, in a second part, a declaration by an expert. The provision is the legislative successor to section 65B of the Evidence Act, whose certificate requirement was authoritatively restated in Anvar P.V. v. P.K. Basheer (2014) and Arjun Panditrao Khotkar v. Kailash Kushanrao Gorantyal (2020). It is the one area in which the BSA has gone beyond re-enactment to prescribe a procedural standard for a species of scientific evidence, and it throws into relief the absence of comparable provisions for biological and neuro-cognitive evidence.[528]

iii. The BNS

The BNS does not regulate forensic technique, but it defines the offences and defences within which medico-legal evidence operates. It re-enacts the offences of murder, culpable homicide and rape, the exception for unsoundness of mind, the exceptions for acts done in good faith for a person's benefit,

[524] *See* Bharatiya Nagarik Suraksha Sanhita § 349; Code of Criminal Procedure § 311A. *See also Ritesh Sinha*, (2019) 8 S.C.C. 1; *Puttaswamy*, (2017) 10 S.C.C. 1.
[525] *See* Bharatiya Nagarik Suraksha Sanhita § 184; Bharatiya Nagarik Suraksha Sanhita § 105; Bharatiya Nagarik Suraksha Sanhita § 180; Criminal Procedure (Identification) Act § 2(1)(b).
[526] *See* Bharatiya Sakshya Adhiniyam § 39; Bharatiya Sakshya Adhiniyam § 40; Bharatiya Sakshya Adhiniyam § 41. *See also Kattavellai*, 2025 INSC 845.
[527] *See* The Bharatiya Sakshya Adhiniyam, 2023, No. 47 of 2023, § 23, India Code (2023); Indian Evidence Act § 27. *See also Selvi*, (2010) 7 S.C.C. 263; *Manoj Kumar Soni*, 2023 INSC 705.
[528] *See* Bharatiya Sakshya Adhiniyam §§ 61–63; *Anvar P.V. v. P.K. Basheer*, (2014) 10 S.C.C. 473 (India); *Arjun Panditrao Khotkar v. Kailash Kushanrao Gorantyal*, (2020) 7 S.C.C. 1 (India).

INDIAN JOURNAL OF LEGAL REVIEW [IJLR – IF SCORE – 7.58]
VOLUME 6 AND ISSUE 12 OF 2026
APIS – 3920 - 0001 *(and)* ISSN - 2583-2344
Published by
Institute of Legal Education
https://iledu.in

and, by section 106(1), the offence of causing death by negligence with its special proviso for registered medical practitioners. The changes bear mainly on medical practice: the proviso reflects a legislative response to the Jacob Mathew line of cases, and by defining the registered medical practitioner by reference to the National Medical Commission Act, 2019 it ties the criminal law to the regulatory framework for the profession.[529]

c. The Indian Position

Table 2.2: The Indian position at a glance

Technique	Constitutional position	Statutory basis	Evidentiary treatment	Leading authority
DNA profiling of accused (criminal)	Not testimonial; compellable as physical evidence, subject to Art. 21 proportionality	BNSS §§ 51–52; Identification Act, 2022	Expert opinion (BSA § 39); weight depends on chain of custody; not self-sufficient	Kathi Kalu Oghad; Kattavellai
Handwriting, signature, finger impressions, voice samples	Not testimonial	BNSS § 349 (includes voice; persons not arrested)	Expert opinion (BSA §§ 39, 41)	Kathi Kalu Oghad; Ritesh Sinha
Narco-analysis	Involuntary administration barred (Arts. 20(3), 21)	None authorises; outside 'such other tests' in BNSS § 51 Explanation (per Selvi)	Voluntary only with safeguards; result not substantive evidence; discovered facts may be proved	Selvi; Amlesh Kumar
Polygraph	As for narco-analysis	As above; NHRC guidelines	As above	Selvi
BEAP / brain mapping (BEOS)	As for narco-analysis	As above	As above	Selvi
Electronic and digital records	Privacy proportionality (Art. 21)	BSA §§ 61–63; BNSS § 105	Admissible on prescribed certificate	Arjun Panditrao Khotkar

[529] *See* Bharatiya Nyaya Sanhita §§ 103, 105; Bharatiya Nyaya Sanhita §§ 63–64; Bharatiya Nyaya Sanhita § 22; Bharatiya Nyaya Sanhita §§ 26, 30; Bharatiya Nyaya Sanhita § 106(1). *See also Jacob Mathew*, (2005) 6 S.C.C. 1.

Medical examination and medical evidence	Dignity and bodily integrity (Art. 21)	BNSS §§ 51–53, 184	Expert opinion; ocular evidence generally preferred unless medical evidence excludes it	Lillu; Solanki Chimanbhai

Source: author's synthesis of the authorities cited in this article.[530]

Conclusion

This article has traced the Indian law of medico-legal and forensic evidence from the physical-testimonial distinction of Kathi Kalu Oghad to the post-2023 directions on DNA and the corroboration of discovery. It has shown that the constitutional framework, built on Articles 20(3) and 21, is well developed for neuro-interrogation and, through the privacy doctrine, increasingly for bodily intrusion generally; that the statutory framework of the BNSS, BSA and BNS authorises collection and admits expert opinion but leaves the standards of reliability, custody, consent and health protection to the courts; and that the Indian position is therefore settled in its outline and unsettled in its detail.[531]

[530] *See Selvi*, (2010) 7 S.C.C. 263; *Kattavellai*, 2025 INSC 845; *Ritesh Sinha*, (2019) 8 S.C.C. 1; *Amlesh Kumar*, 2025 INSC 810.
[531] *See generally Selvi*, (2010) 7 S.C.C. 263; *Kathi Kalu Oghad*, A.I.R. 1961 S.C. 1808; *Kattavellai*, 2025 INSC 845; Bharatiya Sakshya Adhiniyam § 39; Bharatiya Nagarik Suraksha Sanhita § 51.