



ISSN Print: 2394-7500  
ISSN Online: 2394-5869  
Impact Factor: 5.2  
IJAR 2015; 1(9): 964-967  
www.allresearchjournal.com  
Received: 07-06-2015  
Accepted: 10-07-2015

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## Importance of Medical and scientific evidences in criminal cases: an Overviews

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### Abstract

Medical evidences and scientific techniques are also used by investigating agencies to prove the guilt of the accused. The medical and scientific evidences can play a major role in identifying the accused and proving his guilt. These evidences are mainly corroborative pieces of evidences. The expression "evidence" means "oral or documentary or circumstantial proof of the allegations in issue between the parties in a legal proceeding". "Medical evidence" means a proof given by medical expert, which is based on his scientific knowledge skill and personal experience. The opinion of a medical expert cannot outweigh the testimony of a respected and independent witness. But if there is a conflict between the two, then medical evidence is given preference. The testimony of eye witnesses, therefore, cannot be thrown out merely on the ground of its inconsistency with medical evidence because medical evidence is only of probative and corroborative. In case of inconsistency in medical and ocular evidence, the evidence of eye witness may not be believed by the court. When direct evidence is unsatisfactory and the evidence of gunshot injury prima facie appears to be of rifle injury, then the evidence of ballistic expert can cure inconsistency. Conviction is sustainable if injury report not produced provided the evidence of reliable and probable witnesses are on the record showing that injuries were caused by the accused. Medical evidences are commonly required to support a charge of rape but it is seldom more than corroborative. Medical and scientific evidences play an important role in the approximation of criminal justice.

**Keywords:** Medical Evidences, Scientific Evidences, Criminal Offences

### 1. Introduction

The victims of criminal offences seek justice through the Courts by filing criminal cases for awarding punishment to the offenders. The state is required to prove the guilt of the offenders through the public prosecutor by producing adequate evidences. Medical evidences and scientific techniques are also used by investigating agencies to prove the guilt of the accused. In view of current scientific developments, the medical and scientific evidences can play a major role in identifying the accused and proving his guilt. These evidences are mainly corroborative pieces of evidences and such scientific evidences cannot be easily rejected by the courts. Medical and scientific expert witnesses are those who are admitted to testify from a peculiar knowledge of science i.e. forensic science, to give their opinion in evidence.

The expression "evidence" means "oral or documentary or circumstantial proof of the allegations in issue between the parties in a legal proceeding". "Medical evidence" means a proof given by medical expert, which is based on his scientific knowledge skill and personal experience. But such expert's opinion is merely an opinion unless it is tested in a court by cross-examination and accepted by the court as evidence. The opinion of a medical expert cannot outweigh the testimony of a respected and independent witness. But if there is a conflict between the two, then medical evidence is given preference. If the medical evidence and oral evidence is inconsistent with the other, oral version on the point of manner of assault, the nature of weapon, use of the weapon, type of injuries caused and the probable duration of time etc. it, then the medical evidence plays an important role, then is sufficient to discredit the entire case unless reasonably explained<sup>[1]</sup>. The medical evidence is hardly decisive and often inconclusive because it is primarily an evidence of opinion and not of facts<sup>[2]</sup>. The testimony of eye witnesses, therefore, cannot be thrown out merely on the

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ground of its inconsistency with medical evidence because medical evidence is only of probative and corroborative [3].

Where eye witnesses are credible, then medical evidences pointing to alternative possibility cannot be accepted [4]. But where medical evidences completely demolishes the prosecution case, evidence of eye witness stands totally discredited and is liable to be thrown out [5].

In a murder case, when the brother of the deceased is the only available witness, then his version of the facts can be accepted as credible evidence, if his version was corroborated by medical evidence and his evidence cannot be discarded on any ground [6]. Medical evidence is preferable if there is contradiction between medical evidence and evidence of an eye witness regarding fatal injury [7].

When a weapon is recovered from the site of crime, the investigating officer (I.O.) must show it to the medical expert and get his opinion, in order to ascertain whether it was possible for that weapon to cause as much as injury and his failure to do so may provide an advantage to the defense. A weapon seized is required to be examined, first by a doctor and then by a chemical examiner as the weapon used by the accused may contain his fingerprint and being evidences. It should be preserved for comparing the finger prints of the accused and must be taken for comparison under Section-5 of 'The Identification of Prisoners Act' in the presence of magistrate. The police officer, who examines the weapon for finger print etc. gives guidance for his expert knowledge and specific skills, otherwise his opinion will not be accepted as authentic by the court. The eye witness's testimony should be inconsistent with the report of the medical expert. In case of inconsistency in medical and ocular evidence, the evidence of eye witness may not be believed by the court [8]. In a murder case, the prosecution must ask the doctor whether the injuries were sufficient in the ordinary course of nature to cause death because the intention or knowledge of the person can be inferred only from the nature of the injuries. The I.O. must recover an empty cartilage or bullet in the case of murder and immediately send it to the forensic laboratory without waiting for the weapon to be recovered. The arms when recovered should also be sent to the Ballistic expert in a sealed covered to get his opinion whether the empty cartilage or bullet could have been fired from the gun, or pistol or a rifle. Inordinate delay in the dispatch of the empty cartilages or bullet may be fatal to the prosecution [9]. The ballistic expert can also give his opinion regarding the distance from which the fire-arm was fired, the direction from which it was fired, and also the type of fire-arm which was possibly used.

When direct evidence is unsatisfactory and the evidence of gunshot injury *prima facie* appears to be of rifle injury, then the evidence of ballistic expert can cure inconsistency [10]. It would be safe to place reliance upon the ballistic report when the empties sent to ballistic expert were not sealed [11]. Bullet discharged from a rifle can establish identity of rifle, but pellets from a gunshot cannot establish the identity of the gun. The doctor's opinion about the weapon used in crime through theoretical, cannot be totally wiped out [12]. Injury or other report of a doctor is no evidence unless they said doctor is examined in court as witness [13]. And the formal proof of his report by compounder or advocate clerk is of no legal value.

Conviction is sustainable if injury report not produced provided the evidence of reliable and probable witnesses are on the record showing that injuries were caused by the

accused [14].

The post-mortem report indicates the approximate time when the death occurred which is discovered by observing the *rigor mortis*, the *post mortem* report, warmth of the body and the degree of decomposition of the body, the contents of bladder and stomach etc. helps to decide the time of death. When the medical officer deposes the truth of record made by him, the record itself is treated as evidence [15]. When the *post mortem* report is not proved by examining the medical expert in the court to substantiate evidence to his report, it is not admissible in evidence [16]. The evidentiary value of various medical and scientific or expert evidences may, broadly, be discussed under the following heads:

**2. Blood stains:** In case of offences like murder, assault, road accidents, abortion, rape and other cases, where the victim or accused is injured, the search for blood stains are made at the scene of crime on the body or clothing of victim and culprit, on vehicles and its parts, broken glasses etc. and weapon of offences. The blood should be sent to an expert immediately otherwise it decomposes and undergoes a rapid change with the passage of time. An expert decides as to how old the blood sample is by the change in the colour.

**3. DNA test:** The word DNA stands for deoxyribonucleic acid. It is a biological blueprint of life DNA fingerprinting profile is unique to each individual and hence the DNA profiling is used to identify an individual and his lineage. The technological device is used to identify a person in criminal and civil cases the main advantage of this device is that the test can be done on small samples and can accurately establish their originals with a high degree of certainty. DNA is hardly affected by the environmental factors. DNA is stable and therefore much resistance to degradation caused by the environmental changes. It shows the same genetic pattern irrespective of the biological material like hair, seminal stains fresh blood, soft tissues hard tissue etc. DNA finger printing can connect the crime scene or a body to another particular individual. Dry blood stains and sperm can be used for DNA test. These tests are highly useful in various criminal investigations involving offences like rape, murder, kidnapping, exchange of babies, infanticide, abandonment of newborn child, illegal abortion, paternity related disputes, immigration, inheritance, assignation etc.

DNA test results are very reliable. Control samples are provided with the main sample to avoid error in test and reporting. However in order to makes DNA evidence most successful, there must be a strong and robust legislation and reputed elaboration with standardized operational procedures. The laboratories engaged in DNA testing must be well equipped and technicians must be highly qualified and skilled. DNA test is such a new scientific invention which is used for scientific investigation in criminal case. This technique is particularly much useful in cases where eye witnesses are not available.

**4. Blood test:** The purpose of conducting blood test is ordinarily to find out the blood relationship or connection between persons, it has got great evidentiary value in the courts, which is generally used in paternity, maturity and personal identities. "Specimen samples" are collected from the donors or the person-in question for testing. Such 'specimen sample' cannot be taken forcibly from the accused. Article: 20 (3) of Constitution would extend in this

regard also. Allahabad High Court has also ruled that such a test puts a child on the anvil of legitimacy and illegitimacy and, therefore, it would be unjust and unfair either to direct a test for collateral reason to assist a litigant in his or her claim<sup>[17]</sup>. The blood grouping test is a perfect test to determine questions of disputes paternity of a child and can be relied upon by courts as a circumstantial evidence. But no person can be relied upon by courts as a circumstantial evidence. But no person can be compelled to give sample to give sample of blood for blood grouping test against his will and no adverse inference can be drawn against his refusal<sup>[18]</sup>. Medical science is able to analyze the blood of individuals into definite groups and by examining the blood of any certain person and a child to determine whether the man could or could not be the father. Blood tests cannot show positively that any man is father, but that can show positively that a given man could or could not be of the father<sup>[19]</sup>. Blood group tests are not permissible in Indian law for determining the paternity of a child born during the wedlock of the husband and the wife. But it may be helpful in resolving, disputes about maternity<sup>[20]</sup>.

Ordinarily the blood stained earth of P.O. should be sent to the chemical examiner but the failure to send the same cannot be a ground to doubt the prosecution case when there is clinching evidences, both oral and circumstantial, establishing the place of occurrence<sup>[21]</sup>.

According to Andhra Pradesh High Court, although there is no clear provision in Criminal Procedure Code (Cr. P.C.) for taking blood samples yet there is no prohibition for taking such blood samples of an accused by exercising powers under section 53 Cr. P.C. whatever discomfort might be caused when samples of blood or semen are taken from an arrested accused and it would be justified under the provisions of section 53, 54 and 55 of Cr. P.C<sup>[22]</sup>.

**5. Photography:** The science of photography includes the photomicrography which is the science of combining the microscope and the camera and with its help, minute clues, which not visible to ordinary eyes, can be seen. The hair, fibers, dust particles, perforation on paper can be examined with this technology. The fluoroscope camera enables the instruments to piece solid matter and photographic objects that are not visible. It is used mainly in investigation to probe the interior or suspicious packages suspected containing explosive devices etc.

'Radiography' can be used to read the contents of a sealed letter. It is also used to find out position of fracture, dislocation, presence of foreign body like bullet and coins in human body. Photography provides faithful, accurate exhaustive, unbiased, incontrovertible records of various events which may not be possible by other ways.

Video camera helps in obtaining irrefutable proof of occurrences and role played by the offenders and police in unlawful assemblies, Gambling bribery etc. The device provides clear picture of crimes to the Courts. The ultra-violet and infra-red light are also used in photography which used for detecting the forgery, blood stains, semen stains, differences in seals, faded and secret writings, burnt documents etc. Photography can also be used in preparing the sketches of scene of crimes and wanted criminals.

**6. Shoe and foot prints:** The foot prints and shoe prints are not the reliable evidences but they can be used as supportive evidences. Track identification parade should be conducted ordinarily in the jail in the presence of a magistrate for this

suspects shoes should be taken into possession of police and duly sealed and signed by the witnesses. These shoes should be produced before the magistrate holding parade to be worn by the suspect. The videos of the sole of foot have all the attributes, physical characteristics and identification requisites as those on fingers. The investigation officer should search foot prints on the scene of occurrence, along the route taken by the criminals both at the time of coming in or going out and of the places and where the culprits had assembled before or after the commission of the crime. Usually a footprint is presented by taking photograph or casts and by drawing the impressions upon a sheet of glass or celluloid.

**7. Handwriting:** The identity of a person can be established by comparison of handwriting also. First of all the admitted or standard of writing of the accused for a comparison with the disputed writing is obtained. Such standard writing can be taken from personal correspondence, cancelled cheques, diaries, account books, application for employment or other papers written approximately at the same time when the disputed writing was written.

The investigation of handwriting is done by the handwriting experts, known as calligraphic experts, on scientific principles. A person's identity can be established by his handwriting. There is certain distinct prevailing feature or character in every person's identity and it can be discovered by observation. Two people cannot write alike. Handwritings vary as speeches vary at different period of life. There are certain factors such as age, sickness, fear, anger, insanity, hurry, lack of care, status, education, flow of ink from pen etc.

A person familiar with the handwriting of a particular individual or an expert competent to compare handwritings on scientific basis are entitled to give evidence in a court on handwriting. A court can also compare a writing made in its presence with another writing admitted to be the writing of the same person. Public Prosecutor has to prove in court that the specimen writing or signature is of the accused. The evidence given by an expert of handwriting, however, cannot be considered as conclusive evidence.

The specimen writing or signature has to be obtained by the consent of accused. Sec 73 of Indian Evidence Act does not allow the police to force the accused to give his specimen writings. The magistrates also cannot order the accused to give his writing or signature at the instance of police. The court however, is empowered to direct the accused person to be present in the court to write any word or figure in its presence for comparison with the disputed writings. Such provisions in Sec. 73 of India Evidence Act does not violate Article 20 (3) of the Constitution of India because by giving a direction to an accused person to give his specimen writing, the court does not compel the accused to be a witness against himself<sup>[23]</sup>. The expert's opinion on handwriting is only an opinion evidence and the Court must corroborate the same with other clear direct evidence or circumstantial evidence before arriving at a conclusion.

**8. Medical Certificates:** In order that a medical certificate could be received in evidence the person who has issued the certificate must be called and examined as witness before the court, According to the law, a certificate issued by an expert or doctor is nothing more than an opinion brought before the court and is tested by the cross examination<sup>[24]</sup>.

### 9. Narco analysis, Lie Detector Test and Brain Mapping

**Test:** These are the scientific test involving minimal bodily harm to the accused or person concerned, micro analysis involves injecting a drug to drive a subject into a mental stupor. The drug-induced subject/person are then asked question which are ordinarily presumed to be free of lies. The information sought to be elicited in a lie detector test is information in the personal knowledge of the accused <sup>[25]</sup>. According to the guidelines of National Human Rights Commission, no lie detector test should be administered except on the basis of consent of the accused and an option should be given to the accused whether the wishes to avail such test.

**10. Palm Print:** Palm Prints are now accepted by courts as a proof of identity as in the case of fingerprints. Even many convictions have been awarded on such evidence. Such type of imprint is found when heavy bodily presence is used to force a door etc. Palm prints can be found even in the rubber gloves worn by a thief used by him to avoid leaving incriminating marks left behind at the time of committing theft etc. In such a situation, the investigator should take the gloves to an expert for examination <sup>[26]</sup>.

**11. Medical Evidence in Rape cases:** Medical evidences is commonly required to support a charge of rape but it is seldom more than corroborative. It is very rare that rape cases are tried without Medical evidence medical evidence in the cases of rape may be from the following sources- (i) marks of violence on the person of the victim or (ii) the accused, marks of violence on and around the genitals (iii) signs of venereal infection, (iv) presence of blood or seminal stains on the cloths of the prosecutrix of the accused (v) presence of spermatozoa in vaginal secretion (vi) examination of accused and (vii) signs of loss of virginity.

But when the doctor examines the victim after 14 to 16 hours, no marks of injuries in the circumstance can be found on him. Hence it can be said that theprosecute was consenting party <sup>[27]</sup>. Where the girl was examined after 20 hours after she has taken bath, the doctor found no injuries on her person and the hymen was having old ruptured and the vagina admitted two fingers easily, no rape made out in the circumstances <sup>[28]</sup>. When the victim was aged about 20 years and hymen was torn irregularly and there were bleeding on the vagina mons pubis was red swollen, the vagina admitted index finger with difficulty, it proved rape <sup>[29]</sup> Merely because the semen stains were found, in absence of specific circumstances showing intercourse, the conviction cannot be sustained <sup>[30]</sup>. Thus, we may arrive at conclusion that the medical and scientific evidences play an important role in the approximization of criminal justice.

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