

STAB WOUNDS

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STAB WOUNDS

➤ PUNCTURED WOUNDS

➤ **A STAB WOUND OR A PUNCTURED WOUND IS AN INJURY CAUSED BY A MORE OR LESS POINTED WEAPON WHEN IT IS DRIVEN THROUGH THE SKIN AND ITS DEPTH IS THE GREATEST DIMENSION SUCH WEAPONS INCLUDE A KNIFE ,DAGGER ,NEEDLE SPEAR,ARROW,BICHWA,ICE PICK,ETC.**

PENETRATING WOUNDS

- **WHEN THE WEAPON ENTERS A BODY CAVITY SUCH AS THE THORAX OR ABDOMEN.THE INJURY IS TERMED AS A PENETRATING WOUND.**

PERFORATING WOUNDS

- **WHEN THE WEAPON AFTER PENETRATING THE BODY TISSUES COMES OUT FROM THE OTHER SIDE MAKING AN ENTRY AND EXIT WOUND THE INJURY IS TERMED AS A PERFORATING IN WOUND OR TRANSFIXING WOUND .**

DESCRIPTION OF A STAB WOUND

THIS INCLUDES

- **WOUND OF ENTRY (SHAPE SIZE MARGINS AND PRESENCE OFF FOREIGN BODIES,IF ANY)**
 - **DEPTH & DIRECTION**
 - **WOUND OF EXIT,IF PRESENT.**

WOUND OF ENTRY

- **THE WOUND IS GENERALLY BIGGER THEN THE WOUND OF EXIT BECAUSE THE STABBING WEAPON SO OFTEN HAS A TAPERING TIP.CLOTHES MAY BE PUSHED INTO THE WOUND OF ENTRY .**

SHAPE OF THE WOUND

- **THE SHAPE MAY SOMETIMES CORRESPOND TO THE BLADE OF THE WEAPON USED**
- **THUS, A KNIFE WITH ONE SHARP CUTTING EDGE AND OTHER BLUNT EDGE MAY PRODUCE A WEDGE SHAPED INJURY OR INJURY WITH ONE END POINTED AND OTHER END BLUNT OR WITH A SMALL TEAR; A DOUBLE EDGED KNIFE AN ELLIPTICAL INJURY; A ROUND POINTED WEAPON A CIRCULAR INJURY; AND A POINTED SQUARE SHAPED WEAPON A CRUCIATE INJURY**
- **THE OCCURRENCE OF STAB WOUNDS IN A PAIRED PATTERN SUGGESTS THE USE OF TWO PRONGED SHARP WEAPON SUCH AS A FORK, PAIR OF SCISSORS, ETC. IT IS IMPORTANT TO KEEP THIS IN MIND AS THE NUMBER OF WOUNDS OBSERVED WILL EXCEED THE NUMBER OF REPEATED BLOWS OR THRUSTS/SLASHES.**

SHAPE OF THE ENTRY WOUND AND WEAPON USED

- **DURING STABBING THERE IS OFTEN CONSIDERABLE RELATIVE MOTION OR MOVEMENT BETWEEN THE ASSAILANT AND VICTIM .THE SHAPE OF THE ENTRY WOUND MAY THEREFORE NOT CORRESPOND TO THE WEAPON USED**
- **IT MAY HAVE AN ATYPICAL APPEARANCE (FOR EXAMPLE ;TRIANGULAR OR CRUCIATE IF THE KNIFE IS TWISTED DURING WITHDRAWAL FROM THE TISSUES .SUCH ATYPICAL APPEARANCE MAY ALSO RESULT WHEN THE INJURY IS CAUSED BY A RELATIVELY BLUNT EDGED WEAPON SUCH AS BAYONET DUE TO SIMULTANEOUS CUTTING AND TEARING OF THE SKIN DURING PROCESS OF STABBING**

- **REPETITION OF THE STAB WOUND WITHOUT COMPLETE WITHDRAWAL MAY “DOUBLE” THE ENTRY WOUND**
- **SCRIMMAGE ENLARGEMENT IS A TERM OCCASIONALLY USED TO IMPLY EXTENSION OF WOUND DUE TO MOTION OF WEAPON OR BODY AGAINST THE CUTTING EDGE .**

WOUNDS OF INTERNAL VISCERA

WOUNDS OF INTERNAL VISCERA CORRESPOND TO THE TYPE OF PENETRATING WEAPON USED BUT THEIR SHAPE IN MANY CASES IS MODIFIED BY THE MUSCULAR AND ELASTIC FIBERS IN THE CAPSULE AND FRAMEWORK OF THE ORGAN .

GENERAL CHARACTER OF INSTRUMENT CAUSING STAB WOUND

- **TO INDICATE THE GENERAL CHARACTER OF THE INSTRUMENT RESPONSIBLE FOR THE STAB WOUND THE TERMS INCISED OR LACERATED SHOULD BE USED PREFERABLY IN THE DESCRIPTION OF SUCH WOUNDS (FOR EXAMPLE; PUNCTURED-INCISED, PUNCTURED-LACERATED, PENETRATING-INCISED, PENETRATING-LACERATED AND PERFORATING-INCISED AND PERFORATING-LACERATED .**

THE SIZE OF THE WOUND

- **THE SIZE DOES NOT NECESSARILY CORRESPOND TO THE BREADTH OR LENGTH OF THE BLADE**
- **GENERALLY THE SKIN APERTURE IS A LITTLE SMALLER THAN THE BREADTH OF THE WEAPON DUE TO ELASTICITY OF THE SKIN .HOWEVER HOMICIDAL STAB WOUND IS RARELY INFLECTED WITHOUT SOME CUTTING TAKING PLACE AT THE SAME TIME .THE KNIFE MAYBE PULLED UPWARDS OR DOWNWARDS DURING INSERTION OR WITHDRAWAL THEREBY CAUSING AN INJURY WHICH IS BROADER THEN THE WIDEST PART OF THE BLADE.AN OPINION ABOUT THE SIZE OF THE BLADE SHOULD THEREFORE BE GIVEN WITH GREAT CARE**
- **THE LEAST TWISTED OR SPLIT ENTRY WOUND IS A GUIDE TO THE MAXIMUM BREATH OF THE BLADE PROVIDED THE WOUND EDGES ARE OPPOSED .**

THE MARGINS OF THE ENTRY WOUND

- **THESE ARE CLEAN CUT AND THE EDGE IS INVERTED**
- **SOME ABRADING OR BRUISING OF THE EDGES OR BOTH MAY BE SEEN DUE TO THE THRUSTING FORCE OR IF THE WEAPON IS NOT QUITE SHARP OR IF THE WEAPON IS TAPERING AND THEN BECOMES LARGER IN CROSS SECTION .**

- **WHEN A WEAPON SUCH AS KNIFE OR DAGGER IS THRUST INTO THE TISSUES WITH CONSIDERABLE FORCE THE SKIN SURROUNDING THE WOUND MAY BE ABRADED OR BRUISED BY THE HILT OR GUARD OF THE WEAPON.SUCH A CONDITION SUGGESTS THAT THE BLADE HAS BEEN COMPLETELY INSERTED.IT IS IMPERATIVE IN SUCH CASES THAT THE SUSPECTED KNIFE IF AVAILABLE BE EXAMINED BY THE MEDICAL OFFICER PERFORMING THE AUTOPSY TO DECIDE THE COMPATIBILITY OF THE SHAPE OF THE ABRASION OR BRUISE AROUND THE STAB WOUND WITH THE HILT OF THE WEAPON IN QUESTION.**

FOREIGN BODY IN THE WOUND

- **WHEN A PUNCTURED WOUND IS PRODUCED BY FALL ON SOME SHARP OBJECT SUCH AS GLASS POT OR SHARP STONE,THE WOUND WILL HAVE BRUISED EDGES AND A PART OF THE FOREIGN BODY MAY BE FOUND BROKEN OFF IN THE WOUND.**

CONCEALED PUNCTURED WOUNDS

- **PUNCTURED WOUNDS MADE BY PINS AND NEEDLES ESPECIALLY ON CONCEALED PARTS OF THE BODY MAY NOT BE OBVIOUS.THEY ARE THEREFORE SOMETIMES ARE KNOWN AS **CONCEALED PUNCTURED WOUNDS** AND ARE COMMONLY FOUND IN SUCH PARTS OF THE BODY AS FONTANELLE,INNER CANTHUS OF THE EYE,UP THE NOSTRILS,DOWN THE THROAT ,NAPE OF THE NECK,AXILLA,VAGINA,RECTUM AND SO ON.THEY SHOULD BE CAREFULLY LOOKED FOR ESPECIALLY IN CASES OF INFANTICIDE WHEN NO OTHER CAUSE OF DEATH IS OBVIOUS,DEATH MAY RESULT IN AN INFANT IF A PIN OR NEEDLE PUSHED INTO THE BRAIN THROUGH THE FONTANELLE OR INNER CANTHUS OF THE EYE OR INTO THE MEDULLA THROUGH THE NAPE OF THE NECK.**

PENETRATING OR PERFORATING INJURIES OF GUT OR UTERUS

POINTED INSTRUMENTS MAY ENTER THE PERITONEAL CAVITY THROUGH THE VAGINA DURING ATTEMPTS AT ABORTION AND MAY CAUSE DEATH. SIMILAR PENETRATING INSTRUMENTS MAY CAUSE PERFORATION OF THE GUT.

DEPTH AND DIRECTION

- **THE EXTERNAL EXAMINATION OF STAB WOUND YIELDS NO INFORMATION ABOUT IT'S DEPTH,DIRECTION OR INTERNAL INJURIES**
- **THE MOST VITAL INJURY MAY LIE BENEATH A TRIVIAL LOOKING ENTRY WOUND.**

- **THE DEPTH OF A STAB WOUND IS GREATER THAN ITS LENGTH AND BREADTH**
- **IT DOES NOT DEPEND ON THE LENGTH OF THE BLADE ALONE BUT IT'S ALSO DEPENDENT ON THE THRUSTING FORCE**
- **IT MAY CORRESPOND TO THE LENGTH OF THE BLADE BUT IT IS GREATER IF THE INJURY IS CAUSED ON THE PART OF THE BODY THAT YIELDS SUCH AS ABDOMEN**
- **IT IS GENERALLY NOT POSSIBLE TO MEASURE THE DEPTH ACCURATELY DUE TO THE PRESENCE OF BLOOD CLOTS OR IN INJURY INTO INTERNAL VISCERA**

- **IT IS NOT ADVISIBLE TO PROBE A STAB WOUND IN THE LIVING OR TO PULL OUT A KNIFE FROM A STAB WOUND IF ITS LOCATED IN THE CHEST OR NEAR A LARGE BLOOD VESSEL LEST IT MAY DISLODGE A BLOOD CLOT AND CAUSE FRESH BLEEDING**
- **IF THE WEAPON IS BROKEN IN THE DEPTH OF A WOUND, ESPECIALLY IF IT ENCOUNTERS BONE OR CARTILAGE, THE BROKEN PART MAY BE FOUND IN THE WOUND AND PROVIDE VALUABLE EVIDENCE EITHER FOR THE PROSECUTION OR TO PROVE THE CAUSE OF ACCIDENTAL DEATH**
- **IT IS THEREFORE DESIRABLE TO X-RAY ALL STAB WOUNDS IN SEARCH FOR A POSSIBLE BROKEN PART OF OUR WEAPON OR FOREIGN BODY**

- **AT AUTOPSY,WHEN THE STAB WOUND IS SEEN TO GO THROUGH CARTILAGE OR BONE,THE CUT SURFACE MUST BE SAVED IN FORMALIN IN FOR POSSIBLE TOOLMARK COMPARISON WITH SUSPECTED WEAPON .**

DIRECTION OF THE STAB WOUND

- **THIS CAN BE ASSERTED BY DRAWING A LINE JOINING THE WOUND ENTRY AND WOUND OF EXIT**
- **IF THE WEAPON ENTERS OBLIQUELY, IT WILL BEVEL THE SITE FROM WHICH IT ENTERS AND PRODUCE A WOUND WITH AN OVERHANGING MARGIN AND THUS INDICATE THE DIRECTION**
- **THIS IS HELPFUL TO DETERMINE THE RELATIVE POSITION OF THE VICTIM AND ASSAILANT.**

- **A SINGLE TRACK IS USUALLY FOUNDING RELATION TO A SINGLE ENTRY WOUND BUT IN CERTAIN CASES WHERE THE WEAPON IS PARTIALLY WITHDRAWN AND THEN INSERTED IN ANOTHER DIRECTION TWO OR MORE TRACKS MAY BE FOUND IN RELATION TO A SINGLE EXTERNAL OPENING.**

- **THE DEPTH AND DIRECTION CAN BE DETERMINED ACCURATELY ONLY AT AUTOPSY BY METICULOUS DISSECTION IN LAYERS.**

GAPING STAB WOUNDS

- **STAB WOUNDS AND CUTS WILL EITHER GAPE OR REMAIN SLIT SHAPE DEPENDING ON THEIR LOCATION WITH REFERENCE TO **CLEAVAGE LINES OF LANGER****
- **THESE ARE LINES OF TENSION DETERMINED BY THE DIRECTION OF THE ELASTIC AND COLLAGENOUS FIBERS IN THE DERMIS OF THE SKIN**
- **A CUT WHICH IS INFLICTED ACROSS THE NATURAL LINES OF TENSION WILL TEND TO GAPE WHILE ONE WHICH IS INFLICTED PARALLEL TO THESE LINES WILL REMAIN SLIT SHAPED AND RELATIVELY UNDISTORTED**

- **THEREFORE IN CASE OF A GAPING STAB WOUND IT IS NECESSARY TO APPROXIMATE THE EDGES MANUALLY TO RECORD THE DIMENSIONS**
- **RESTORATION OF A STAB WOUND TO ITS ACTUAL SIZE USUALLY SHOWS THE RESULTING SLIT TO BE CONSIDERABLY LONGER THEN THE OVAL SHAPED WOUND PRESENT ON THE BODY**
- **THIS IS OF GREAT IMPORTANCE TO COUNTER A POSSIBLE LATER CLAIM THAT THE KNIFE IN QUESTION COULD NOT HAVE PRODUCED A STAB WOUND WITH SUCH SMALL DIMENSIONS**
- **SUCH AS RECONSTRUCTION SHOULD BE A NORMAL ROUTINE IN THE EXAMINATION OF EVERY STAB WOUND**

WOUND OF EXIT

THIS IS SMALLER IF A TAPERING WEAPON IS USED AND ITS EDGES ARE EVERTED.

FACTORS AFFECTING STAB WOUNDS

- **IN THE EXAMINATION OF A VICTIM OF A STAB WOUND THE FOLLOWING ESSENTIAL SHOULD BE KEPT IN MIND;**

- **THE EFFECTS OF STABBING WILL VARY WITH THE DIRECTION AND DEPTH OF PENETRATION OF STRUCTURES INVOLVED. CONSIDERABLE VOLITIONAL ACTIVITY MAY BE POSSIBLE BEFORE COLLAPSING FROM POTENTIALLY FATAL WOUND. THERE ARE CASES ON RECORD WHERE VICTIM WITH A PENETRATING WOUND OF THE HEART OR GREAT VESSEL HAS CONTINUED TO FIGHT WITH THE ASSAILANT, CHASED HIM OR HAS GONE TO BRING A WEAPON TO RETALIATE BEFORE SUCCUMBING FROM FATAL BLOOD LOSS**

- **POSITION OF THE WOUNDS IN RELATION TO THE DEFECTS IN THE CLOTHES MAY GIVE SOME INDICATION ABOUT THE POSITION OF THE VICTIM AT THE TIME OF INJURY. IF THE ARM WAS RAISED IN DEFENSE AT THE TIME OF ATTACK, A HOLE IN THE CLOTHING AT THE BACK WILL BE AT A HIGHER LEVEL. IT WILL APPEAR TO LIE AT A MUCH LOWER LEVEL WHEN THE ARM IS LYING BY THE SIDE OF THE BODY AFTER DEATH. SIMILARLY A SKIN WOUND MAY NOT CORRESPOND TO THE UNDERLYING INJURIES IF THE ARM WAS RAISED IN DEFENCE, AS IN THE ABOVE INSTANCE, THE WOUND TRACK WOULD SPARE THE SCAPULA WHICH WOULD HAVE OTHERWISE SUSTAINED AN INJURY IF THE ARM WAS BY THE SIDE. THE TRACK OF BLOODSTAINS MAY ALSO INDICATE IF THE VICTIM WAS STANDING OR LYING PRONE. HENCE CLOTHING FORMS AN INTEGRAL PART OF THE EVALUATION AND SHOULD BE SAVED IN SUSPICIOUS OF CRIMINAL CASES**

- **IN ASSESSING THE DEPTH OF PENETRATION IT IS ESSENTIAL TO REMEMBER THAT ORGANS OF THE VICTIM LYING ON AN OPERATION TABLE OR IN A CADAVER LYING SUPINE ON A MORTUARY TABLE ARE NOT IN THE SAME POSITION AS THAT IN AN UPRIGHT LIVING PERSON**

- **MULTIPLE STAB WOUNDS IN THE MALE VICTIMS SUGGEST AS HOMOSEXUAL ASSAULT ESPECIALLY WHEN ASSOCIATED WITH SEXUAL MUTILATION**

- **HOMICIDAL STAB WOUNDS ARE FREQUENTLY ASSOCIATED WITH DEFENSE WOUNDS UNLESS THE VICTIM IS TAKEN UNAWARES OR HIS POWERS OF RESISTANCE IMPAIRED BY DRINK DRUGS OR AGE**

- **IF THE VICTIM IS ADMITTED TO A HOSPITAL AFTER A STAB INJURY THERE IS EVERY POSSIBILITY OF THE STAB INJURY BEING SURGICALLY ALTERED OR AN ADDITIONAL THERAPEUTIC STAB INJURY INSTITUTED BY WAY OF A DRAINAGE TUBE THAT'S CONFUSING AUTOPSY INTERPRETATION UNLESS THE MEDICAL OFFICER PERFORMING THE AUTOPSY CONSULTS THE TREATING SURGEON AND OR REVIEWS THE VICTIMS CHART**

- **IT IS INTERESTING TO KNOW THAT IN A MAJORITY OF HOMICIDAL STABBINGS THE ASSAILANT SAYS THAT THE VICTIM RAN OVER A KNIFE AND SUSTAINED THE FATAL INJURY. IN SUCH AN EVENT THE APPEARANCE AND SITE OF WOUNDS ON THE BODY AND THE CLOTHES MAY HELP DETERMINE THE POSITION OF THE VICTIM AT THE TIME OF ATTACK. THE TRACT OF THE WOUND MAY NOT MATCH. WOUND CAUSED BY RUNNING OVER A KNIFE IS MORE OR LESS HORIZONTAL AND THE PRESENCE OR ABSENCE OF DEFENSE INJURIES MAY GIVE OUT THE TRUE PICTURE**

MEDICOLEGAL ASPECTS OF STAB WOUNDS

➤ **STAB WOUNDS MAY BE**

- **SUICIDAL**
- **HOMICIDAL**
- **ACCIDENTAL**

SUICIDAL STAB WOUNDS

- **SUICIDAL STAB WOUNDS OF THORAX ARE SITUATED ALMOST EXCLUSIVELY OVER THE HEART AREA**
- **HARI KARI IS UNUSUAL FORM OF SUICIDE WHERE THE ABDOMEN IS BOLDLY PUNCTURED BY A SHORT SWORD IN A SITTING POSITION RESULTING IN ONE LARGE FATAL WOUND CAUSING SUDDEN EVISCERATION OF INTERNAL ORGANS RESULTING IN SUDDEN FALL OF INTRA ABDOMINAL PRESSURE FOLLOWED BY COLLAPSE AND DEATH.**

HOMICIDAL STAB WOUNDS

- **STAB WOUNDS OVER THE ABDOMEN, TRUNK AND LIMBS OTHER THAN OVER THE HEART ARE SUGGESTIVE OF HOMICIDE**
- **STAB WOUNDS ON THE BACK ARE ALMOST ALWAYS HOMICIDAL .**

ACCIDENTAL STAB WOUNDS

- **PUNCTURED WOUNDS MAY BE CAUSED ACCIDENTALLY FROM FALLS WHILE A PERSON IS IN THE ACT OF RUNNING WITH POINTED INSTRUMENT IN HIS HAND OR POCKET**
- **SUCH WOUNDS MAY ALSO BE CAUSED BY RUNNING OVER A KNIFE OR FALLING UPON SHARP POINTED OBJECTS SUCH AS BROKEN PIECES OF GLASS**
- **THE ABSENCE OF DEFENCE WOUNDS AND THE CIRCUMSTANCE OF ACCIDENT CLARIFY THE SITUATION.**

➤ **FROM CAREFUL EXAMINATION OF STAB WOUND IT MAY BE POSSIBLE TO DETERMINE**

- **THE NATURE OF THE WEAPON(SINGLE EDGED, DOUBLE EDGED, PAIRED, ROUND, POINTED STONE OR BROKEN GLASS)**
 - **THE APPROXIMATE DIMENSIONS OF THE WEAPON**
 - **THRUSTING FORCE FROM THE DEPTH OF THE WOUND**
- **THE POSITION OF THE ASSAILANT AND THE VICTIM FROM THE DIRECTION OF THE WOUND**
 - **THE IDENTITY OF THE WEAPON IF A BROKEN PIECE IS FOUND IN THE WOUND**
 - **VOLITIONAL ACTIVITY; AND**
 - **THE NATURE OF THE INJURY THAT IS HOMICIDE ACCIDENT OR SUICIDE**

COMPLICATIONS OF STAB WOUNDS

- **EXSANGUINATION(SEVERE HEMORRHAGE)**
 - **HYPOVOLEMIC SHOCK**
- **AIR EMBOLISM(SYSTEMIC/PULMONARY)**
 - **SECONDARY INFECTIONS**
- **INJURY TO VITAL ORGAN/ORGANS(HEART,LUNGS,LIVER,KIDNEY,ETC)**
 - **PNEUMOTHORAX**
- **ASPHYXIA DUE TO INHALATION OF BLOOD**

ANTEMORTEM STAB WOUNDS

- **COPIOUS ARTERIAL BLEEDING**
- **BLOOD CLOTTED**
- **INFILTRATION/STAINING OF EDGES WHICH CANNOT BE WASHED AWAY**
- **EDGES GAPING, EVERTED AND SOMEWHAT SWOLLEN**
- **VITAL REACTION (INFLAMMATION & REPAIR) PRESENT**
- **MICROSCOPY SHOWS LEUCOCYTIC AND RBC INFILTRATION**
- **ENZYME HISTOCHEMISTRY---NEGATIVE AND POSITIVE REACTIONS SEEN**
- **SEROTONIN AND HISTAMINE BIOCHEMISTRY---INCREASE IN WOUND SEROTONIN AND FREE HISTAMINE CONTENT**

POSTMORTEM STAB WOUNDS

- **SLIGHT/VENOUS**
- **NOT CLOTTED**
- **NO INFILTRATION/STAINING**
- **NO GAPING UNLESS CAUSED WITHIN ABOUT TWO HOURS AFTER DEATH; APPROX, NOT SWOLLEN**
- **NOT PRESENT**
- **NO INFILTRATION**
- **VITAL REACTION ABSENT**
- **NO INCREASE IN TISSUE SEROTONIN AND FREE HISTAMINE**

THE END