

VITAL POINTS OF THE HUMAN BODY

Shodan Thesis

by

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VITAL POINTS OF THE HUMAN BODY

The vital points of our body are the vulnerable nerve centered parts. Points of the body where shock to the nerves can most readily be given. These parts can suffer a mortal wound if struck with sufficient force. Therefore, it is necessary and advantageous for a karate student to have some knowledge of them.

If the body is attacked with equal strength first at a random point and next at a vital point, there would be a considerable difference in the effect of the blows. In other words, a vital point is only a point where a blow is comparatively effective.

The effectiveness of a blow is not solely due to the power of the blow itself. The specific degree or severity of injury will vary depending on the existing circumstances at the time the blow is delivered. The physical condition of the opponent, the position of the target begin struck, and the direction the opponent maybe moving, (towards or away) all have an effect on the result of a particular blow.

The following pages depict karate blows familiar to most styles and list the possible results in varying degrees of severity.

WEAPON: Elbow
TARGET: Middle of forehead

Medical Implications

I. **TWO BLACK EYES** would be the slightest possible effect due to the branching out pattern of the deep winding blood vessels in this region of the skull.

III **A LIGHT TO SEVERE CONCUSSION** would occur assuming (as we shall in all techniques presented in this work) that all of the forces are moving well and in the right directions. In this case, the head would be moving down and forward into the oncoming elbow. This would increase the effectiveness of the blow by nearly on hundred per cent.

A "concussion" is the vibration (or shaking) of the brain within the brain case. The damage caused by such shaking can range from almost insignificant to certainly fatal results, depending upon the number of blood vessels ruptured and their positions relative to the brain itself.

Rupture of the vessels in the membrane (Dura) surrounding the brain or, more deeply, in the brain itself, will cause a brain hemorrhage and attendant blood clot. Such clots may cause immediate death or paralysis (as in a "stroke") or it may cause pressure to build up within the brain until "something gives." A really effective, well-focused elbow strike to the center of the forehead would be expected to run the gauntlet from unconsciousness and coma to death.

III. **A SKULL FRACTURE OR A FRACTURE THROUGH THE FRONTAL SINUS** (a small cavity above the eyebrow) would be one effect if the blow were struck slightly to one side or the other of the lower forehead. If the elbow strike were a follow-through type blow, it would cause the bone fragments of the first fracture to be driven through the back of the thin-boned wall of the sinus cavity and into the brain, causing bleeding there. There would also be profuse bleeding from the nostrils because of the tearing of mucous membrane linings in the sinus cavity. These results will cause immediate unconsciousness, coma, and most certainly death.

IV. **A WHIPLASH INJURY** would occur due to the quick change of head position. (First the head would lean forward and down and then it would be suddenly snapped straight back while the rest of the body was still moving in the opposite direction). With this action, one of the vertebral

tips (spinous process) might be forced against a larger tip and be completely chipped off the vertebra, resulting in extreme pain and stiffness of the neck.

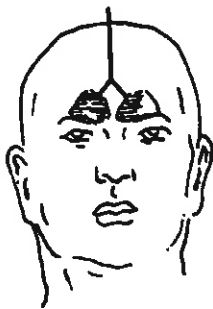


FIG. 1

BLEEDING IN BRAIN TISSUE

FRACTURE THROUGH THE
FRONTAL CAVITY

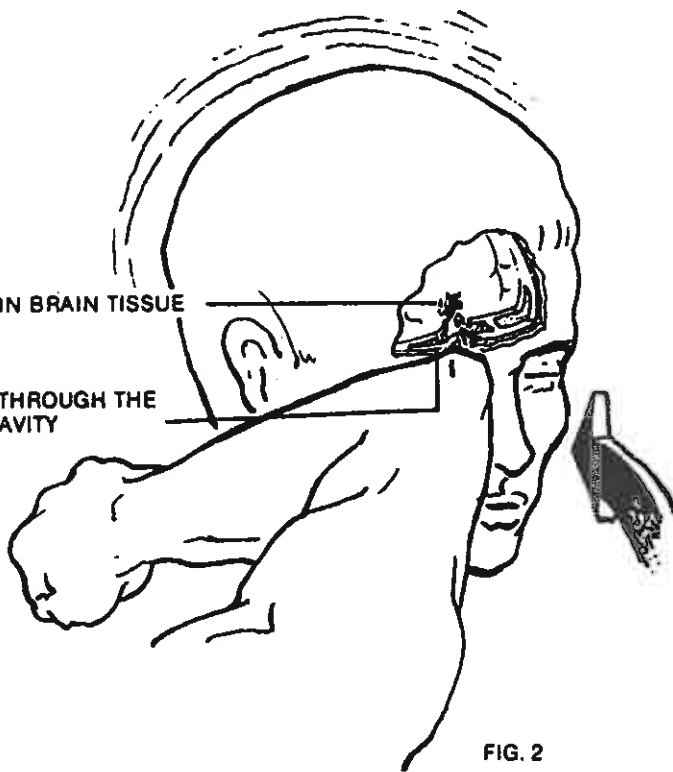
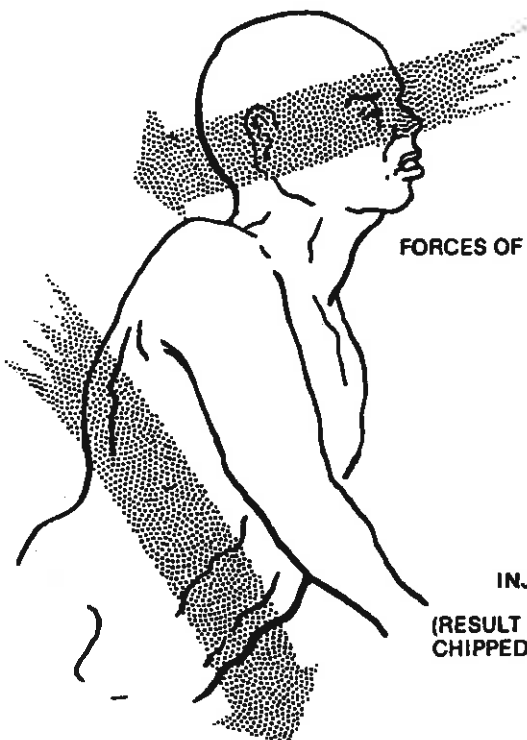


FIG. 2



FORCES OF A WHIPLASH

FIG. 3

INJURY TO SPINAL CORD
(RESULT OF WHIPLASH)
CHIPPED SPINOUS PROCESS

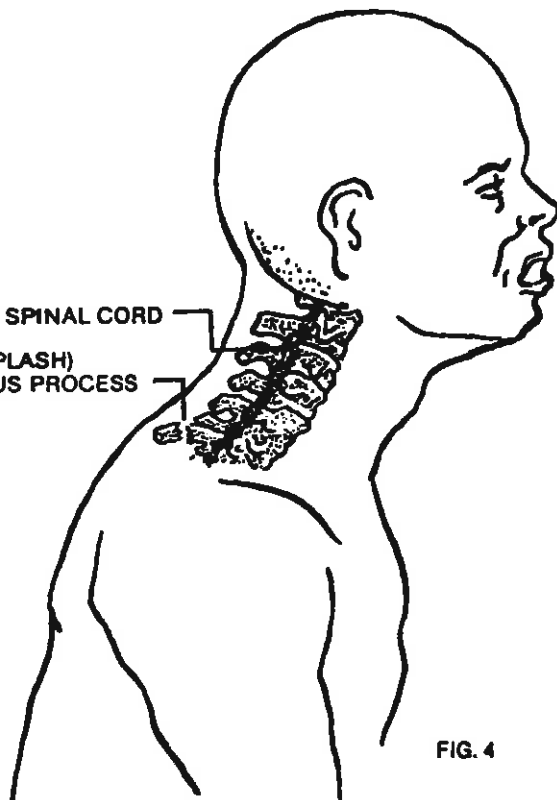


FIG. 4

WEAPON: Cupped Palms
TARGET: Ears

Medical Implications

- I. **UNCONSCIOUSNESS OR A CONCUSSION** will occur from any well-focused blow to the head. This is especially true when the head is not allowed to roll with the blow. The palms striking on both sides of the head simultaneously will act as a stabilizing device to the head and therefore doubles the percussive shock and pain. Whenever there is the possibility of a concussion there is the possibility of death.

- II. **RUPTURE OF THE TYMPANIC MEMBRANE (Eardrum)** will result from the large volume of air being forced through the external auditory canal, through the thin-skinned membrane of the eardrum, and finally through the eustachian tube which opens into the back of the throat. The outside of the ear will be swollen because of the broken blood vessels and small capillaries there. Capillaries inside the auditory canal will be ruptured and swell because of the expanding volume of air that has rushed through the narrow passage way leading to the eardrum. Loss of hearing would be from partial to complete, depending upon the total degree of injury to the internal ear. The eustachian tube is much narrower than the auditory canal (the size of a pencil lead), and therefore will suffer greater expanding pressures as the air passes through it. The eustachian tube will undoubtedly swell completely shut. There will be an extreme amount of pain from the double palm strike to the ears. If the blows are not pulled, shock will be a prominent result.

- III. **POSSIBLE FRACTURE AND/OR DISLOCATION OF THE JAW HINGE** (refer to fig. 24) may occur if the blow is slightly lower.

- IV. **CONTUSION OF THE FACIAL NERVE AND VEIN**, with possible paralysis of one side of the face, are experienced if the blow abrades them against the edge of the jawbone. This paralysis would probably be temporary unless a sharp section of the bone fracture punctured or severed the facial nerve. Likewise, if the vein was punctured there would be a small hematoma* (walnut-size lump) and eventually one side of the face would turn black and blue (Fig.8.)

*HEMATOMA: An organized area of blood spilled from a torn blood vessel.

WEAPON: Back-knuckle
TARGET: Temple

Medical Implications

I. A FRACTURE IN THE TEMPORAL REGION OF THE SKULL WITH MIDDLE MENINGEAL, HEMORRHAGE (Meningeal Artery) commonly occur together; however, one may prevail without the other. The meningeal artery supplies the skull and dura (membrane that covers the brain) with blood. The artery follows its groove in the skull case (Fig.10) and is easily pinched or severed if disruption of this groove occurs from a skull fracture.

II. HEADACHE, NAUSEA, VOMITING, COMA AND DEATH may ensue immediately or may be the delayed result, as long as two weeks, later. If the artery were severed there would be immediate compression of the brain due to the massive hemorrhage there, indicated by a gradual deepening stupor. If diagnosis is not made soon, the patient will go into a coma and finally death will result. If the artery is only pinched with slow blood leakage, a small extradural hematoma* will produce delayed results, similar to a complete severance of the meningeal artery. Rupture of the meningeal artery may be prevalent without an accompanying skull fracture due to the severe jarring action displacing the vein from its groove.

III. RUPTURE OF THE TYMPANIC MEMBRANE (EARDRUM) may occur if the fracture line runs through the internal ear section of the skull. This will be evident from bleeding of the ear, nose, and mouth, and also from the vomiting of blood that has been swallowed and an obvious impairment of hearing.

IV. A FRACTURE OF THE ZYGOMATIC PROCESS will be the outcome if the blow is one inch lower than the temporal bone (temple). Opening and closing of the mouth will be noticeably painful. (Fig. 9.)

***Extradural hematoma: Blood clot between the skull casing and the dura.**

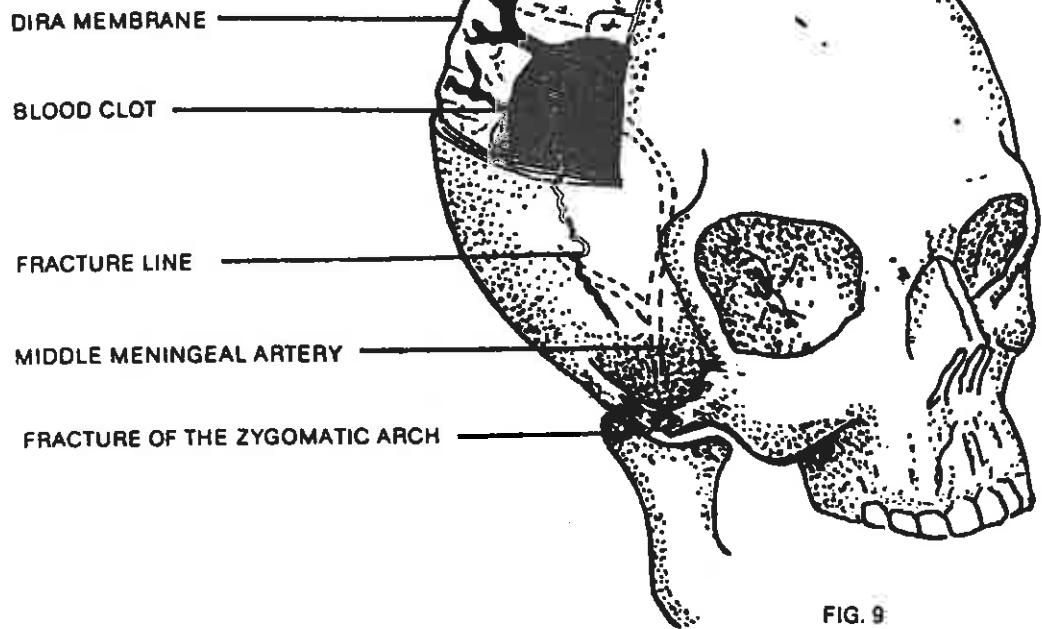


FIG. 9

FIG. 10 BLOW UP OF VEIN GROOVED INTO THE DURA MEMBRANE AND INSIDE THE SKULL

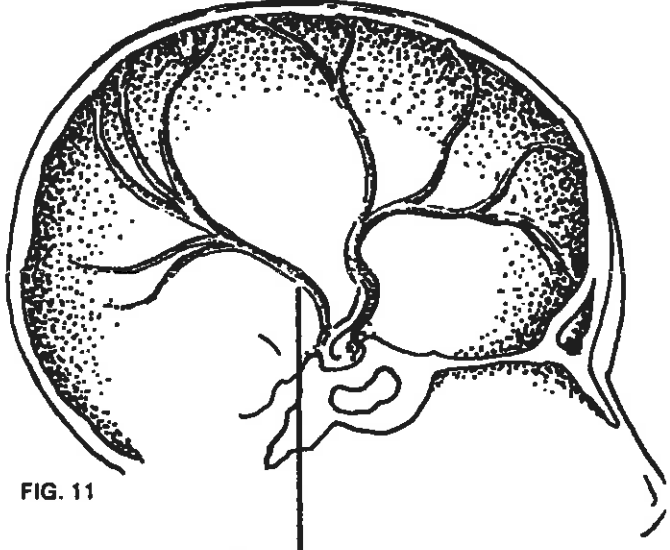
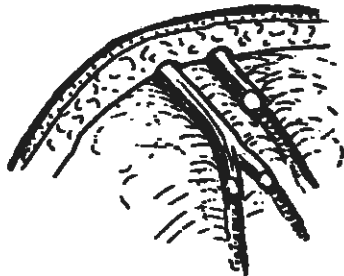


FIG. 11

MENINGEAL ARTERY GROVES IN THE SKULL

WEAPONS: Back of all four knuckles

TARGET: Nasal bone

Medical Implications

I. COMPOUND FRACTURE AND/OR DISLOCATION OF THE NASAL BONE AND SEPTUM (dividing partition of the nostrils) are a consequence of knuckles raking across the upper part of the nose. Needless to say, there will be massive hemorrhage because of the many blood vessels in this area. Shock and pain may render your opponent unconscious. Temporary blindness may be a result of the extreme watering of the eyes because of the stimulated pain receptors in the nasal region. We must realize that many times the blow may not be a death-dealing one, but the accidental consequences may end in death. In this case we are talking about unconsciousness which invariably occurs before the opponent hits the ground. The effect is a grave one because the head is relaxed when it strikes the ground and may end in a serious concussion or skull fracture if the surface is fairly soled. Death may also ensue because of the huge amount of blood clogging the trachea (wind pipe) during unconsciousness.

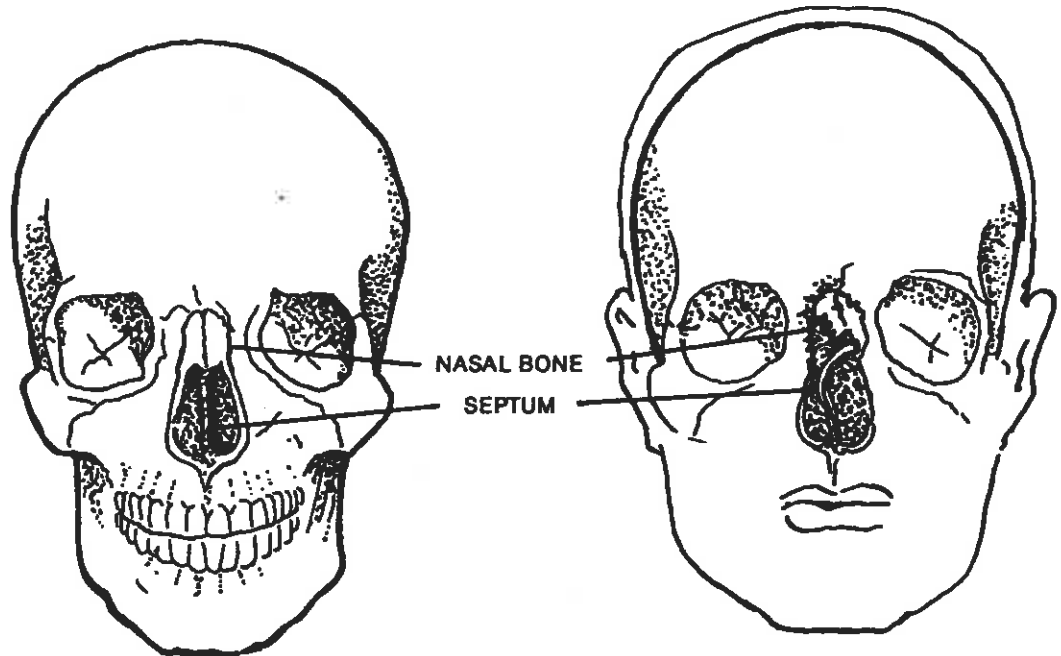
II. FRACTURE INTO THE ORBITAL SOCKET (eye socket) with possible cerebral involvement may be a complication of the blow. If the fracture line has continued into the brain casing (cribriform plate of the ethmoid bone), a slight tear in the dura will release small amounts of cerebrospinal fluid. The fluid will travel through the sinuses and finally exit through the nostrils or be swallowed. Cerebrospinal fluid (clear fluid that circulates in the closed cavity of the brain and spinal cord) is sometimes mistaken for a normal secretion for quite some time, until severe headaches motivate the individual to seek medical advice.

When bone (or for that matter any part of the body) is struck, the force of the blow is transferred from the weapon to the target in the form of oscillating vibrations. In the case of bone the oscillations follow the path of least resistance. The oscillations are further apart in wide or thick bone and closer together in thin or narrow bone (Fig. 17). As oscillations narrow the vibration becomes more violent and causes a fracture through the weakest portion of bone.

The olfactory nerves (nerves of smell) are spread throughout the roof of the nasal section (cribriform plate of the ethmoid bone) and may become torn or severed from the fractured bone. A dulling of the sense of smell will occur.



EXTERNAL APPEARANCE



NORMAL

FIG. 15
FRACTURE AND DISLOCATION OF THE NASAL BONE AND SEPTUM
(CARTILAGE THAT DIVIDES THE SIDES OF THE NOSTRILS)

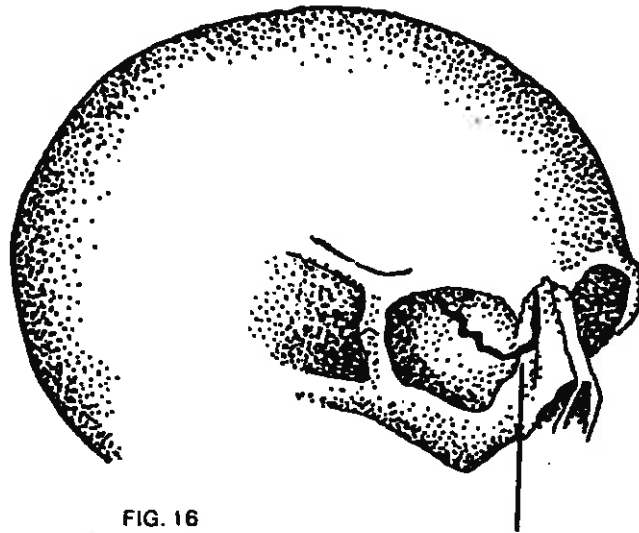


FIG. 16
FRACTURE INTO THE ORBITAL SOCKET

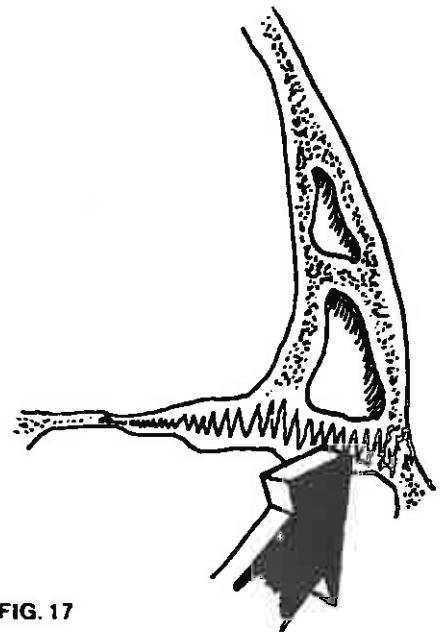


FIG. 17
DISLOCATIONS FOLLOW PATH OF LEAST RESISTANCE AND BECOME CLOSER TOGETHER AS THE BONE NARROWS

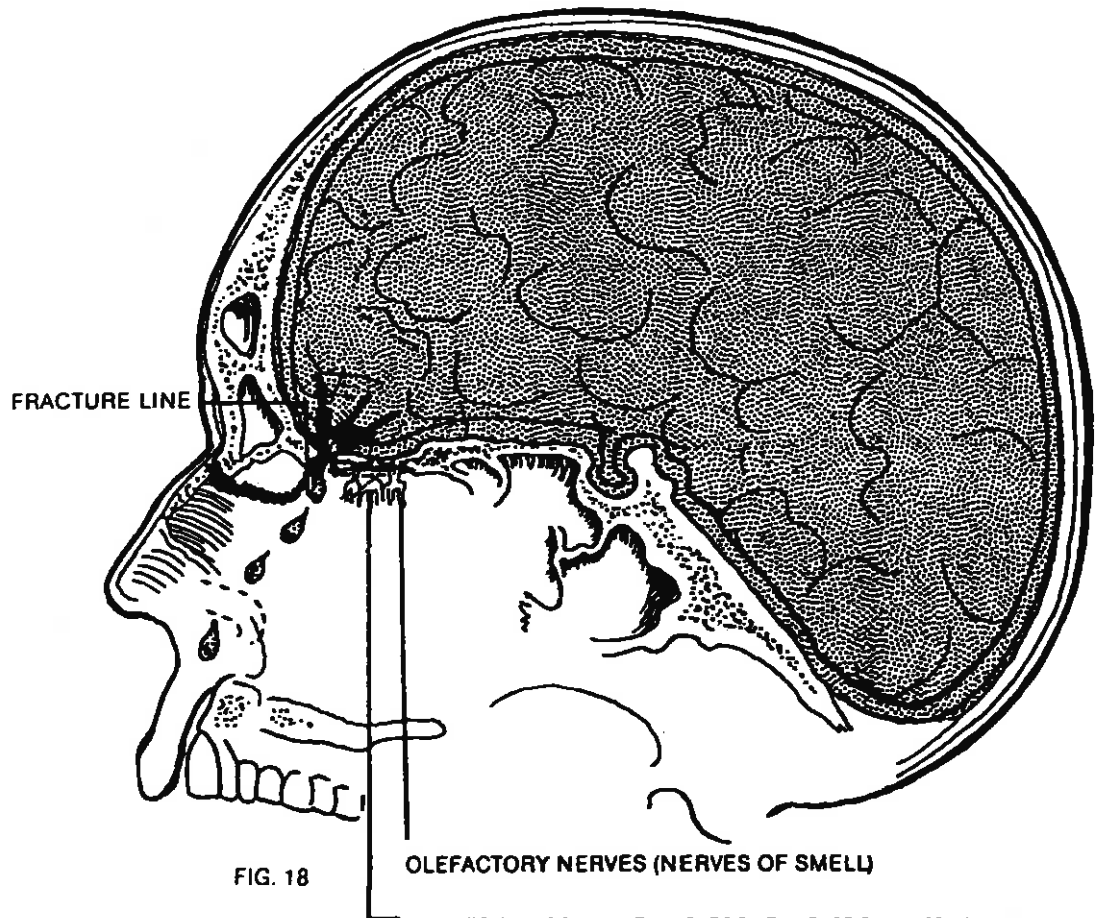


FIG. 18

OLEFACTORY NERVES (NERVES OF SMELL)

CEREBRAL-SPINAL FLUID ESCAPING FROM A FRACTURE THROUGH THE CRIBIFORM PLATE OF THE ETHMOID BONE

WEAPON: SHUTO (side of the hand)
TARGET: Region under the nose

Medical Implications

I. A SPLIT LIP, CHIPPED OR MISSING TEETH AND EYEWATERING PAIN are the minimal possible results. The eyewatering pain is due to the close proximity of the nerves to the surface of the skin.

II. A BURSTING FRACTURE OF THE MAXILLA (upper jaw) is the outcome because of the spherical nature of the skull. The skull will compress to its limit and then burst, producing a bursting fracture. The fracture site is usually on one side or the other, distal to the point of impact, but there may be fracture at the impact site also. The simple task of eating may become a very painful one.

III. UNCONSCIOUSNESS AND/OR CONCUSSION frequently follow such a blow. Unconsciousness may be a result of a concussion or more than likely may be caused by the fast exit of blood from the brain into the internal organs (due to shock).

IV. RESPIRATORY PARALYSIS AND DEATH may develop from broken or dislocated teeth and blood caught in or near the wind pipe (trachea) may cause a spasm of the vocal cords (Fig. 30) with closing off of the air supply.

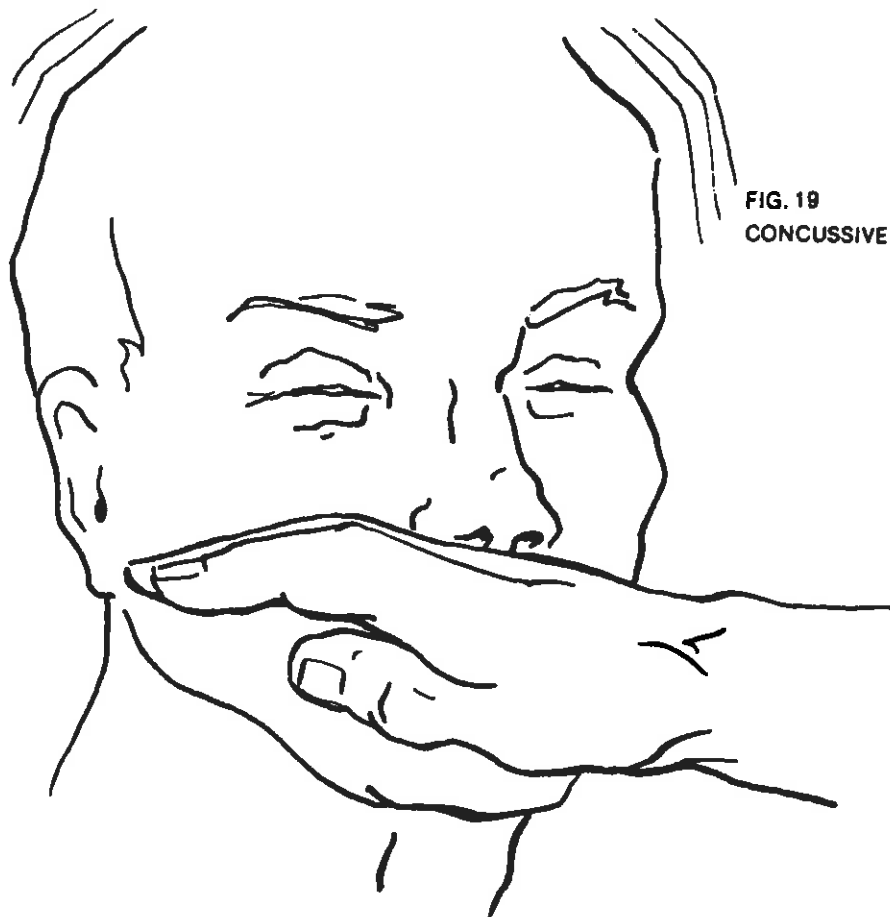


FIG. 19
CONCUSSIVE VIBRATION

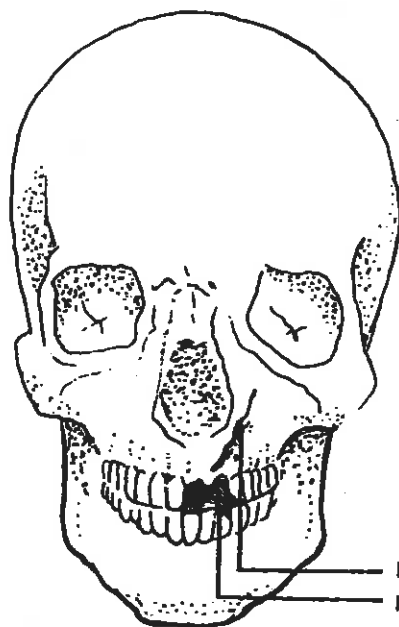


FIG. 21
BURSTING FRACTURE OF THE MAXILLARY BONE
MISSING AND CHIPPED TEETH

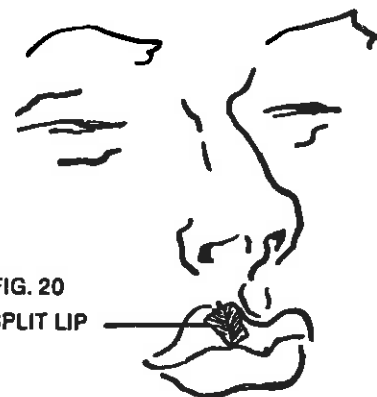


FIG. 20
SPLIT LIP

WEAPON: Elbow and palm strike

TARGET: Jaw

Medical Implications

I. A FRACTURE OR DISLOCATION OF THE MANDIBLE (lower jaw) is a very apparent result of two striking surfaces on either side of the jawbone. If both strikes were simultaneous, a double fracture (one on each side) would be evident. But if one weapon were to arrive before the other, thus pushing the jaw into the path of the other weapon, then only a fracture on one side would be applicable. In order to prevent a future deformity of the jaw line, the teeth and fragments must be temporarily wired together. Of course there will be great difficulty eating and speaking until complete healing has taken place. Dislocation of the jaw hinge would easily occur if the blow were near the upper portion of the jaw and were a glancing type blow. The wider the opening of the mouth at the moment of impact, the easier it would be for the dislocation to occur.

II. A FRACTURE DISLOCATION OF THE ZYGOMA (cheekbone) would result if the elbow struck a short distance above the jaw. A bursting fracture in the bone surrounding the cheekbone may result from the crushing pressure of the elbow. The maxillary sinus lies under the cheekbone and would undoubtedly be lacerated by bone fragments from the fracture. Blood would fill the sinus and flow into the throat or out of the nose. The possibilities of unconsciousness and concussion range very high.

III. THE FACIAL NERVE MAY BE PINCHED OR ABRADED against the edge of the mandible and (according to how devastating the damage) may leave part or all of one side of the face in paralysis (Fig. 8).

IV. CONTROL OF THE TONGUE WOULD BE LOST because of the mandible fracture. Torn muscles on the bottom of the mouth that adhere the tongue would go into spasm and if unconsciousness ensued, the tongue along with the broken and dislocated teeth would be swallowed and death by choking would follow.

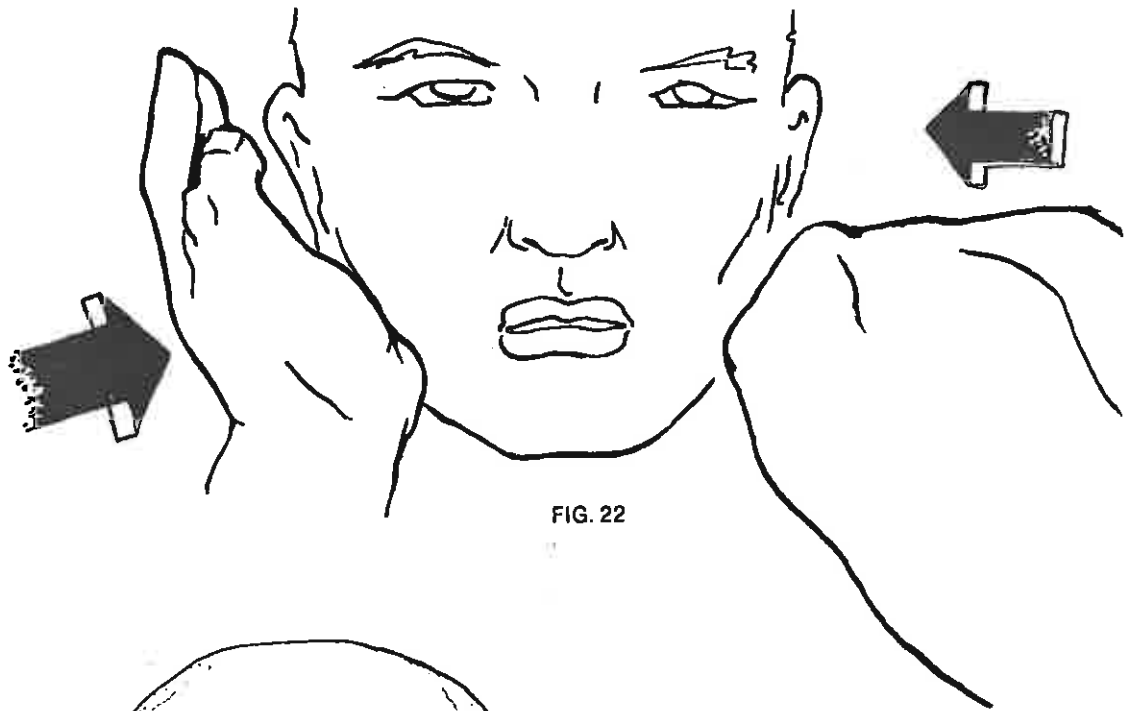
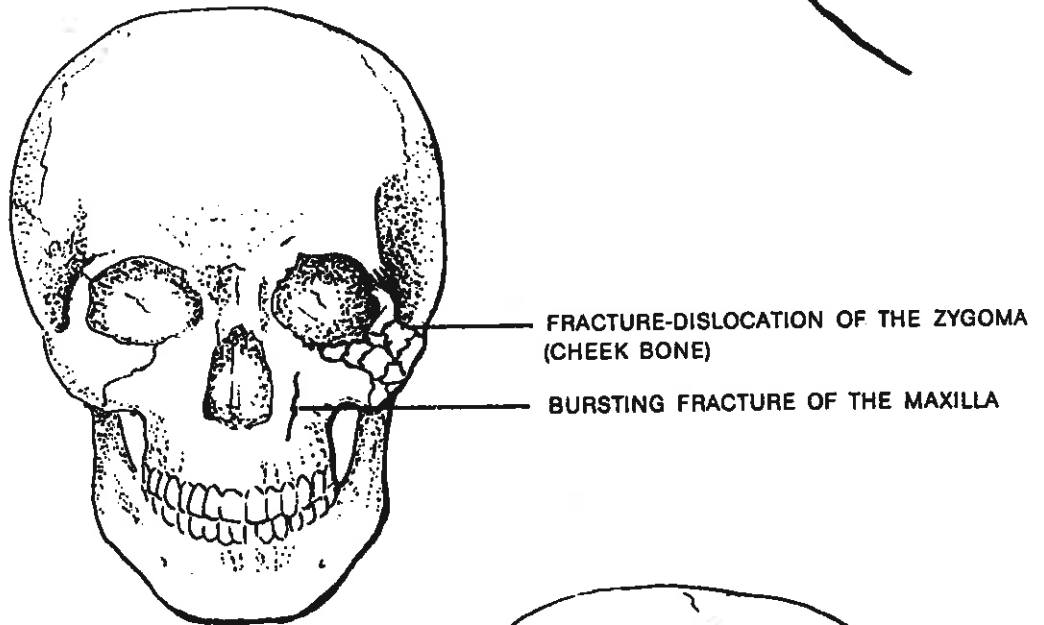


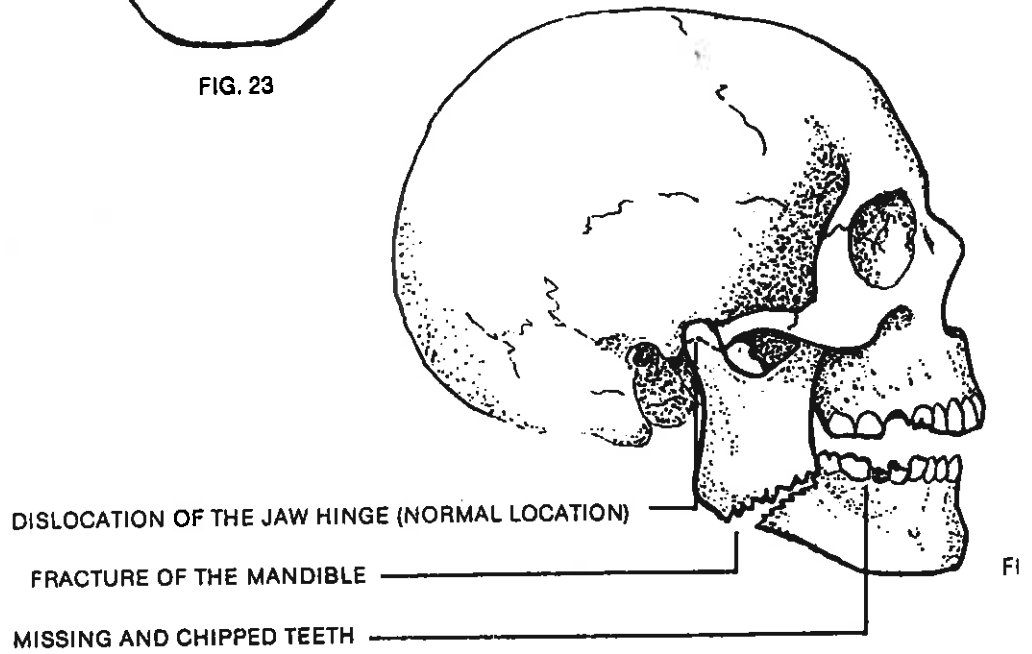
FIG. 22



FRACTURE-DISLOCATION OF THE ZYGOMA (CHEEK BONE)

BURSTING FRACTURE OF THE MAXILLA

FIG. 23



DISLOCATION OF THE JAW HINGE (NORMAL LOCATION)

FRACTURE OF THE MANDIBLE

MISSING AND CHIPPED TEETH

FI

WEAPON: Shuto-Uchi (side of the hand)
TARGET: Side or front of the throat

Medical Implications

The results from a well-focused blow to the front or side of the throat are a combination of multiple effects and results. The following is a listing of each separate possible effect and result:

Effects

- (1) Contusion of the internal Jugular Vein
- (2) Contusion of the internal Carotid Vein
- (3) Contusion of the Vertebral Vein
- (4) Contusion of the Hypoglossal Nerve
- (5) Contusion of the Vagus Nerve
- (6) Contusion of the Phrenic Nerve
- (7) Contusion of the laryngeal Nerve
- (8) Hematoma in Carotid Sheath
- (9) Fracture of the Spinous Process
- (10) Fracture of the Thyroid Cartilage
- (11) Fracture of the Cricoid Cartilage
- (12) Possible injury to Branchial Plexus

Results

I. The internal jugular vein pulsates during respiration, distends, during expiration, and collapses to a ribbon-like structure during inspiration. If the blow struck on expiration, the vein would be full of blood and hard. Rupturing of the internal jugular vein from striking it against the hard surface of the cervical vertebra would result in a quick death due to a massive hemorrhage (hematoma).

II. Severe contusion of the carotid vein may result in thrombosis, (blood clot in the vessels) due to the vessel wall spasm, which produces a restriction in blood flow. This may eventually end in cerebral thrombosis (blood clot in vessels of the brain) and death.

III. Laceration or contusion of the VERTEBRAL ARTERY is only possible when the blow is heavy enough to chip or fracture the spinous vertebral

processes that the artery runs through. Results are the same as the previous two variations in vessel damage.

IV. The two most important functions of the VAGUS NERVE we are concerned with here are that of heart contraction and lung constriction. Since there are two branches of the vagus nerve (one on each side of the neck) injury to one may not by itself be completely fatal because of the partial overlapping of the two nerve branches once they reach their destination. However, damage to one side of the nerve could cause spasms of the lungs and heart, ultimately ending in shortness of breath, irregular heart palpitations, and death.

V. The PHRENIC NERVE runs from the fourth cervical vertebra, vertically down the neck into the thorax (chest) where it finally merges into the diaphragm. The main function of the phrenic nerve is to supply the diaphragm with necessary responses for breathing. When it is injured, the same feeling that one gets when the "wind" has been knocked out will exist until normal function resumes or death occurs.

VI. The LARYNGEAL NERVES (nerves of the vocal cords, etc.) are a branch of the vagus nerve. They control the main functions of the larynx, which are to open and close the vocal cords and epiglottis so that no foreign objects are permitted to pass through the trachea. When a foreign object (food, teeth, blood, etc.) agitates the nerve surrounding the larynx or inside of the throat, the vocal cords close and the epiglottis covers the opening of the wind pipe to prevent anything from being sucked into the pipe. When this is done no air can go in or out of the lungs until the nerve relaxes and opens the wind pipe for normal breathing. If the nerve does not relax, death by suffocation will follow.

VII. The HYPOGLOSSAL NERVE is the main nerve of the tongue. If it is damaged, loss of control of the tongue will be inevitable with suffocation and death if it is swallowed.

VII. A HEMATOMA IN THE SHEATH that encompasses the internal jugular, carotid vein and vagus nerve in the neck is the result of blood leakage from a torn blood vessel.

If the tear does not seal itself immediately, death by strangulation will soon follow. The hematoma will grow larger with each pulsation of

the heart and eventually start pressing against the trachea until it has compressed it enough to stimulate the laryngeal nerves to close it off. The outside appearance will be that of a huge swelling on the side of the neck (Fig. 29).

IX. A chipped or fractured SPINOUS PROCESS of the vertebra is one of the most dangerous occurrences, not because of the fracture but because of what lies between it and the outside surface of the skin, which in this case is everything previously mentioned in this Chapter. Also there would be the possibility of spinal cord shock (injury to the spinal cord without any known disruption of the spinal cord fibers-whiplash).

X. Fracture of the THYROID OR CRICOID CARTILAGE is the result of a frontal blow to the throat. The most important thing to remember here is that surrounding the cartilages are many nerve branches of the larynx (laryngeal nerves). Of course, stimulation of these nerves by a fracture of the cartilage will activate the vocal cords and epiglottis to close off the air supply to the lungs, resulting in a slow death by suffocation or at least unconsciousness from lack of air.

Because of the close proximity of all the above mentioned effects and results, it is easy to see how two or more of the effects would exist and cause death to or at least total disability of the attacker.

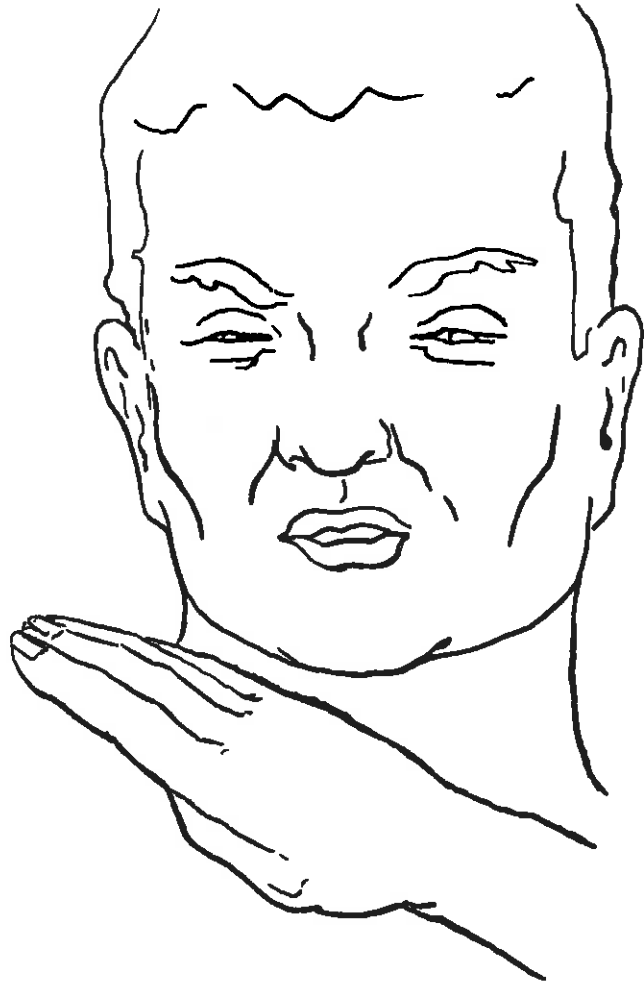


FIG. 25

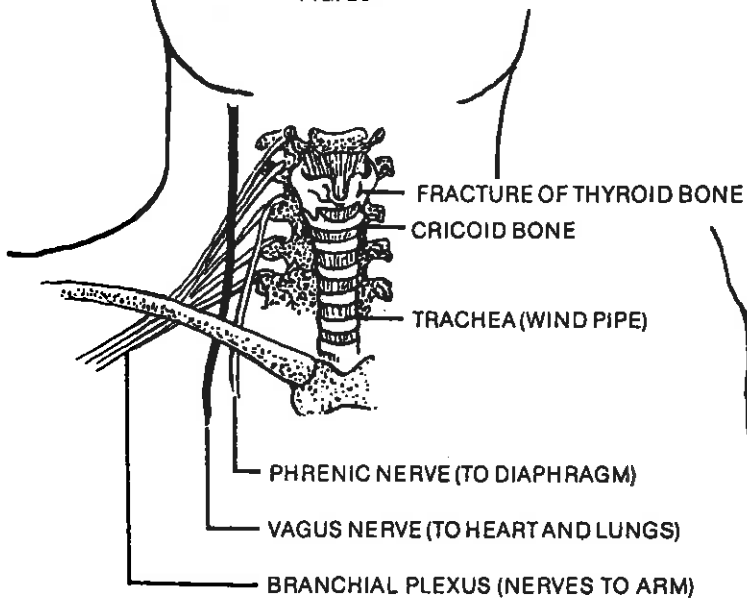
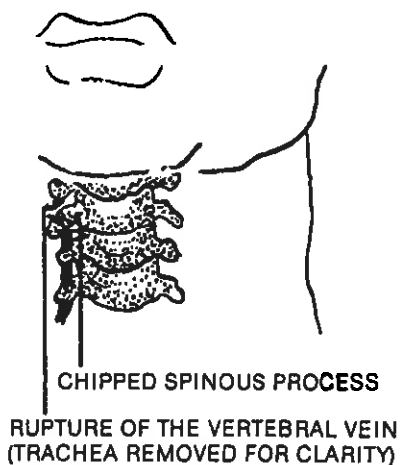


FIG. 26



JUGULAR VEIN TO BRAIN
 CAROTID VEIN TO BRAIN
 VAGUS NERVE
 PHRENIC NERVE

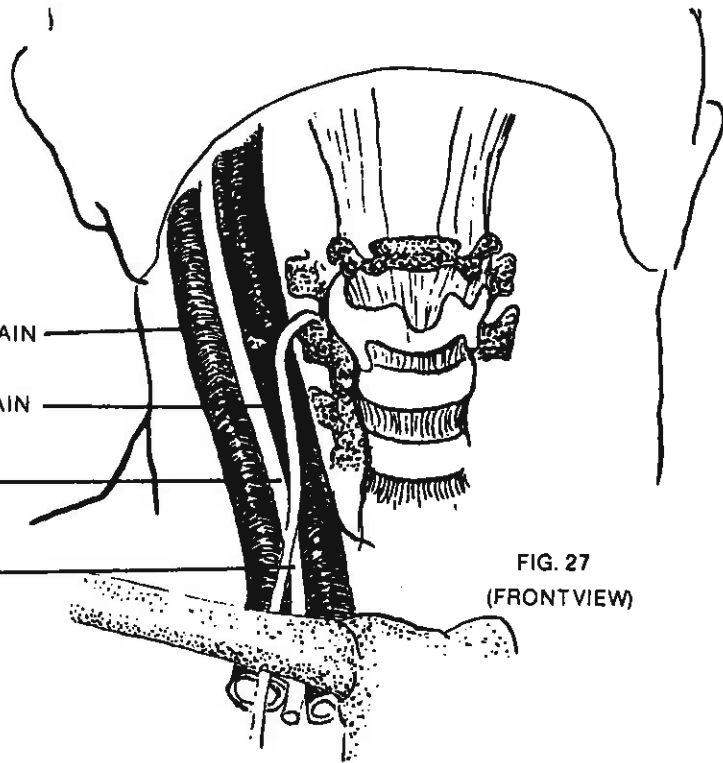
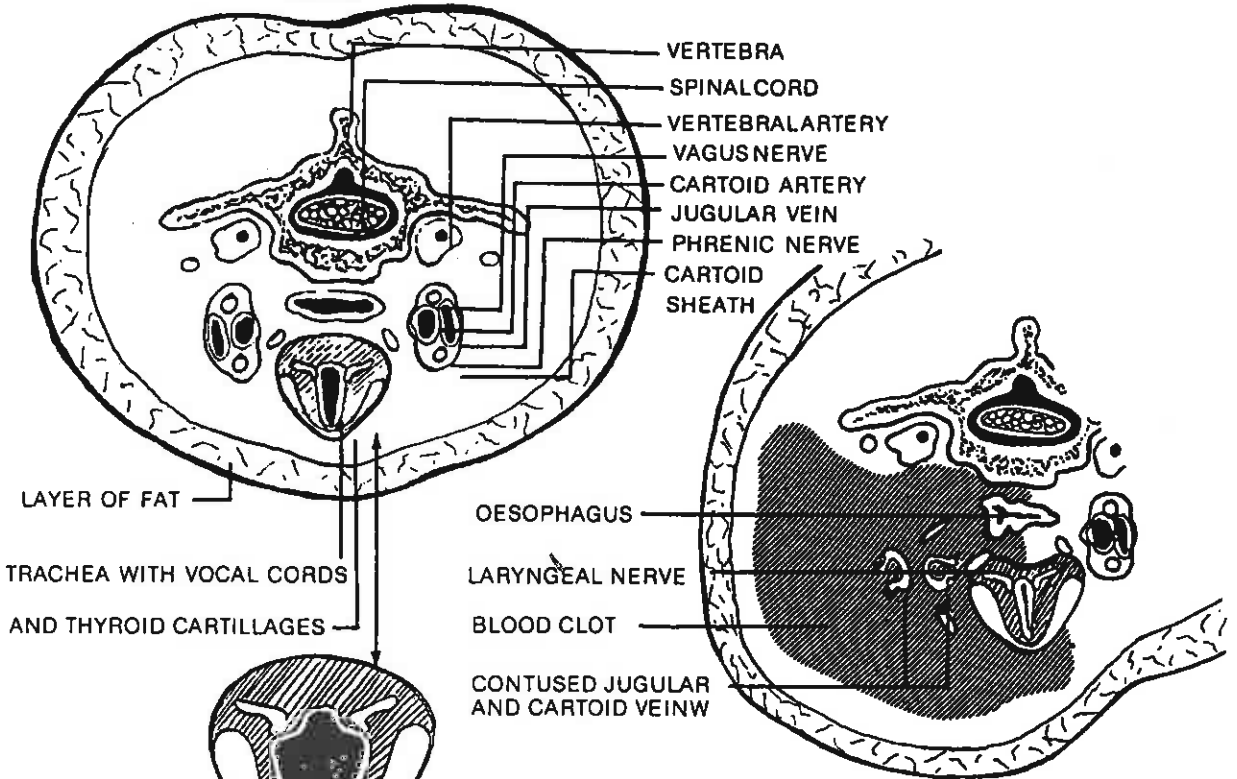


FIG. 27
 (FRONT VIEW)

CROSS SECTION OF NECK (TOPVIEW)
 FIG. 28



LAYER OF FAT
 TRACHEA WITH VOCAL CORDS
 AND THYROID CARTILLAGES

VERTEBRA
 SPINALCORD
 VERTEBRALARTERY
 VAGUS NERVE
 CAROTID ARTERY
 JUGULAR VEIN
 PHRENIC NERVE
 CAROTID SHEATH

OESOPHAGUS
 LARYNGEAL NERVE
 BLOOD CLOT
 CONTUSED JUGULAR
 AND CAROTID VEINW

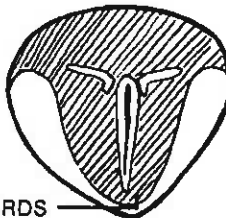
FIG. 29

COMPRESSION OF NERVES, OESOPHAGUS
 AND TRACHEA BY BLOOD CLOT

OPEN VOCAL CORDS

FIG. 30

CLOSED VOCAL CORDS



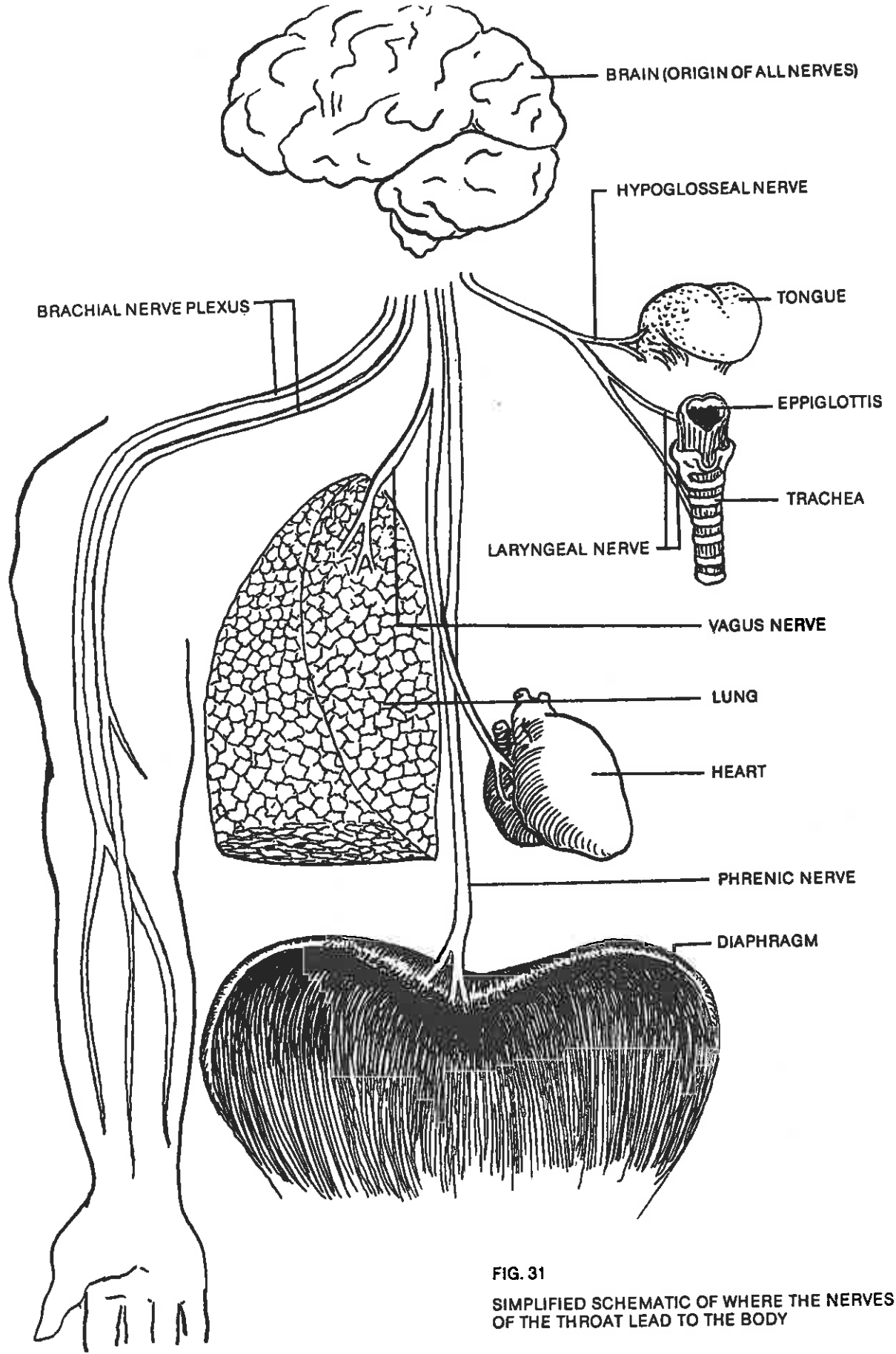


FIG. 31
 SIMPLIFIED SCHEMATIC OF WHERE THE NERVES
 OF THE THROAT LEAD TO THE BODY

WEAPON: Shuto-Uchi (Side of the hand)

TARGET: Back of the neck

Medical Implications

I.. Muscle spasms and a **WHIPLASH INJURY** should be considered the minimum possible damage resulting from this type of blow. There is also a possibility that the blow might result in permanent spinal cord shock (injury to the spinal cord-better known as a whiplash injury). Noticeable symptoms will appear immediately or at a later date. These symptoms occur in many degrees of severity, from constant neck strain (as if a muscle were pulled) and severe headaches, to pains throughout the neck and back area.

II. A broken neck is the term used to specify a **SEVERED SPINAL CORD**. This is usually accomplished by the severing action of a fractured vertebra. Complete paralysis from the point of impact downward will result.

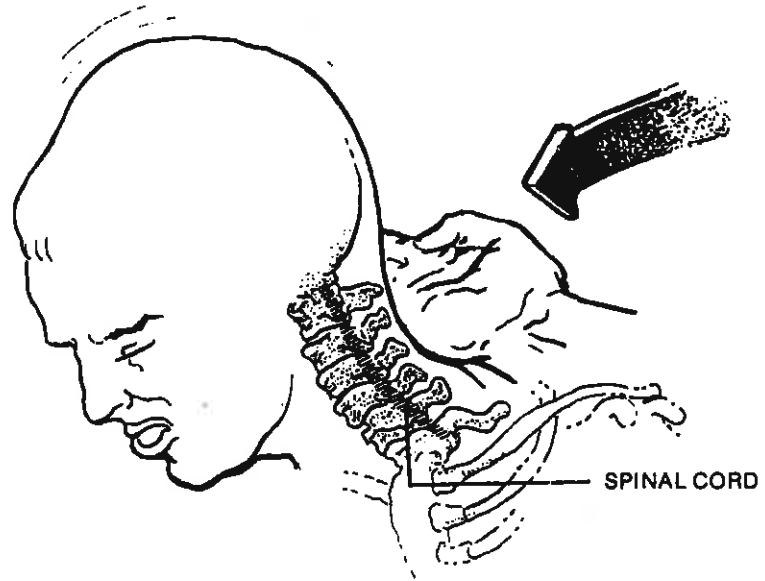
If the cord is severed above the fifth cervical vertebra death will be immediate.

The spinal cord is very much like a multiple strand telephone cable in the sense that it is composed of many nerve strands, and these strands together make up on e dense cord. The phrenic nerve is most accessible between the second and fourth vertebrae. If it is severed it will be fatal, because it controls the function of the diaphragm in breathing. Shock, loss of consciousness, coma, and death waste no time in arriving.

III. Multiple **FRACTURE OF THE CERVICAL VERTEBRA** with bleeding in a pinched spinal cord will cause partial to complete paralysis encompassing any or all portions of the body and limbs below the point of impact. Respiratory paralysis may be due to a compressed phrenic nerve. Death may be immediate or occur later. Inability to move the head from side to side, dizziness and headache are the minimal possibilities from a medium-strength blow.

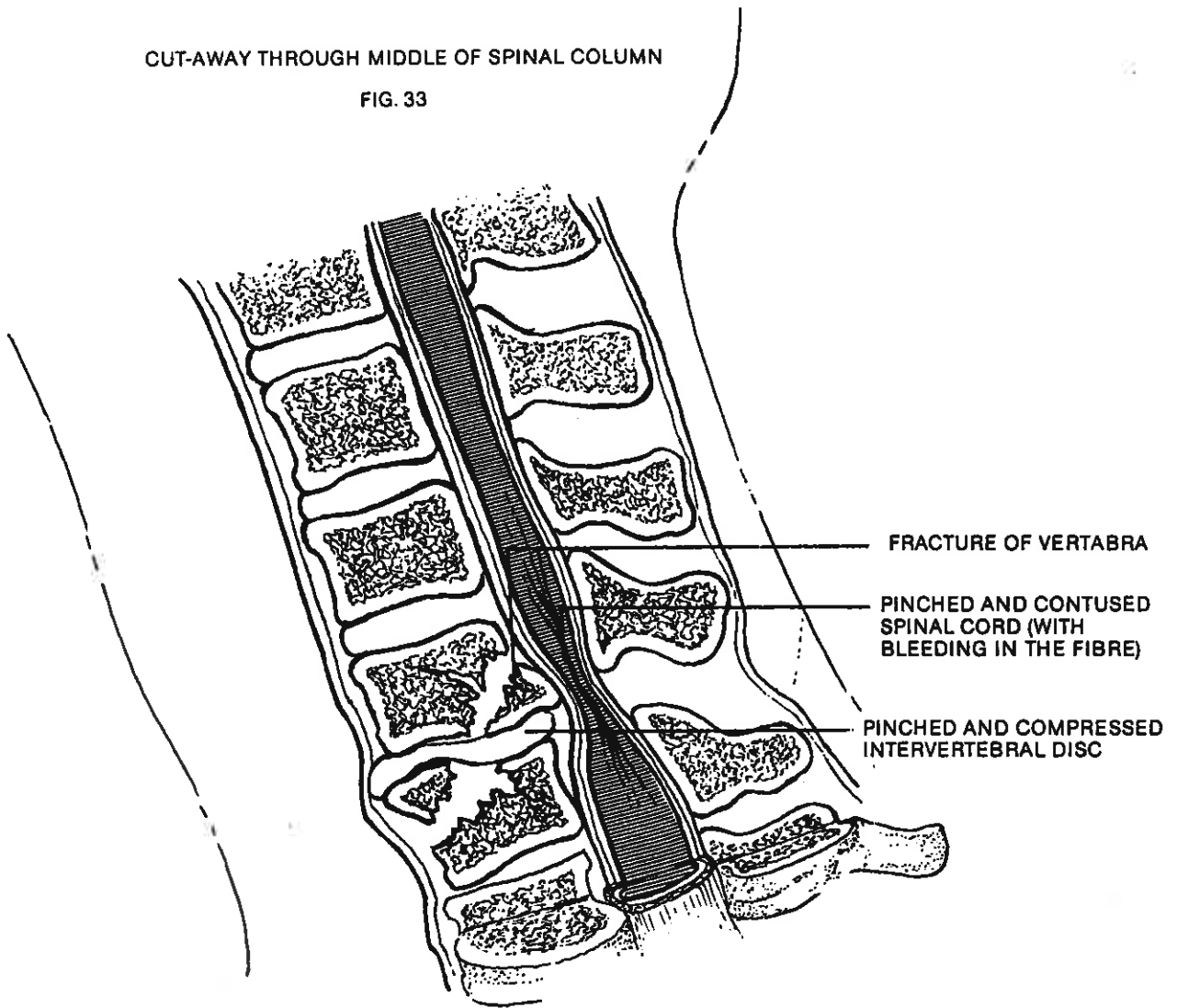
A **CONCUSSION** may exist due to the transmission of shock waves through the brain stem into the brain. Shock (caused by too much stress on the nervous system) may by itself cause death. This is sometimes referred to as a violent interruption of the body's homstatic balance.

FIG. 32



CUT-AWAY THROUGH MIDDLE OF SPINAL COLUMN

FIG. 33



WEAPON: Heel of the foot

TARGET: Solar Plexus

Medical Implications

As indicated in Figures 38, 39, 40, different angles of the kick will produce varied results. If the kick is directed toward the right side of the opponent's body, the liver and gall bladder will be damaged. If it is in the center of the solar plexus, the duodenum and pancreas will be thrust against the front of the lumbar spine. The abdominal aorta (huge vein) follows the lumbar spine vertically and is very snug against the front side of the vertebra. If the heel kick was strong enough to injure the vein, shock (extreme loss of blood) and death would follow almost immediately. The stomach (and some reports claim that the spleen) will be involved when the blow is to the left side of the solar plexus. The level, angle and strength of the kick will determine how many of these organs will be damaged.

I. A DEEP FISSURE IN THE LIVER may very well be fatal. Peritonitis in the name given to free floating blood and/or bile in the peritoneal cavity (body cavity). Hiccuping from blood or bile irritating the diaphragm and an increasing tenderness and pain in the abdomen will continue until surgery of the abdomen corrects the symptoms which may very easily evolve into death.

II. THE GALL BLADDER WOULD BE TORN with gastric acids and digestive juices being spilled into the body cavity. (prior to a meal, the gall bladder fills with proper digestive juices of digestion of the meal and stores the juices until food is induced. The gall bladder would burst rather easily if enough pressure was exerted upon it during the predigestion period.) The juices would immediately start to digest the internal organs they came in contact with, and only surgery would prevent death.

III. RUPTURE OF THE STOMACH with the spilling of its contents and blood into the body cavity would again result in peritonitis. Days of intestinal disturbances, gastric disorders and vomiting, shock, and eventual death will occur.

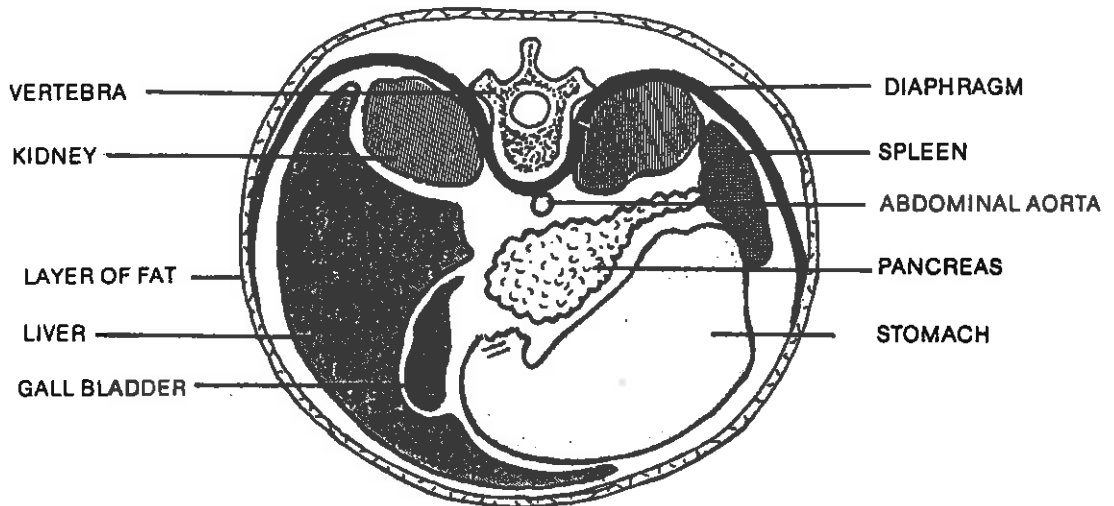
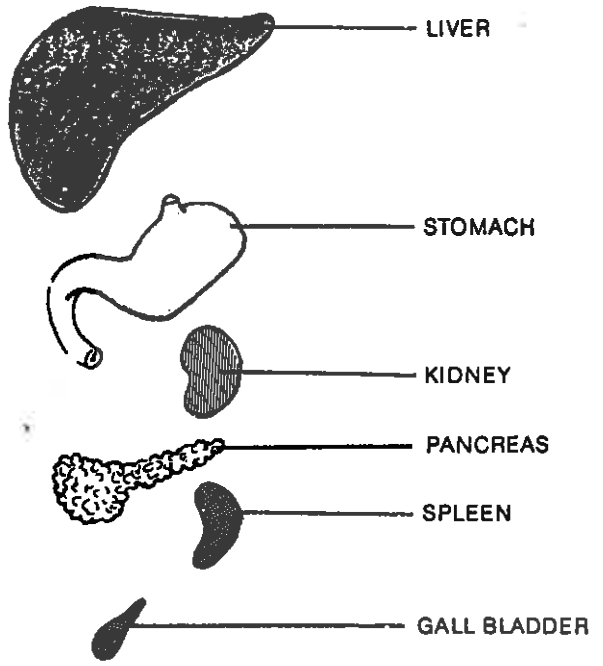
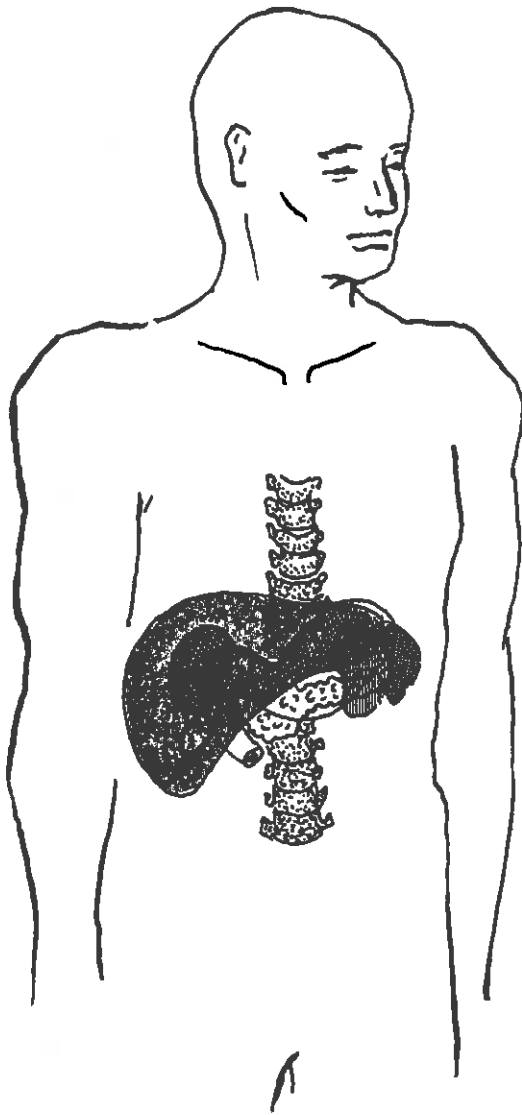
IV. A compression injury of the DUODENUM against the lumbar spine will progress the same as III above.

V. AN INJURED PANCREAS may result if the kick were well timed (when the opponent was inhaling) and the solar plexus were relaxed and easily penetrated. The pancreas might also be compressed, along with the duodenum, against the lumbar spine producing a split surface of the organ. Respiratory paralysis (Fig. 45) -spasm of the abdominal and intercostal rib muscles, which inhibits normal movements of the diaphragm in breathing-unconsciousness, shock, and death are the likely results.

VI. PARTIAL COLLAPSE OF THE LUNG, due to a minute plural tear from the percussive shock (jarring) present in the chest cavity at the moment of impact, will result in shallow breathing and great pain during respiration.

VII. SHOCK is a term used in internal injuries to describe the extreme loss of blood and bile into the body cavity. Shock may be immediately fatal or be latent (48 hours later) until abdominal splinting occurs. Abdominal splinting means that when the cavity fills with blood, it will be evident because of a growing tenderness and increasing rigidity of the abdomen, with the elevation of body temperature and possible vomiting of blood from rupture of the stomach or duodenum. Death is the common result of shock, because usually by the time the injured person arrives at the hospital he has lapsed into unconsciousness from lack of blood and cannot tell the doctor his symptoms.

FIG. 37



TOP VIEW OF SOLAR PLEXUS (CUT-AWAY)

TOP VIEW OF SOLAR PLEXUS
(POSSIBLE ANGLES OF PENETRATION)

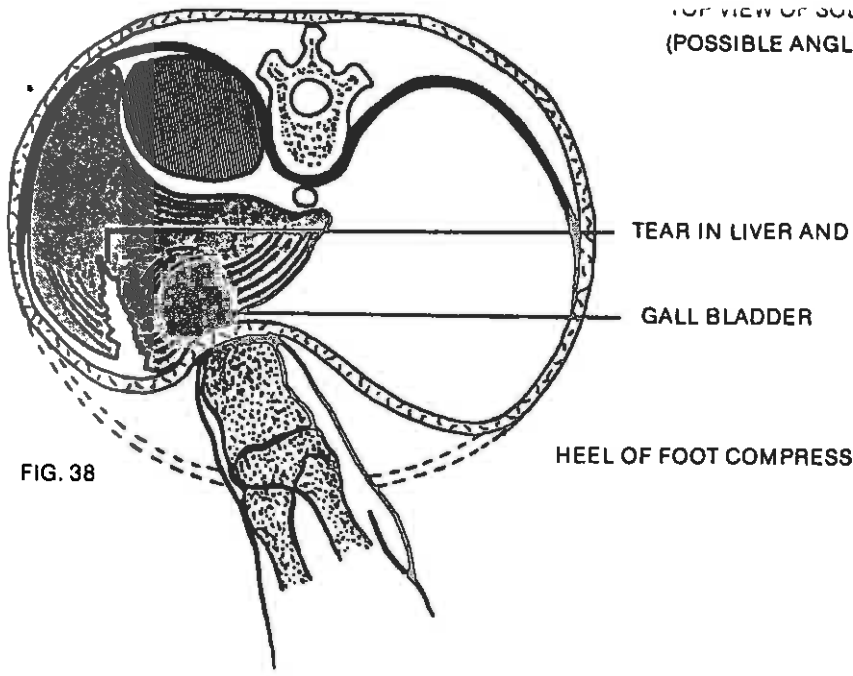


FIG. 38

HEEL OF FOOT COMPRESSING GALL BLADDER

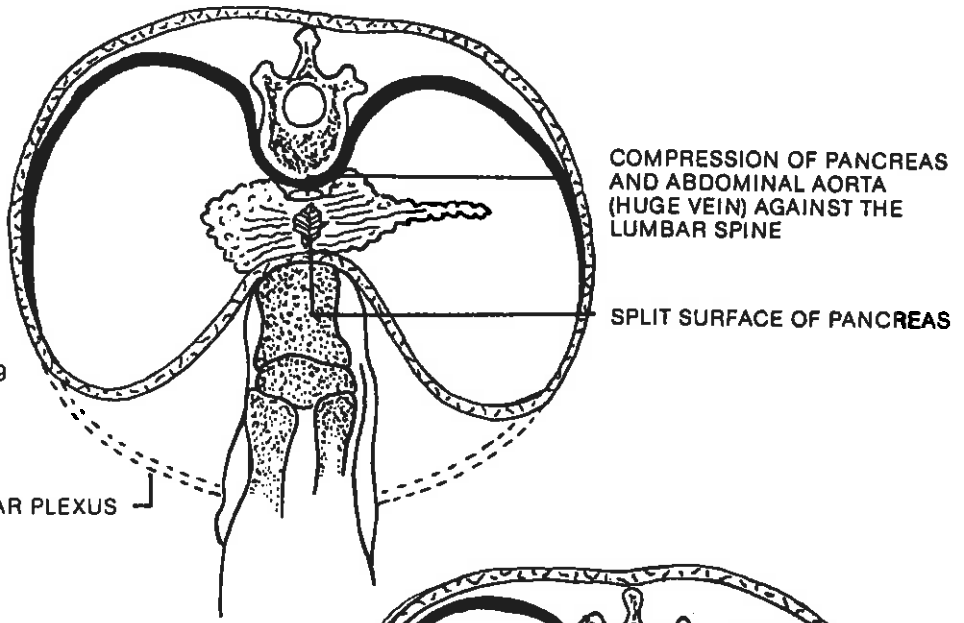


FIG. 39

NORMAL LINE OF SOLAR PLEXUS

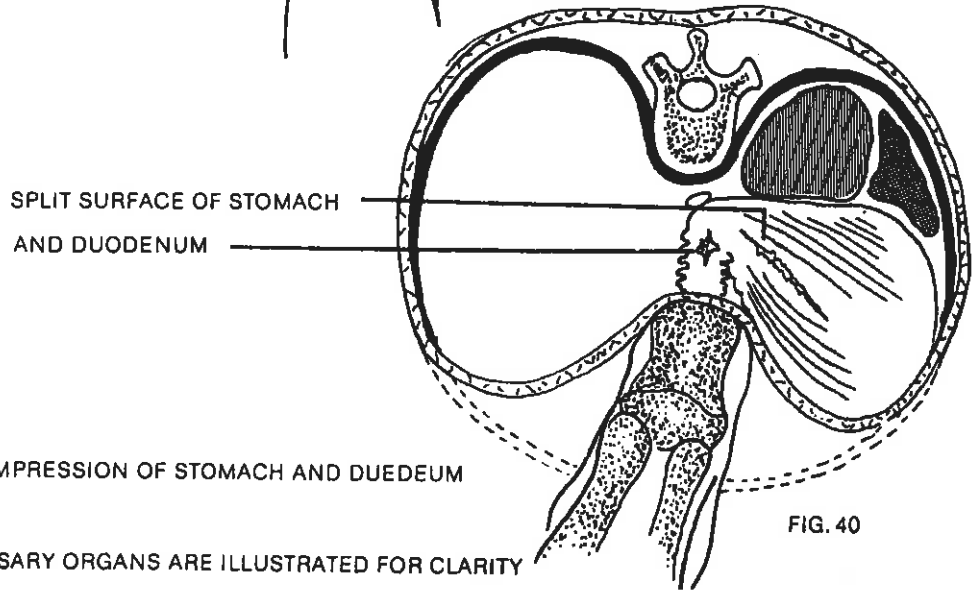


FIG. 40

*ONLY THE NECESSARY ORGANS ARE ILLUSTRATED FOR CLARITY

WEAPON: Elbow
TARGET: Kidney

Medical Implications

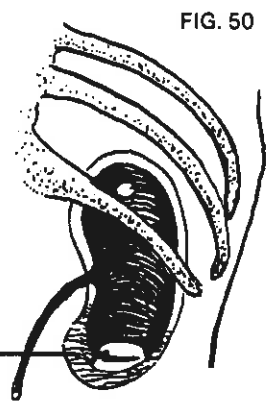
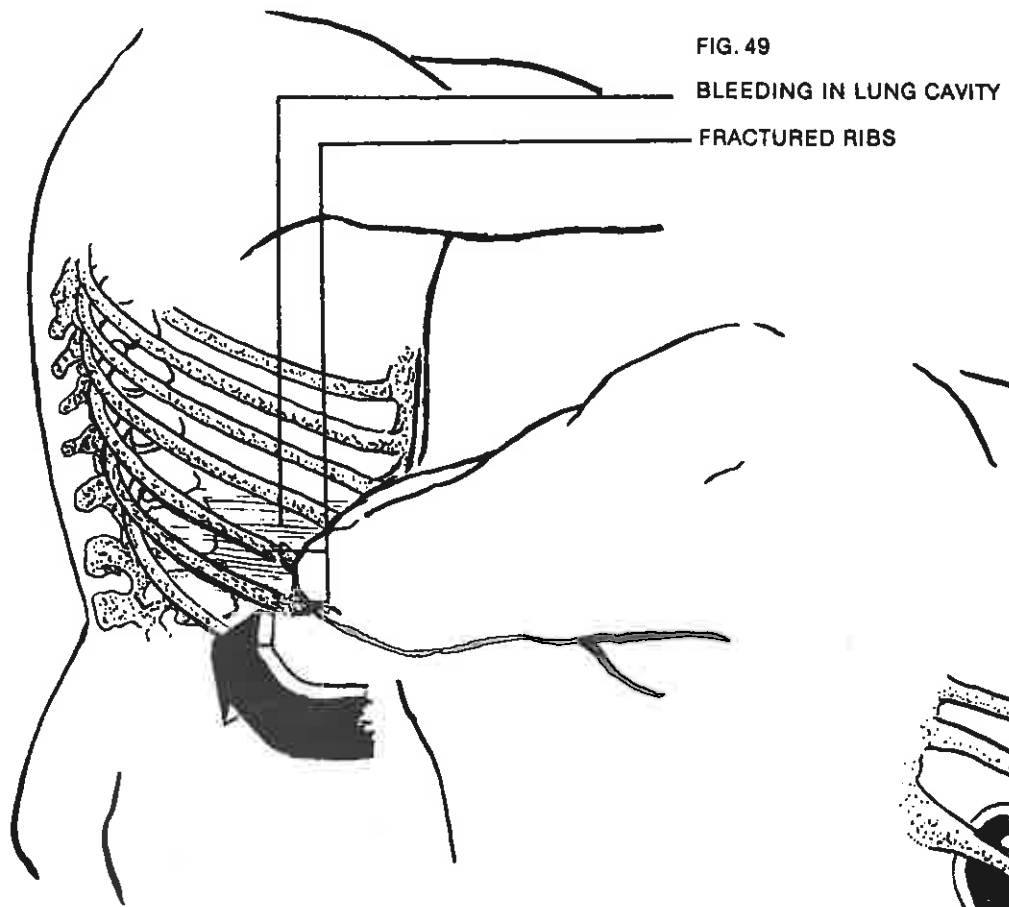
I. Rupture of the kidney, with bleeding in the capsule, can be prevalent with or without broken ribs. Hydrostatic pressure from the impact of the twelfth rib hitting the kidney can cause the rupture.

II. Laceration of the kidney from a broken rib is the most common type of injury from a blow of this nature. There will be peritonitis,* extreme pain, bloody urination, coma, and death (or at least many weeks in bed).

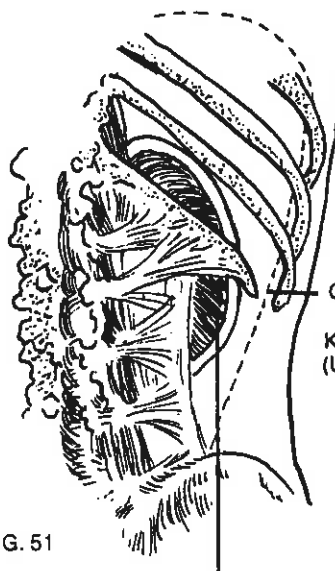
III. If the blow was a glancing type, just below the last rib (twelfth), the kidney capsule (membrane that holds kidney in place) would be torn from its moorings, causing bleeding into the body cavity; and because the ureter is displaced, a bend or kink in the ureter (urinary tube that goes to the bladder) would result in a urinary blockage, followed by infection and sometimes death.

IV. Because the diaphragm lies between the ribs and kidney, it will also be punctured if a complete break in the ribs has resulted. Spasms of the intercostal rib muscles and diaphragm will result in temporary to permanent respiratory paralysis with severe pain and ultimately death.

V. When the blow is three or four inches higher it may have an end result equal to that of a collapsed lung.

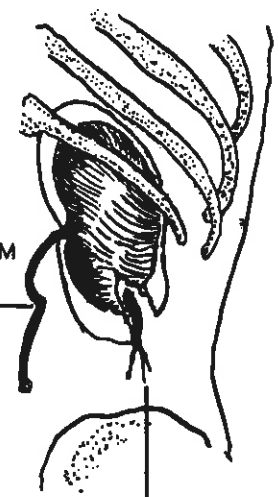


BLEEDING IN KIDNEY AND KIDNEY CAPSULE



NORMAL KIDNEY AND CAPSULE WITH ACCESSORY MUSCLE OF SPINE

OUTLINE OF THE DIAPHRAGM
KINK IN URETHRAL TUBE (URINE BLOCKAGE)



TORN AND DISPLACED KIDNEY AND CAPSULE WITH BLEEDING INTO BODY CAVITY

WEAPON: Ball of foot

TARGET: Groin

Medical Implications

I. Rupture of the bladder from the percussive jolt of a solid kick or from a fracture of the pubic bone, are the two main methods of rupture. Blood and urine in the abdominal cavity will be in abundance with the usual tenderness and pain.

II. The center of the pubic bone is the weakest and most probable place of fracture. An inability to walk because of the nauseating pain originating between the legs (due to the pinching, abrading effect of the separated pubic bones rubbing together upon attempted movement) will leave your opponent in a distressed prone position.

III. In order for the kick to penetrate to the underside of the frontal pubic bone, it must first drive through the penis and scrotum (not a very difficult feat). Disruption of the urethra (urinary tube leading to the outside) with bleeding and urine into the scrotum will be the minimal injury. Bloody and painful urination or an inability to urinate will more than likely be the aftermath.

IV. The testicles are extremely mobile within the loose skin of the scrotum; however, a crushed testicle may result, due to the wide surface of the ball of the foot striking it. Sterility to one or both testicles is one sure occurrence from such a heavy blow. Pain, shock, loss of breath, nausea, vomiting, unconsciousness (and sometimes death) commonly follows one another.

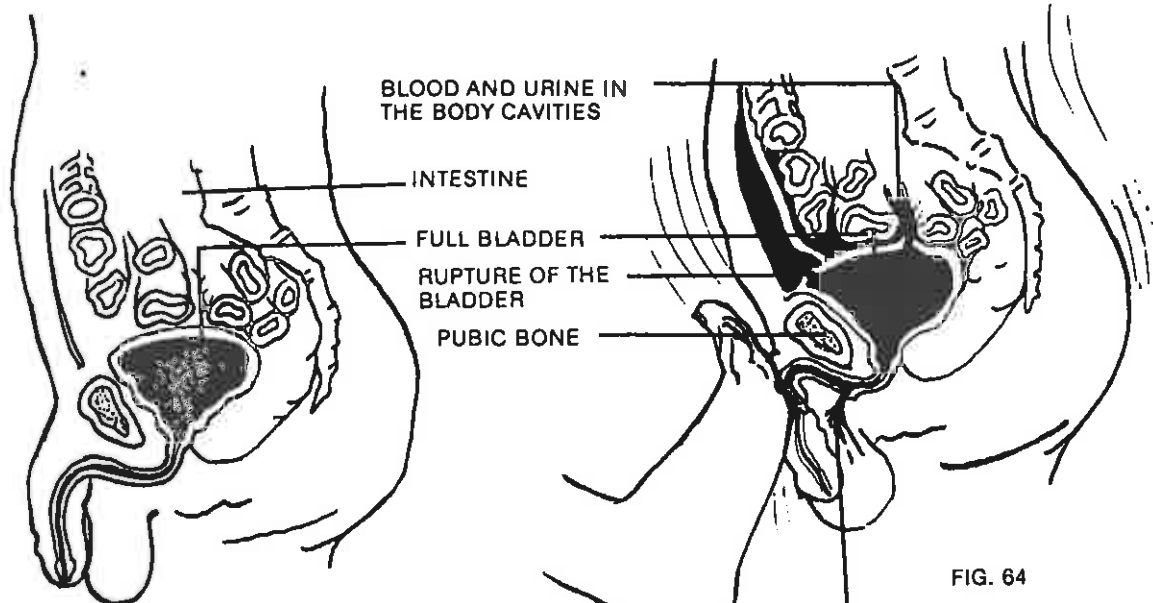


FIG. 63
NORMAL VIEW (CUT-AWAY)

FIG. 64
BLOOD AND URINE IN THE SCROTUM WITH DISRUPTION OF THE UREATHIAL TUBE

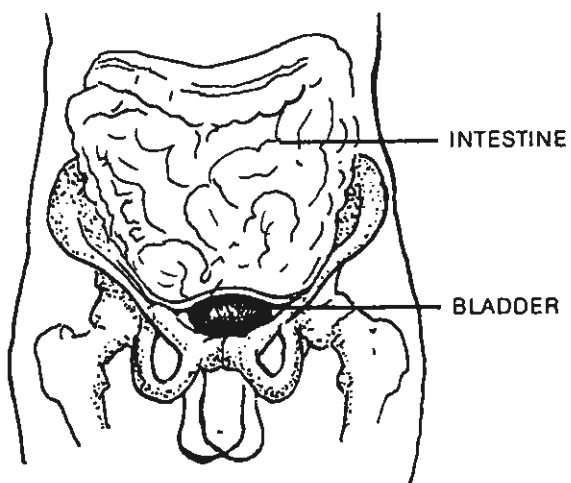


FIG. 65
NORMAL

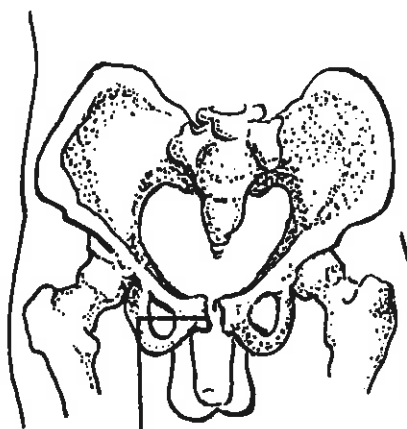


FIG. 66
FRACTURED PUBIC BONE

Crude tactics are a source of serious injuries (a little learning is a dangerous thing) is a proverb often quoted, and similarly, with just a little knowledge of the martial arts one might become careless and adversely incur injuries with life long consequences, so one must always remember to be very careful.

The principle of martial arts is not vanquishing the attacker but resolving to avoid an encounter before its occurrence.

References and Sources

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