DESTRUCTIVE OPERATIONS

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DESTRUCTIVE OPERATIONS

- These are a group of **operations** aims at reducing the size of the head, shoulder girdle or trunk of the dead foetus to allow its vaginal delivery.
- It has been abandoned from the modern obstetrics in favour of caesarean section which is safer to the mother.

PURPOSE OF DESTRUCTIVE OPERATIONS

- To reduce baby's size(head, shoulder girdle or body) and so enable the vaginal delivery of baby which is too large to pass intact through the birth canal

- Or, operations that are designed to diminish the bulk of the fetus so as to facilitate easy delivery through the birth canal.

ROLE OF DESTRUCTIVE OPERATIONS

- No role in modern obstetrics–
- Unpleasant and unacceptable level of maternal traumatic and psychological morbidity
- Complicated intrauterine procedure
- Chances of injury to obstetrician in HIV era
- Caesarean section is much safer alternative

Most of these procedures are

- Intrauterine
- Learning phase is longer
- Higher complications
- L.S.C.S is more safe

CONTRAINDICATIONS

- Living normal fetus
- Markedly contracted pelvis
- Cervix less than 3/4th dilated
- Neoplasms obstructing the pelvis

COMPLICATION

- Lacerations of vagina, cervix, uterus, bladder or rectum
- Uterine rupture
- Hemorrhage from lacerations and uterine atony
- Infection

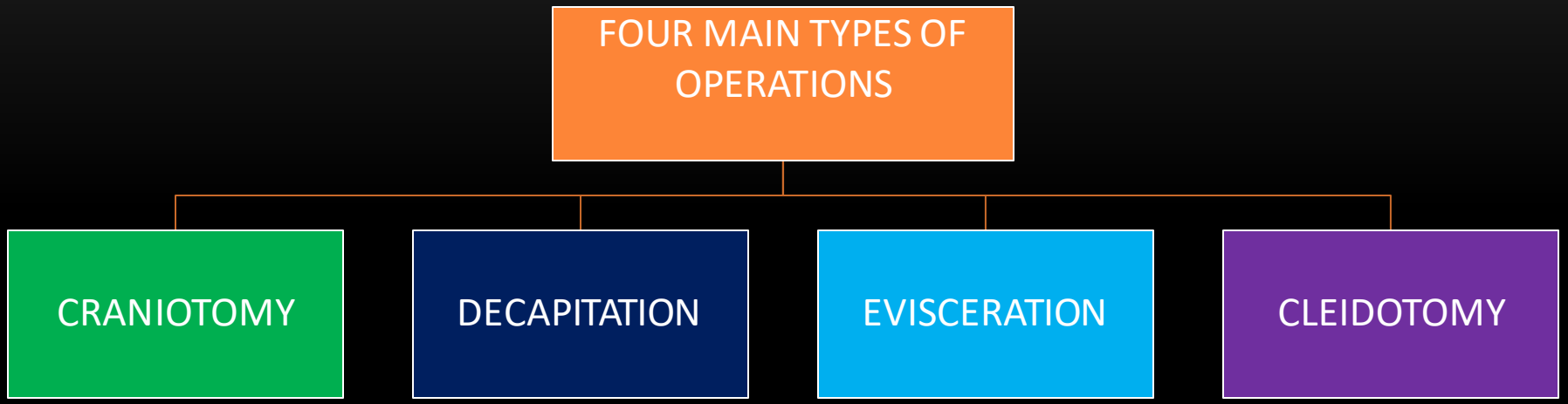
CLASSIFICATION

Living fetus:

- Needle drainage in hydocephaly
- Fracture of clavicle or arm- in shoulder dystocia and breech with nuchal arm

Dead fetus

- Craniotomy-hydrocephaly
  -when delivery of intact head is impossible
- Decapitation- neglected transverse lie
  - interlocked twins


FOUR MAIN TYPES OF OPERATIONS
CRANIOTOMY
DECAPITATION
EVISCERATION
CLEIDOTOMY

CRANIOTOMY

- Method to reduce the fetal head size so as to effect easy vaginal delivery
- OR
- It is an operation to make perforation on the fetal head , to evacuate contents followed by extraction of the fetus

INDICATIONS

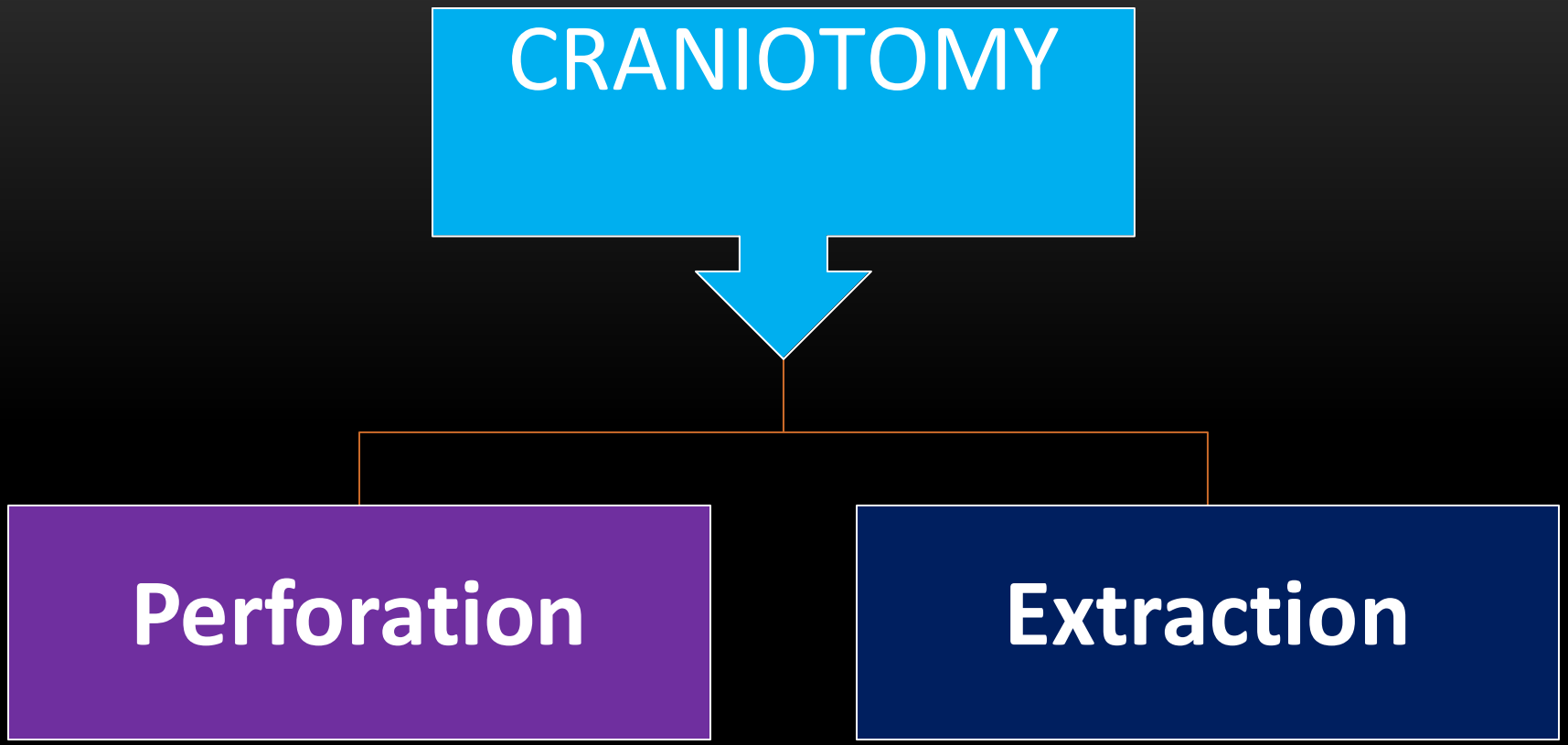
- Obstructed labor with dead fetus
- Hydrocephalus live or dead
- Specially unfavourable position of child-impacted mento-posterior, brow, or occipitoposterior positions-following a prolonged labour
- Interlocking of twins

PREREQUISITES

- Fetus is dead (hydrocephalus excluded)
- Two fifth or less head Palpable above the brim
- Head is impacted
- Cervix is at least 7 cm dilated
- Uterus unruptured/no Imminent rupture
- True conjugate not < 7.5 cm

PRE TREATMENT

- Correct dehydration
- Treat ketoacidosis
- Draw blood for cross-matching, investigations
- To arrange blood
- Prophylactic antibiotics
- Catheterize the bladder


CRANIOTOMY
Perforation
Extraction

SITES FOR PERFORATION

- Parietal bone in fore coming head
- Occiput / post-lateral fontanelle in aftercoming head

- Palate / orbit in face
- Frontal bone in brow

Anaesthesia

- General anaesthesia
- Spinal anaesthesia with IV sedation better option
- These are not available then pudendal block, paracervical block or intravenous sedation may be given

Craniotomy of the Fore-coming Head

- **The first step is perforation.**
  - **This is carried out by** the perforator, of which there are two different types -the scissors and the trephine forms.
  - Scissors variety only used; trephine perforator is obsolete
  - Scissors variety has shoulder to each blade, so that the blades might be prevented from passing completely into the skull.

- With this instrument the opening in the skull is made by separating the handles
- The two most generally employed at the present day are those of Oldham and of Simpson PERFORATOR .
- The perforator has two cutting blades, each being limited by a shoulder.

FIG. 28, I.-OLDHAM'S PERFORATOR.

The blades are opened by compressing the handles.

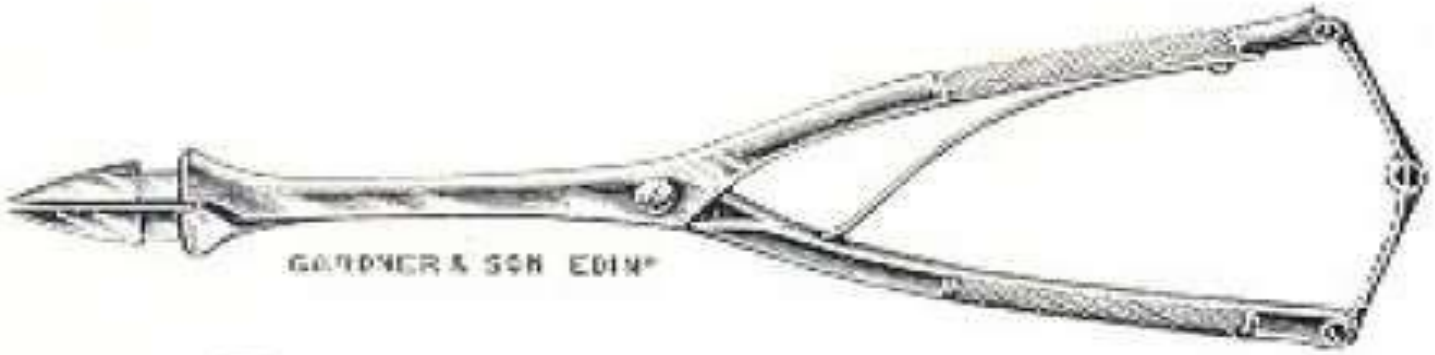


FIG. 28, 2.-SIMPSON'S PERFORATOR.

- The handles, when the blades are in apposition, are wide apart, and in the case of Simpson's model a hinged crossbar holds the handles apart.

- This crossbar is so hinged that it only permits of approximation of the handles when the hinge is pressed inwards. By pressing the handles together the blades are separated

- The steps in perforating are as follows:
  - The head of the child is steadied from above the Symphysis by an assistant grasping it and pressing it against the pelvic brim.
  - The operator holds the perforator in his right hand.
  - Under protection of the fore and middle fingers of his left hand, placed in the vagina, the point of the instrument is directed up against the skull and pushed through it.

- In pushing or boring the instrument through the skull, the direction of the instrument should be, as far as possible, at right angles to the surface of the child's head, otherwise there is danger of the instrument glancing off the skull and doing injury to the soft parts of the mother.

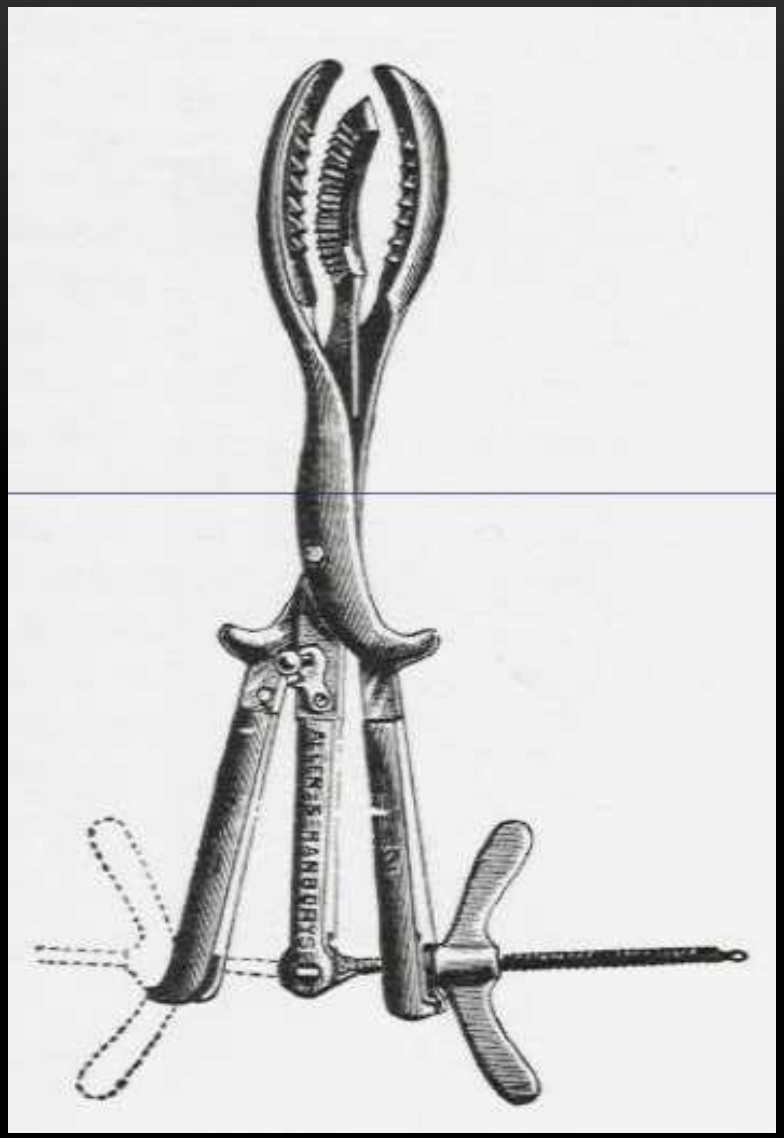
- In order to get the perforator at right angles to the - surface of the skull, the shanks of the instrument should be depressed against the perineum.

- The blades of the instrument, having been pushed through the skull as far as their shoulders, should then be separated, and this is done by pressing the handles together .
- A large tear in the skull having been made in one direction, the instrument should be turned round and a similar tear made at right angles.
- The points of the instrument should be pushed into the skull and the brain broken up in all directions. The instrument is now withdrawn under protection of the left hand.

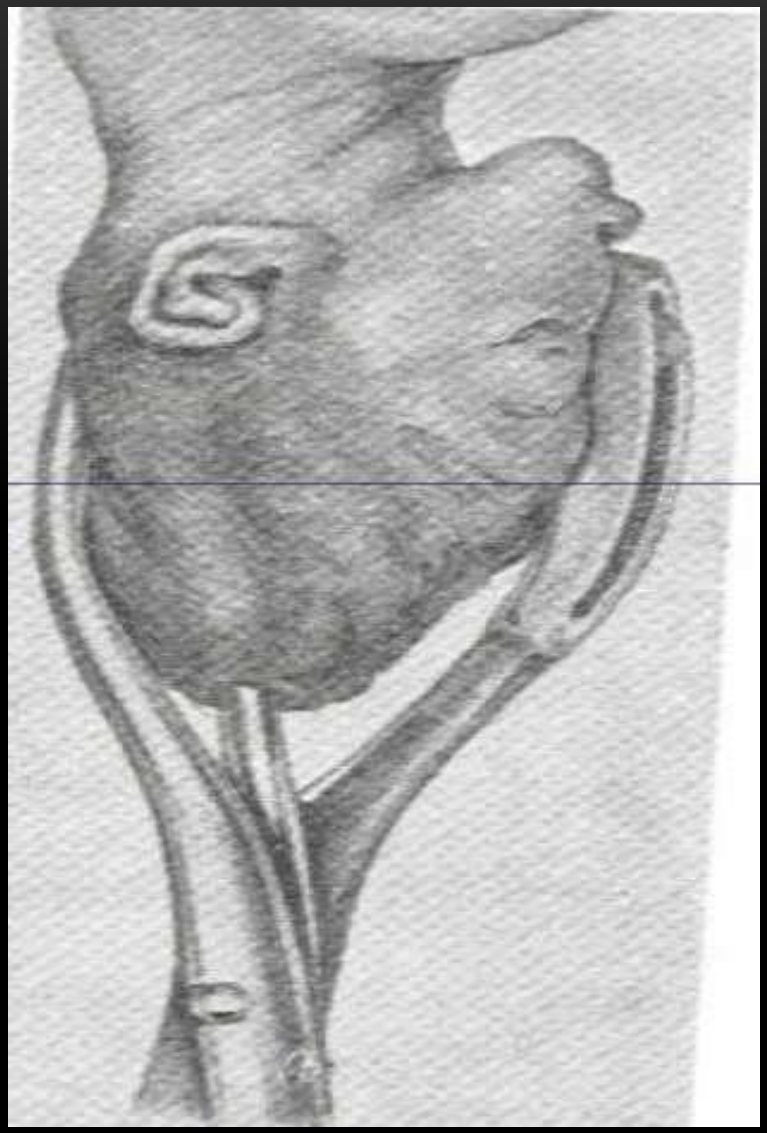
EXTRACTION- METHODS

- Left to natural forces
- Use forceps/ vulsellum
- Cephalotribe
- Cranioclasm

- Cephalotribe

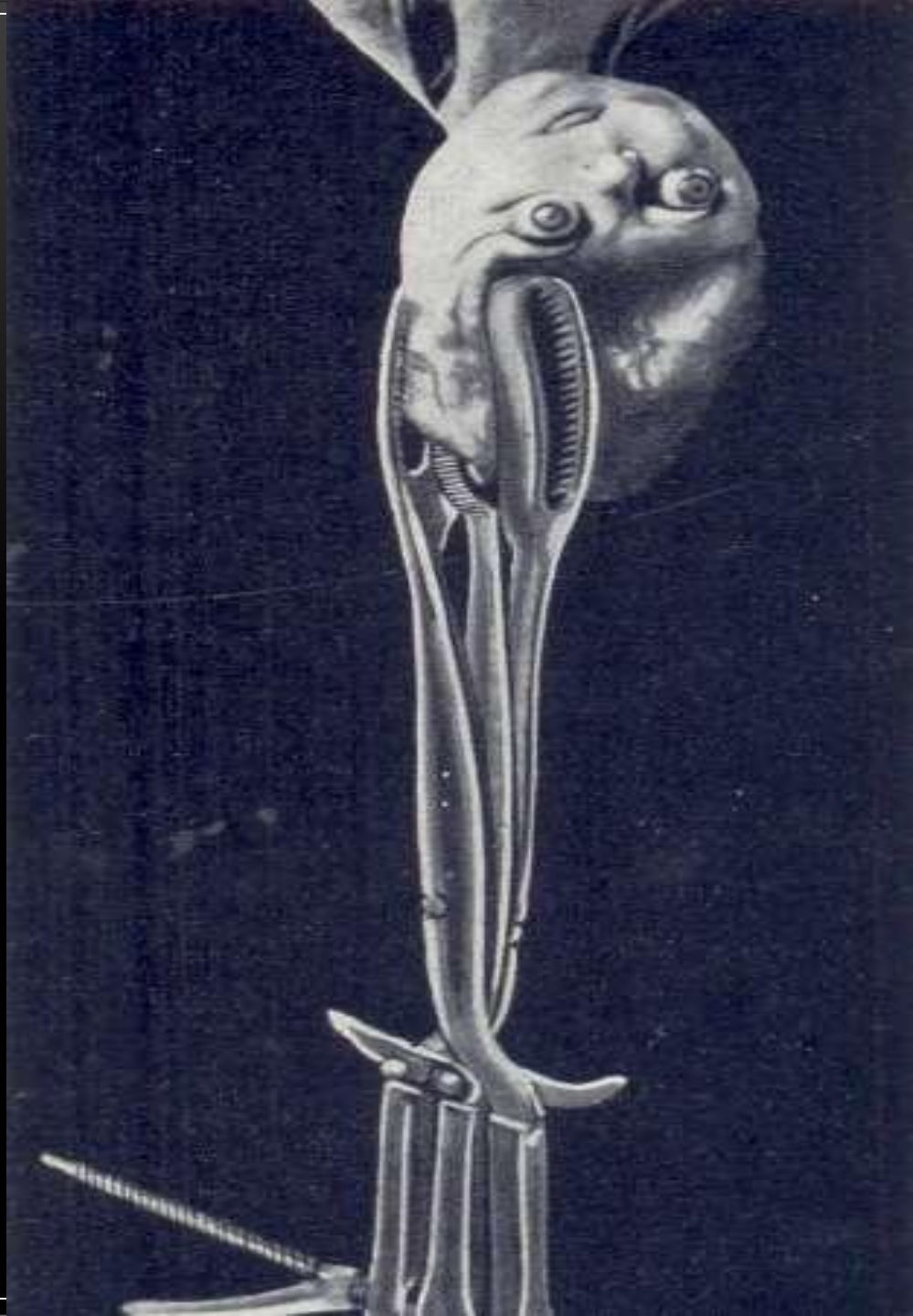


- Method of extraction



- *Showing the ideal grasp of the head with the three-bladed cephalotribe:*
- *one blade is well down over the face, and the other over the occiput*

- *Showing the effect of crushing only one half of the head in a case of posterior parietal presentation.*



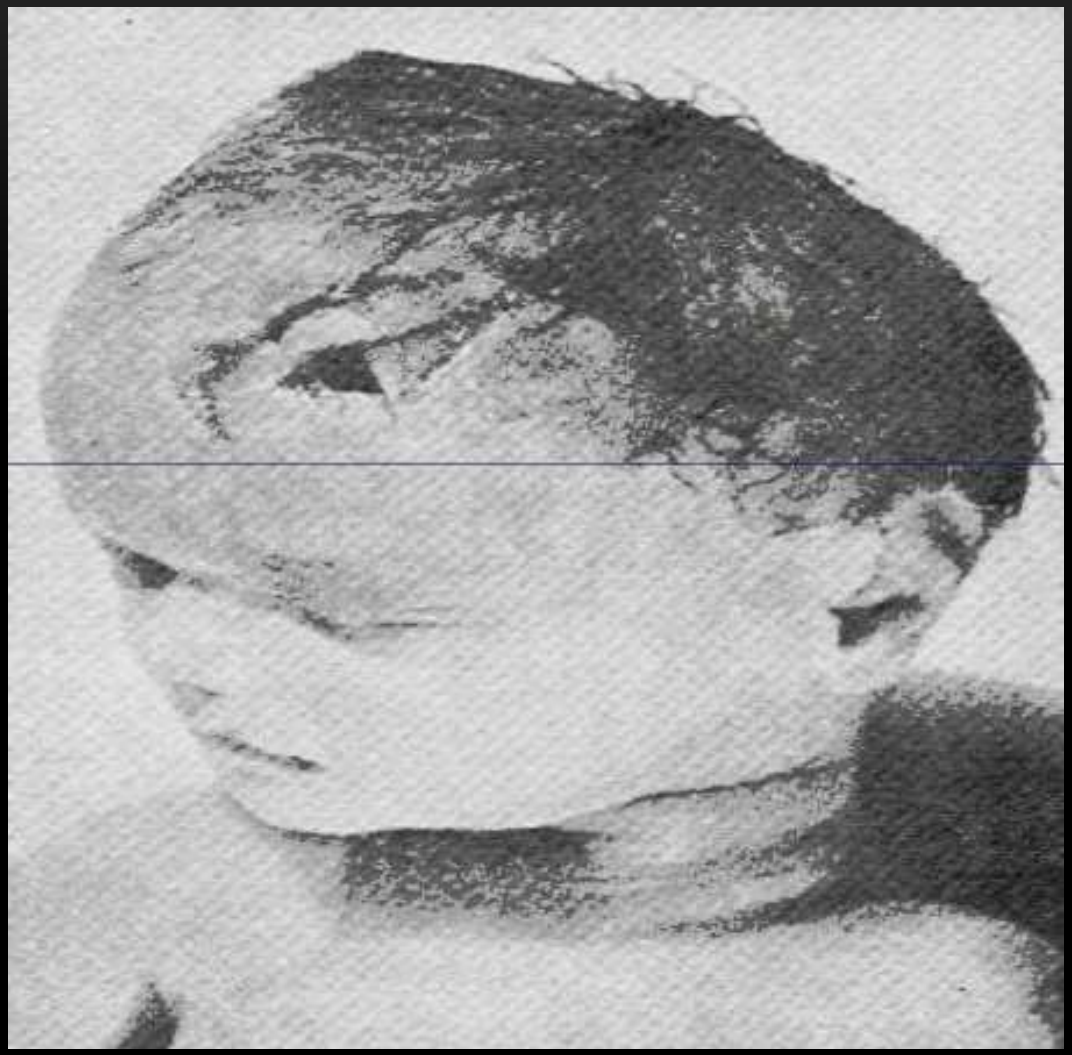
- **In the flat rachitic pelvis-the pelvic deformity most commonly encountered - the head engages** in the transverse diameter of the pelvis, with the anterior and posterior fontanelles about the same level.

- **In the simple cases where the sagittal suture is equidistant from the promontory and** symphysis, the hole in the skull can readily be made in the middle line, through or near the anterior fontanelle, and the blades of the cephalotribe can be applied over the face and occiput

- When, however, the sagittal suture is placed nearer the promontory or nearer the symphysis, and an anterior or a posterior" parietal presentation" exists,

- The opening in the head will come through the presenting parietal bone, and the blades of the cephalotribe will tend to grasp the head parallel to midline, but to one or other side of the middle line

Craniotomy in brow presentation



- **In cases where maternal pelvis is contracted in all diameters, the head becomes extremely flexed, and the most accessible area usually is – nearby** posterior fontanelle.

- Consequently, if the presenting part is perforated, the blade of the cephalotribe, which should reach over the face, cannot be placed over the face farther than the child's forehead naturally, therefore, when traction is made, the instrument tends to slip off the head.

- *The three-bladed cephalotribe is slipping off the head because the anterior blade has not been applied far enough down over the face. This results if the perforation is made in the region of the posterior fontanelle*

- After perforation the instrument should be pushed into the skull and the brain substance thoroughly broken up.

- This having been done, the cranium may be washed out with a double channelled uterine douche tube (Bozeman).

After coming of head

- The operation of perforation of the after-coming head is carried out as follows:
  - The arms of the child having been brought down, the assistant grasps the legs and directs traction upon them in the direction desired by the operator.
  - The operator carries the perforator, protected by the two fingers of the left hand, along the dorsal aspect of the trunk until he reaches the skull.

- He then pushes the instrument through the skull in the neighbourhood of the postero-lateral fontanelle .

- The perforator is pushed through the skull, and an opening made in the manner already described for perforation of the fore-coming head.

PERFORATING THE AFTER-COMING HEAD THROUGH THE POSTEROLATERAL FONTANELLE

COMPLICATIONS - DURING PERFORATION

INJURIES TO:

- Bladder And Urethra
- Vagina, cervix and Uterus
- Rectum And Intestines

DURING EXTRACTION

- Wrong tissue holding
- Injuries to soft tissues
- Wrong directions of pulling
- Spicules of bones

IDENTIFICATION OF COMPLICATIONS

- Fresh Bleeding
- Urine Dribbles
- Faecal Matter Flows

PREVENTION

- Catheterisation
- Willingness To Abandon
- Good Assistance
- Adequate Light Source

- Use Large Sims Speculum
- Incise (Nick) The Scalp And Perforate
- Guide And Protection Of Soft Tissues By Left Hand

TREATMENT

- Bladder & Urethral Injuries:
  - Don’t Abandon Procedure
  - Repair & Catheterize for 14 Days
  - Check in the next follow-up

- Vaginal, Cervical tears Repair
- Rupture Uterus-laparotomy
- Rectal, Intestinal injuries Repair
- It is important to rule out rupture of uterus before and after craniotomy

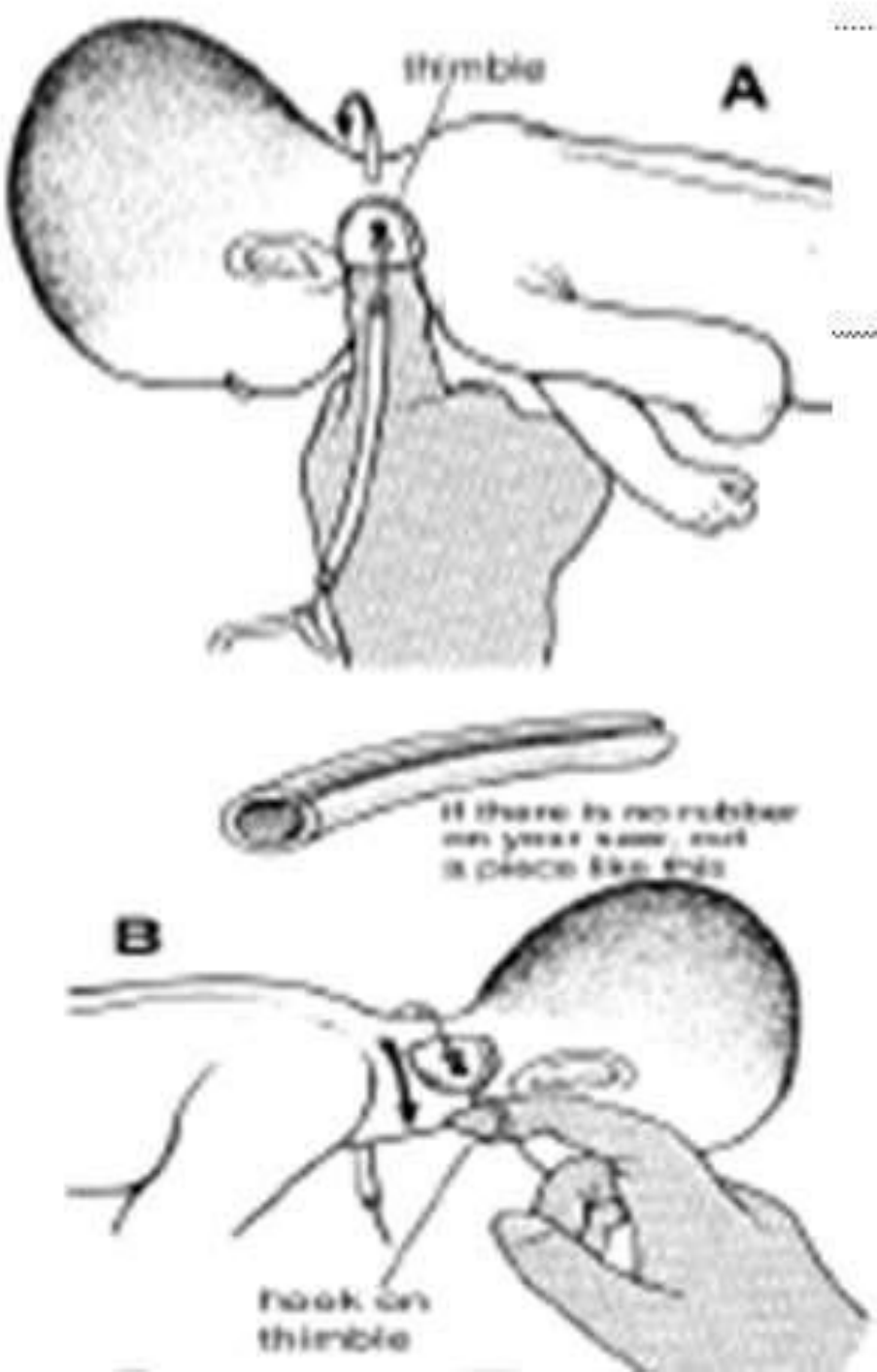
DECAPITATION

- Indications
  - Neglected shoulder with hand prolapse
  - Interlocked twins.

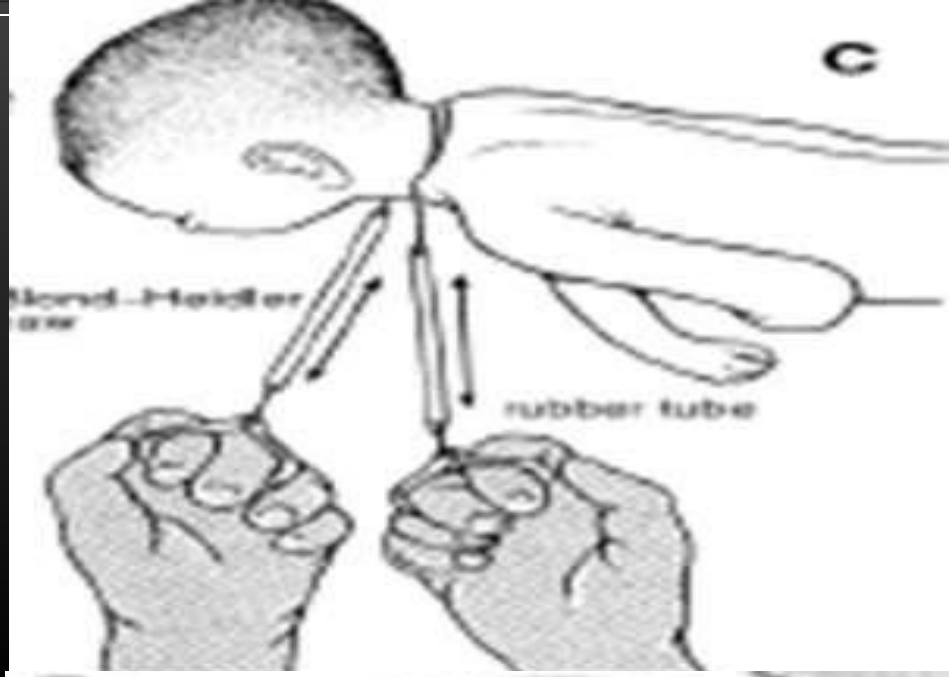
- Prerequisites:
  - Neck of the fetus should be accessible per vagina.
  - No evidence of impending rupture.
  - Cervix should be atleast 7 cm dilated

Technique

- The operator mounts the thimble on his thumb and attaches the wire to the slot in the thimble.
- Pulling gently to exert counter-tension on the prolapsed arm of the foetus, he introduces the whole hand into the vagina; the thumb is passed in front of the foetal neck and the fingers behind.



- The middle finger now feels for the metal loop that projects from the thimble and, having secured it, pulls the thimble with the attached wire off the thumb and round the foetal neck.
- The ends of the wire are now mounted on the handles and by a to and fro motion the neck is severed.



- This method of decapitation is safer and less barbarous than the use of decapitating hooks.
- After the head is completely severed, the trunk is removed by traction on the arm.
- There now remains the removal of the severed head, and this is easily accomplished manually by a finger hooked into the mouth and pulling on the jaw, or with forceps, unless the pelvis is deformed.

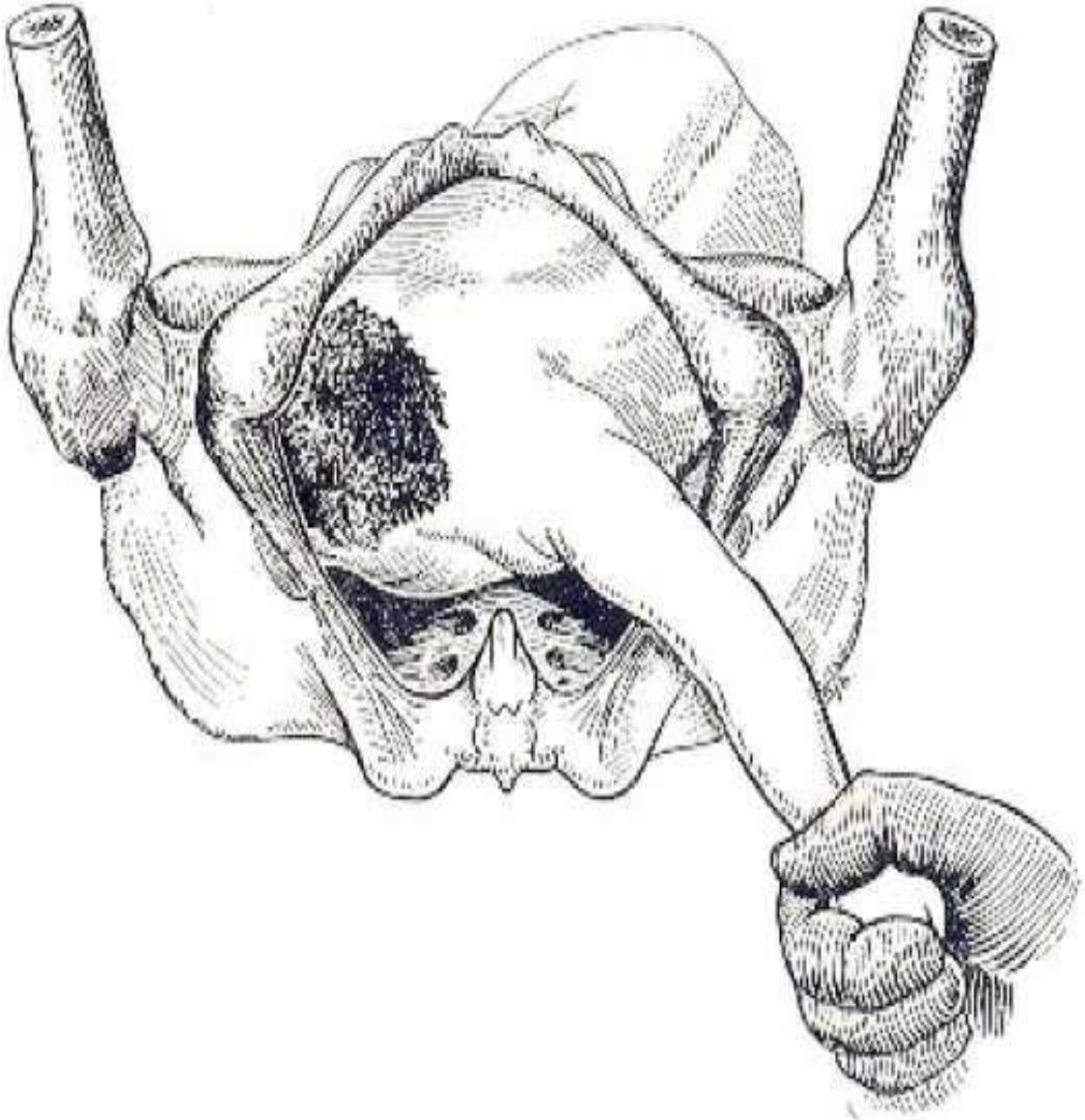


FIG. 28, I6.-EXTRACTION OF THE TRUNK BY TRACTION ON AN ARM.

Note that the line of cleavage is flush with the trunk.

- Should the pelvis be contracted, the head is steadied by suprapubic pressure, perforated, and then removed with the cranioclast, crotchet, etc.

- Care must be taken, in extracting the head, that the ragged neck does not injure the soft parts

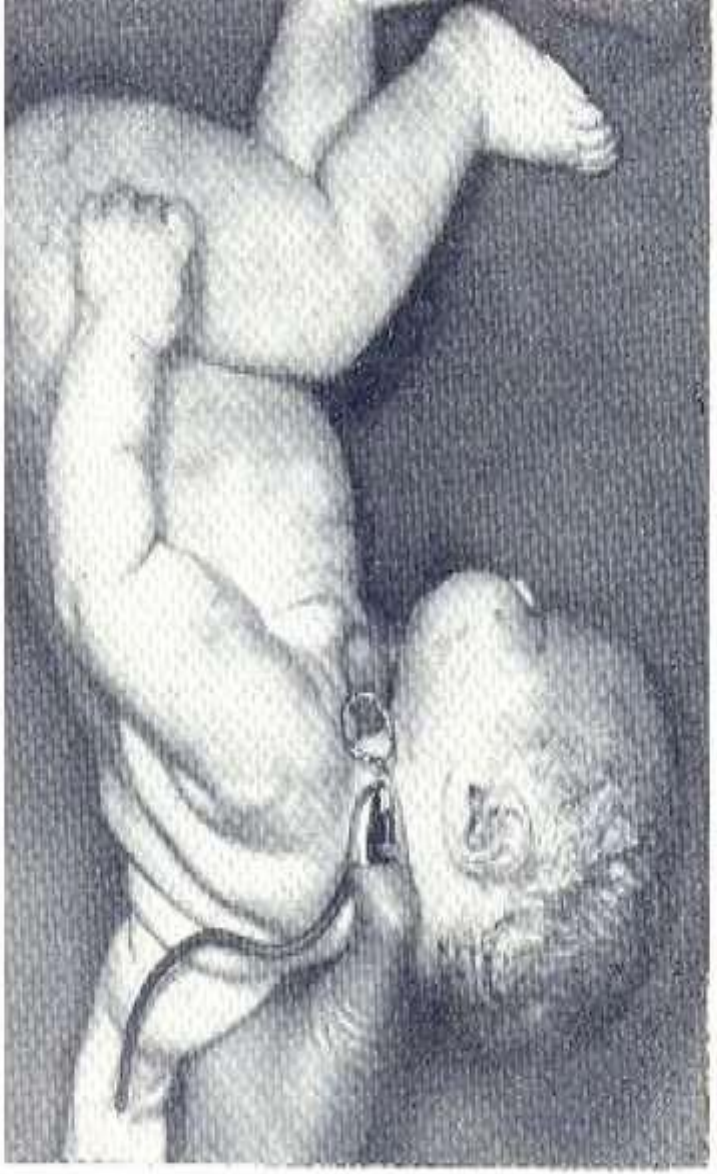


FIG. 28, I5.-METHOD OF PASSING THE DECAPITATING WIRE ROUND THE FmTAL NECK BY MEANS OF THE BLOND-HEIDLER THIMBLE (Fig. 28, 14).

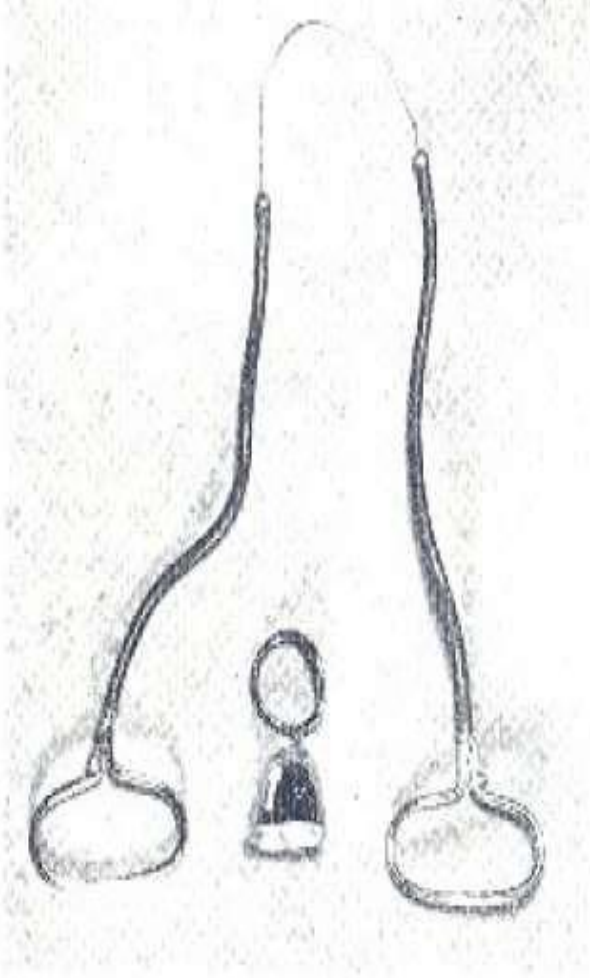


FIG. 28, I4.-THE BLOND-HEIDLER THIMBLE AND DECAPITATING WIRE.

The thimble enables the operator to pass the wire round the foetal neck as shown in Fig. 28,15. The wire is of roped brass (as used for picture hanging); the ends are protected with rubber tubing. The traction handles are detachable.

EVISCERATION

Indications

- Neglected shoulder presentation with dead fetus; Neck not easily assesible
- Fetal malformations such as fetal ascitis or monsters

EVISCERATION

- The operation of evisceration consists in the removal of the abdominal and thoracic contents, with the object of diminishing the bulk of the child, and so permitting it being extracted.

- Especially should care be exercised if the foetus is large or the cervix inadequately dilated.

- The operation is occasionally necessary in monsters, and where the abdomen or thorax of the child is distended with fluid or a tumour.

- The operation is performed by first making a large opening (with a perforator) into the abdomen or thorax; the viscera are then broken up and removed manually.

- During these manipulations, if the lie is transverse, the trunk of the child may be steadied by pulling down an arm; but if that is not possible (trunk presentation) vulsella: may be employed for this purpose.

CLEIDOTOMY

- The operation of cleidotomy, or division of the clavicles, has for its object the reducing of the bulk of the shoulder girdle.

- The clavicles are divided by a short-bladed knife or long, strong, straight scissors. Two fingers of the left hand are passed along the ventral aspect of the child, and under the protection of them the scissors is introduced and the clavicle divided.

- Considerable power is required to snip the hard bone.
- The only danger is injuring the soft parts of the mother
- Care must be taken to identify the position of the clavicles. It is difficult sometimes to be sure which is the ventral side of the foetus, as the head is rotated so easily. One can quite easily divide the spine of the scapula by mistake

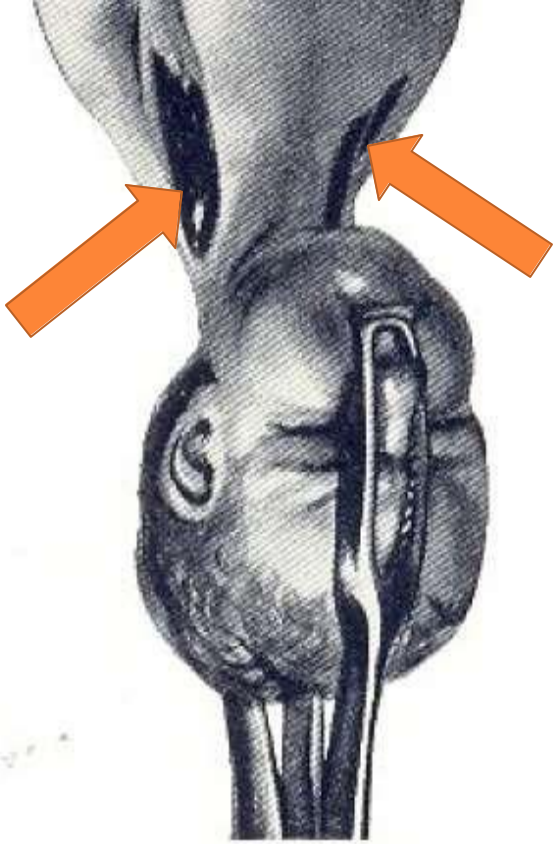


FIG. 28, I7.-SHOWING THE COLLAPSED SHOULDER GIRDLE AFTER CLEIDOTOMY.

The child was a very large one, and had. to be extracted with the three-bladed cephalotribe. Note the correct position of this instrument.

Clavicles were divided in this case

MORCELLATION

- Cutting the fetus into pieces is necessary on rare occasions before vaginal delivery can be accomplished

SPONDYLECTOMY

- Spondylectomy is transection of the spine of the delivered thorax.
- In breech presentation it may allow drainage of CSF
- It is done when the back is anterior and head and neck are out of reach.
- In cases of hydrocephalus when there is communication between the ventricles and spinal cord the fluid may be drained from brain in this way thus obviating the need for craniotomy.

Post delivery care

- Active management of third stage
- Oxytocin infusion contd for 6-8hours as the as the risk of atonic PPH following prolonged obstructed labour is high
- Careful inspection of genital tract for signs of trauma including uterine exploration to rule out rupture
- Bladder should be catheterised for 5-7days in cases where bladder distension was for prolonged time

- Broad spectrum antibiotics
- Thrombophophylaxis
- As much possible the infant must be restored anatomically with suturing
- **This along with careful placement of blankets should help reduce trauma to the parents when they view their new born dead infant**
- Psychological wellbeing of husband / wife and family members should be taken care
- Plans for subsequent pregnancy care

mother must not see

After any destructive operation, wrap up the baby immediately

Thank you