

शाल्य तंत्र

श्ल - तत्र, मनः शरीर बाध करणि शाल्यानि (Sushu).

- Process which produces discomfort to mind and Body is known as Shalya (शल्य).

तत्र शल्यं नाम विविध तृण काष्ठ पाषाण पांसु लोहलोह्य अस्थि कल चरुव पूषास्राव दुष्टत्रणांत मर्ज शल्योद्वेगार्थं यंत्र शस्त्र क्षार अग्नि प्रणिधान त्रण विनिश्चय्य यार्थं च ॥ (Su. Su. 1/9)

शल्य तंत्र महत्व -

- 1 - प्रामाणिकता - ①
- 2 - त्रण संशुद्ध - ②
- 3 - आशुक्रिया करण - ③
- 4 - यंत्र शस्त्र क्षार अग्नि - ④
- 5 - सर्व तन्त्र सामान्य - ⑤

मूल तंत्र

- 1 - शोषधेय - ①
- 2 - शो रक्त - ②
- 3 - शो सुत - ③
- 4 - पीष्कलावत - ④

- Teacher - Dinodas धनवन्तरी — ①
- सिद्धि - सुसुत सिद्धि — ②
- परम्परा - धनवन्तरी सिद्धि — ③
- Famous - as Father of surgery — ④

Reason to decline surgery in आयुर्वेद

- Lack of Anaesthesia
- Buddhism
- Foreign Invasion
- British rule
- concise explanation
- Government support lack
- Knowledge secrecy
- communication gap
- Lack of Antiseptic Procedures.

Surgery book

• Ross and Ronalds.

यंत्र (Blunt Instruments)

यंत्र - Total 86

- Depend on अकृति shape of yantra (यंत्र)

यंत्र types -

✓ <u>स्वस्तिका</u>	→ ①	S
✓ <u>संकेता</u>	→ ②	S
✓ <u>तला</u>	→ ③	T
✓ <u>नाडी</u>	→ ④	N
✓ <u>शलाका</u>	→ ⑤	S
✓ <u>अपयंत्र</u>	→ ⑥	U

Modern co-relation -

Auto सुहुद

✓ <u>स्वस्तिका</u>	→ <u>Cureiform</u>	—	24
✓ <u>संकेता</u>	— <u>Dissecting forceps</u>	—	02
✓ <u>तला</u>	— <u>Spatula</u>	—	02
✓ <u>नाडी</u>	— <u>Tubular Instrument</u>	—	20
✓ <u>शलाका</u>	— <u>Rod like</u>	—	28
✓ <u>अपयंत्र</u>	— <u>Accessory Instruments</u>	—	85

यंत्र लोच

- ✓ अति स्थूल
- अस्कार
- ✓ अति पिथ
- ✓ अति ह्रस्व
- अग्राहि
- वक्र
- विषम ग्राही
- मृदु कील
- मृदु मुख

- अतिस्थूल
- अति पिथ
- अति ह्रस्व
- अग्राहि / विषम ग्राही
- वक्र
- मृदु कील
- मृदु मुख

- ①
- ②
- ③
- ④
- ⑤
- ⑥
- ⑦
- ⑧

अस्कार

अग्राहि

अतिस्थूल
 अति पिथ
 अति ह्रस्व
 अग्राहि
 विषम ग्राही
 मृदु कील
 मृदु मुख

शीर्षक (Sharp Instruments)

Alto सुअल्टो - 20.

(आधारी)

- मुसलकार	Circular knife	- दाँदोंक	Tooth scaler
- काँच पात्र	Surgical saw	- लक्षणी	Sharp probe.
- वृद्धि पात्र	scalpel		(लेखनी)
- मख: शीर्षक	Nail pincer		
- मुद्रिका	Ring knife	o Parts of शीर्षक -	
- उच्चल पात्र	lamet	- मूल	
- अर्ध धार	edged knife	- ग्रीव	
- सुचि	suturing Needle	- धार	
- कुक्षपात्र	Bistoury	- वृद्धा	
- अलिमुख	Hawk scissor	- पुरुषवा	
- वशीरमुख	scissor	- अग्र (tip)	
- अन्तर मुख	curved bistoury		
- त्रिकूचक	Brush		
- कुधारिका	chisel		
- वृद्धिमुखी	canula		
- आरा	Awl		
- वेदसपात्रका	scalpel		
- बधीषा	sharp hook	(आधारी)	

शेखर कोटा - (Instrument box)

Aim - To preserve edges of cutting

Made up - काँसपात्र

— काँसोय त्रिक

— मृदु चर्म

— पुकल

Size: — 12 अंगुल = Long

— 9 अंगुल = wide

शेखर दोष -

— वक्र

— कुठ

— खण्ड

— खरखार

— अलिख्युल

— अल्प अल्प

— अलिपील

— अलिखर

शेखर गुण -

— सुग्रहाणि

— सुलोथानि

— सुधारानि

— सुकपाणि

— अकरालानि

— मुखग्रहे

अंगु शब्द

- approximately -

<u>काष्ठ</u>	<u>Bamboo</u>	
<u>खनिज</u>	<u>Crystal</u>	<u>खनिज and</u>
<u>काच</u>	<u>Glass</u>	<u>खनिज</u>
<u>कृष्ण विट</u>	<u>Ruby</u>	
<u>जलिका</u>	<u>Leech</u>	<u>खनिज</u>
<u>अग्नि</u>	<u>Fire</u>	<u>अग्नि</u>
<u>क्षार</u>	<u>Caustic</u>	<u>क्षार</u>
<u>नाखः</u>	<u>Nail</u>	<u>खनिज, खनिज</u>
<u>शीत</u>	<u>Leaves</u>	<u>विस्तारण</u>
<u>शैवालिका</u>	<u>Parijata</u>	<u>विस्तारण</u>
<u>शैवाल</u>	<u>leaf</u>	<u>विस्तारण</u>
<u>करीब</u>	<u>stem</u>	<u>उष्ण</u>
<u>बाल</u>	<u>Hairs</u>	<u>उष्ण</u>
<u>अंगुली</u>	<u>Fingers</u>	<u>उष्ण</u>

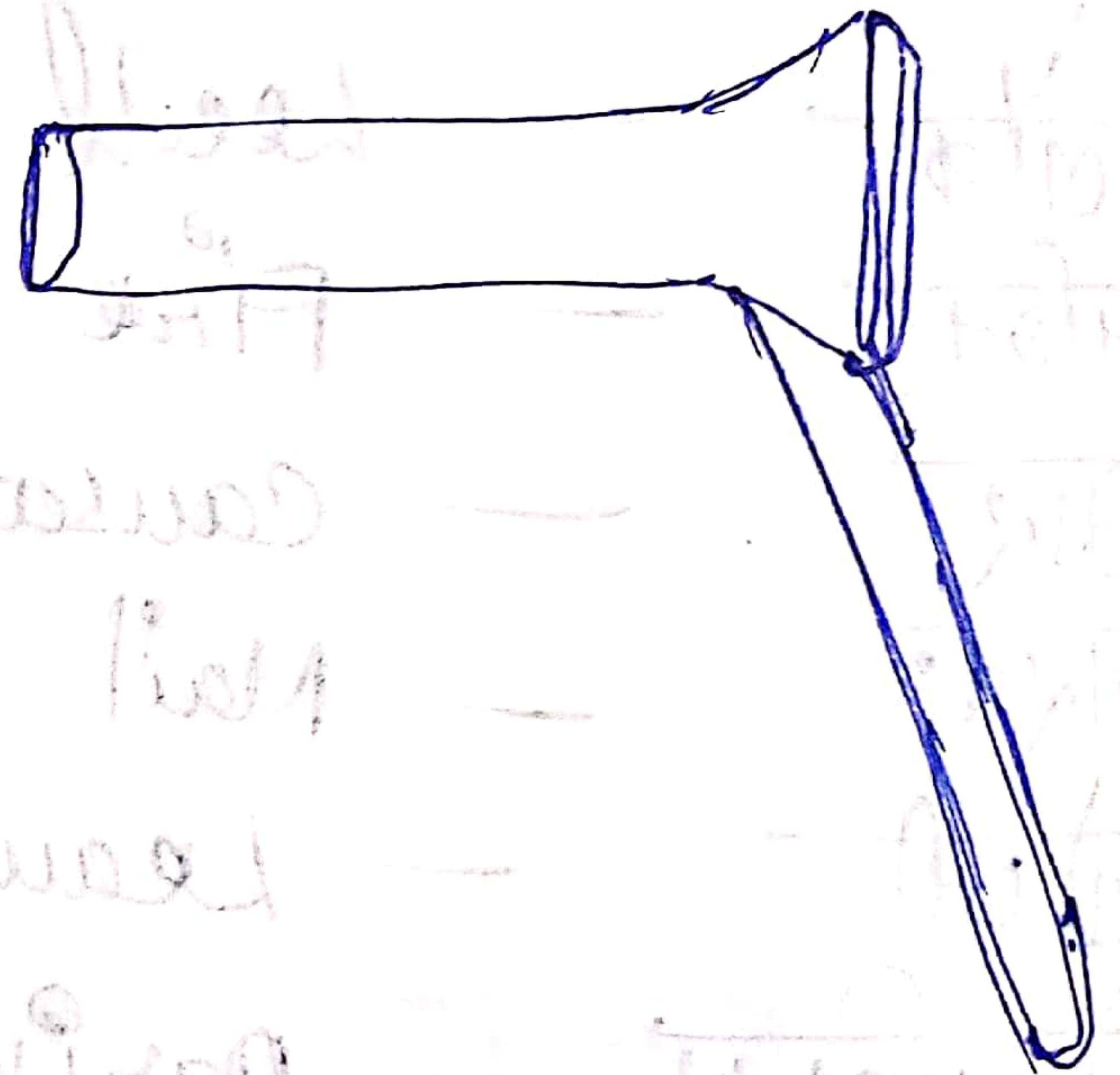
Proctoscope

- Hollow tubular instruments
- equipped with light or without light
- examine the Anal walls

- Haemorrhoids
- Polyps
- Tumors

- length - 5 to 7 cm

- Bore - 10 to 30 mm.



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Proctoscope
length
bore
weight
material

10/11/2017
10/11/2017
10/11/2017
10/11/2017
10/11/2017

Sterilization निर्जंतुकरण

- A process to Remove all viable forms of Microbial life.
- Including Bacterial Spores — ①
- To Achieve Sterility Assurance Level — ②.

Sterilization — Physical Methods are used — ①

Disinfection — Chemical Methods are used — ②.

Trees and plants used for disinfection.

① निम्ब — (Azadirachta Indica) — ①

— गुण्डुल — (Commiphora Mukul) — ②

— सरसप — (Brassica seeds) — ③

— Ela — (Cardamum) — ④.

• Methods of sterilization —

— Physical Agents — ①

— Chemical Agents — ②.

- 1) Physical Agents
- Sunlight — (1)
 - Drying — (2)
 - Dry heat — (3)
 - Moist heat — (4)
 - Radiation — (5)
 - Ultrasonic and sonic vibration — (6)

- 2) Chemical Agents
- Alcohol — (1)
 - Aldehyde — (2)
 - Phenols — (3)
 - Halogens — (4)
 - Gases — (5)

(1) Sunlight — consist of UV-Rays — (1)
 — Act as a Natural Method of sterilization — (2).

(2) Drying — Reduces the chances of Bacterial growth — (3)
 — unreliable Method — (2).

③ Dry Heat -
 - Flaming — ① ✓
 - Hot air oven — ② ✓

④ Moist Heat -
 - Pasteurization — ① ✓
 - Boiling — ② ✓
 - Steam — ③ ✓

⑤ Radiation -
 - Ionizing — ① ✓
 - Non-Ionizing — ② ✓

⑥ Ultrasonics - wavelength Beyonds.
 (vibrations of 20 to 20,000 cps)

II Chemical Agents -

① Alcohol - Ethanol and Isopropyl Alcohol are commonly used — ①
 - Effective Antiseptics — ②
 - Evaporates quickly — ③
 - less volatile in nature — ④

② Aldehyde - Formalin ——— ①
- Glutaraldehyde (Cidex) ——— ②

① Formaldehyde — Bacterial Agent — ①
- Sporicidal Agent — ②.

② Cidex - kills viruses, fungi and
neg. bacteria.

③ Phenols - Lysol ——— ①
- Cresol ——— ② ✓

- Toxic to human beings —

- generally used for walls, floors
and furnitures.

- used as a mouth wash.

④ Halogens: — Alcoholic Solutions:

- good bactericidal effect

eg. Betadine ✓

⑤ Gases - Ethylene oxide — ① - Penetrating gas.
- Formaldehyde gas — ② - Best for spores and
for fumigations.

Anaesthesia (संज्ञाघात) संज्ञाघात

anaesthesia is आयुर्वेद

Surgery was at its peak in sushruta (सुश्रुत) period.

The Anaesthesia is widely practiced during these days.

Anaesthesia Means - 'Loss of Sensation'

used during surgical operations
Prevents Pain and discomfort.

Anaesthesia in आयुर्वेद

- मधु पान — ①
- शान्तवैद्य — ②
- आपतैर पुरु धाम अहितास्थ — ③
- संज्ञा स्थापना — ④
- वेपन स्थापना — ⑤
- समोद चूर्ण — ⑥
- Reversal of unconscious. — ⑦
- Aceto ragshat. — ⑧
- गोप्य — ⑨
- मंत्र — ⑩
- कन्दर's. — ⑪

- मधुपान ①
- शान्तिवैद्य ②
- संज्ञा स्थापना ④
- वेपन स्थापना ⑤
- समोद चूर्ण ⑥
- मंत्र
- गोप्य
- कन्दर

① मधुपान -

मधुपान - Release pain of labour
and during extraction of foreign Body.

② शान्तिवैवा - Soothing and counselling the patient
with sweet words.

- Happy conversations
- fomentation

③ Aptardrudham grahitasya

- Holding a caressing by Relatives.

④ सिद्धा स्वामन -

group of Medicinal Plants
used to Restore the
consciousness.

- The Hingu - ①

- Turmeda - ②

- Jatula - ③

- Rohinya - ④

⑤ वेद स्वामन वृक्षा - used to subside the pain.

- अणु - ①

- अणु - ②

- अणु - ③

Anaesthesia

Anaesthesia is a Medical treatment that prevents Pt. from feeling Pain during surgery.

Types of Anaesthesia

- Local Anaesthesia — (1)
- Regional Anaesthesia — (2)
- General Anaesthesia — (3)
- Dissociative Anaesthesia — (4)

Stages of General Anaesthesia

- Stage-01 - Analgesia — (1)
- Stage-02 - Excitement — (2)
- Stage-03 - Surgical Anaesthesia — (3)
- Stage-04 - Medullary Paralysis — (4)

Local Anaesthesia — Specific location on the body — (1)

Regional Anaesthesia — Larger area of Body — (1)
— Blocking transmission of Nerve Impulse — (2)

③ General Anaesthesia - Inhibition of Sensory org
- Motor Nerve - ②
- Sympathetic Nerve -

④ Dissociative Anaesthesia - Inhibit transmission
Higher centres of
(Cerebral cortex)

• Local Anaesthesia (स्थानिक अनाesthesia) (एए01)

- It directly co-relates with the particular area.
- Temporarily stops the sense of pain in a particular area of body.

- Routes of LA -

- Topical - 5 min (Peak level) - ①

- Intramuscular - 5-10 min - ②

- Subcutaneous - 30-90 min - ③

- Drugs used -

- Procaine - Low potency - ①

- Lignocaine - Intermittent Potency - ②

- Bupivacaine High potency - ③

Complications -

- Needle Breakage — ①
- Pain on Injection — ②
- Burning Sensation — ③
- Paresthesia — ④
- Infection — ⑤
- Haematoma — ⑥
- Oedema — ⑦.

Types of Local Anaesthesia -

- Surface Anaesthesia — ①
- Infiltration Anaesthesia — ②
- Nerve Block — ③
 - ↳ Brachial Block — ①
 - ↳ Digital Block — ②
- Field Block — ④.

Spinal Anaesthesia -

- spinal tracts are blocked by injecting local anaesthetic drug in Sub-Arachnoid space.

- Drugs used in SA -
- Inj - lidocaine — ①
 - Inj - Prilocaine — ②
 - Inj - Bupivacaine — ③

o Materials Required

- Puncture Needle ————— ①
- Ice and ice disposal syringes ————— ②
- 23/24 Injertable Needle ————— ③
- Towel ————— ④
- Artery forceps ————— ⑤
- Gloves and Anaesthetic drugs ————— ⑥

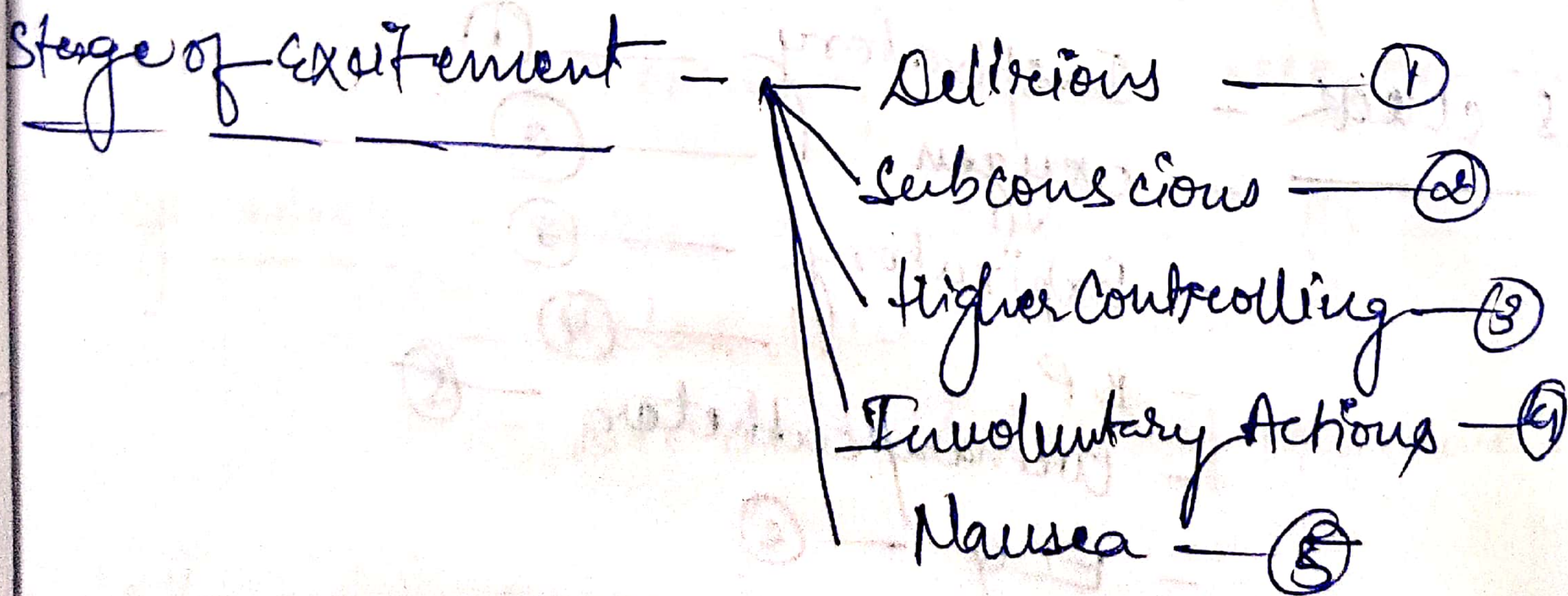
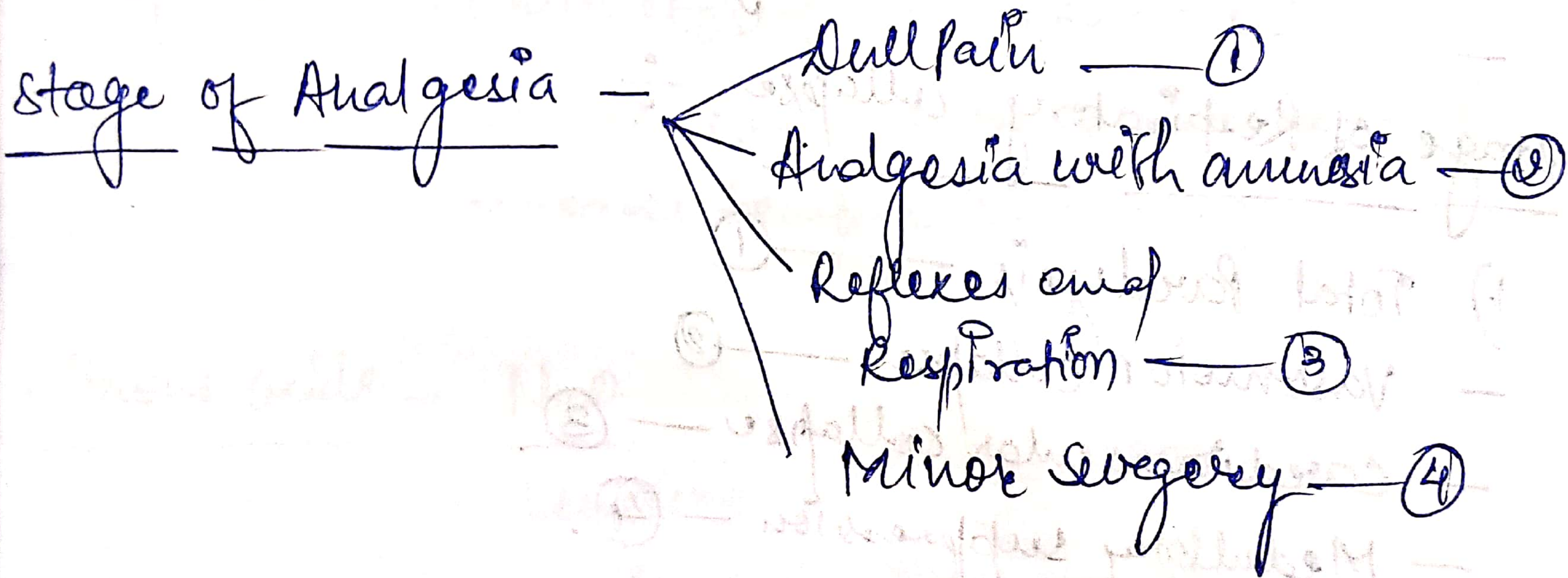
② General Anaesthesia

- It is Medically Induced coma and loss of Protective Reflex.

- Purpose — Analgesia ————— ①
- Amnesia ————— ②
- Immobility ————— ③
- Unconsciousness ————— ④
- Skeletal (Muscles Relaxation) ————— ⑤

Stages of GA -

- 1) Stage of Analgesia — ①
- Stage of Excitement — ②
- Stage of Surgical — ③
- Stage of Respiratory collapse — ④



Stage of Surgical Anaesthesia

- Feels No Pain — ①
- Muscles Relax — ②
- Vomiting Stops — ③
- Eye Movements — ④
- Slow and deep Breathing — ⑤

• Stage of Respiratory collapse ∴

- 1) Total Paralysis — ①
- Vasomotor collapse — ②
- Cardiovascular collapse — ③
- Medullary suppression — ④

- ### • Vital's check
- Inspiratory — ①
 - Oxygen — ②
 - Expiratory — ③
 - B.P. — ④
 - Urinary catheter — ⑤
 - ECG — ⑥

Common used drugs.

Chloroform — ①

Nitrous oxide — ②

Ethyl ether — ③

Halothane — ④

Ketamine — ⑤

Chloroform - 1-5 min of loss of sensation — ①

- Increase Respiratory secretions — ②

- Decreases temperature — ③

Nitrous oxide - N₂O

- Laughing gas. — ①

- Quick Induction — ②

- colour of Body - Black Body. — ③

Ethyl ether - Killed organisms. — ①

- Relax Muscles. — ②

- Decreases Intestinal Movements — ③

Halothane - Dilatation — ①

- Sensitive — ②

- Decrease BP and Pulse — ③.

Ketamine

- known as dissociative — ①
- useful in Burn Dressing — ②
- elevates heart rate — ③
- dangerous for IHD Pt — ④.

- ① — increases heart rate
- ② — increases respiratory depression
- ③ — increases temperature

- ① —
- ② —
- ③ —

- ① —
- ② —
- ③ —

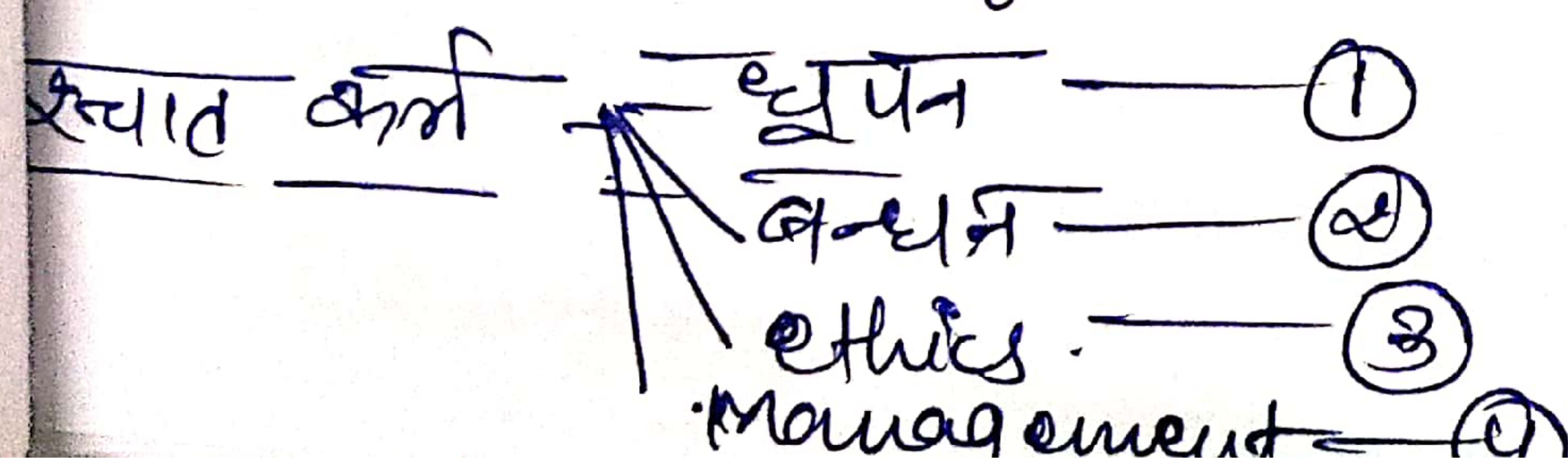
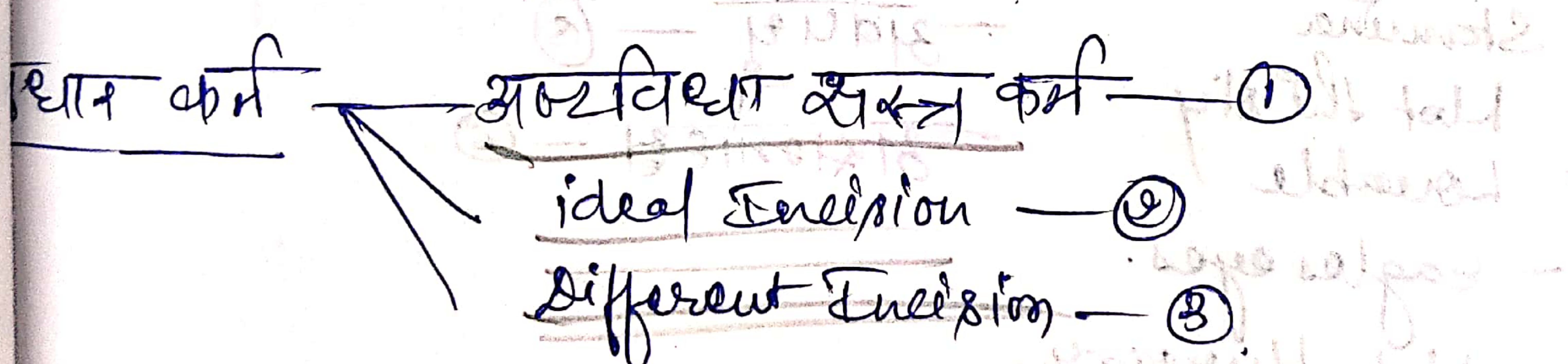
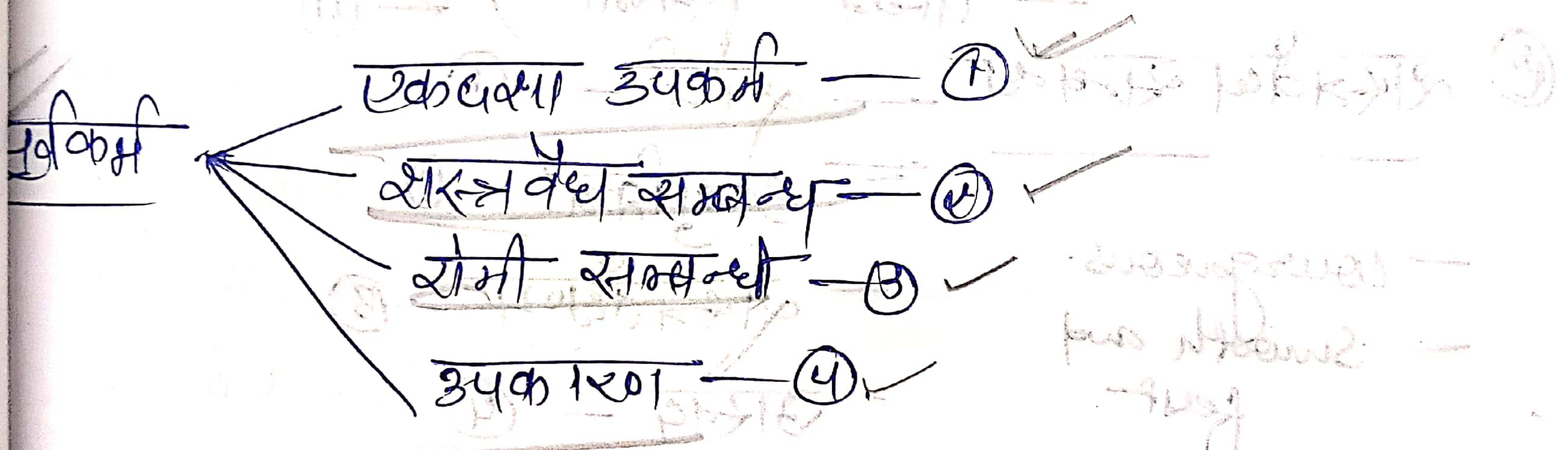
- ① —
- ② —
- ③ —

त्रिविधा कर्म (अभ्युपहारणीय अर्थान्)

त्रिविधा कर्म means preparation of Pt. along with collecting all the Required materials during any surgical procedures.

Classifications -

- पूर्वकर्म — ① (Pre-operative)
- प्रथम कर्म — ② (operative)
- पश्चाद कर्म — ③ (Post-operative)



पूर्वकर्म - ① उपवास उपकर्म -

- पाचन - उपवास (fasting) — ①
- परिषेक - अलेप (ointment) — ②
- उपवास - परिषेक (Enhillahim) — ③
- अलेप - अभ्यङ्ग (massage) — ④
- अभ्यङ्ग - स्नान (snan) — ⑤
- वमन - अनाह (poultice) — ⑥
- विरचन - स्नेह (oleation) — ⑦
- विस्त्रावण - वमन (vomiting) — ⑧
- विस्त्रावण - विरचन (purgation) — ⑨
- विस्त्रावण - विस्त्रावण (Blood letting) — ⑩
- विस्त्रावण - पाचन (अग्नि) — ⑪

A = 6
P = 20
S = 20
V = 20
U = 20

② शिरःशूलसम्बन्ध

- Couragous.
- Smooth and fast
- Stamina
- Not thirsty
- Loveable
- Eagles eyes.
- Not Hungry

- शूल — ①
- आशुक्रिया — ②
- शिरःशूलसम्बन्ध — ③
- अस्वप — ④
- अपपद्यु — ⑤
- शिरःशूलसम्बन्ध — ⑥

समीक्षा-सूची -

- Consent — ①
- Absolute Indication — ②
- Anaesthesia — ③
- Food Management — ④

निर्देशिका II

निर्देशिका नहीं है (1)

2/2 नमूने of 0/A

उपकरण-सूची

परिचारक

- यंत्र — ①
- शस्त्र — ②
- क्षाल — ③
- आग्नेय — ④
- जलौक — ⑤
- अलखु — ⑥
- लेप — ⑦
- कलक — ⑧
- तेल — ⑨
- धूल — ⑩

- should be Polite — ①
- रिश्ता — ②
- बलवत् — ③

निर्देशिका नहीं है (1)

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निर्देशिका नहीं है (1)

II प्रधान कर्म -

(1) अष्ट विधा शस्त्र कर्म -

<u>A/c to सुत्र 5/8 -</u>	<u>वेपथु</u>	<u>1</u>
	<u>भौषण</u>	<u>2</u>
	<u>लेखन</u>	<u>3</u>
	<u>व्याधन</u>	<u>4</u>
	<u>सीक्ण</u>	<u>5</u>
	<u>पेषण</u>	<u>6</u>
	<u>आधरण</u>	<u>7</u>
	<u>विस्त्रावण</u>	<u>8</u>

C
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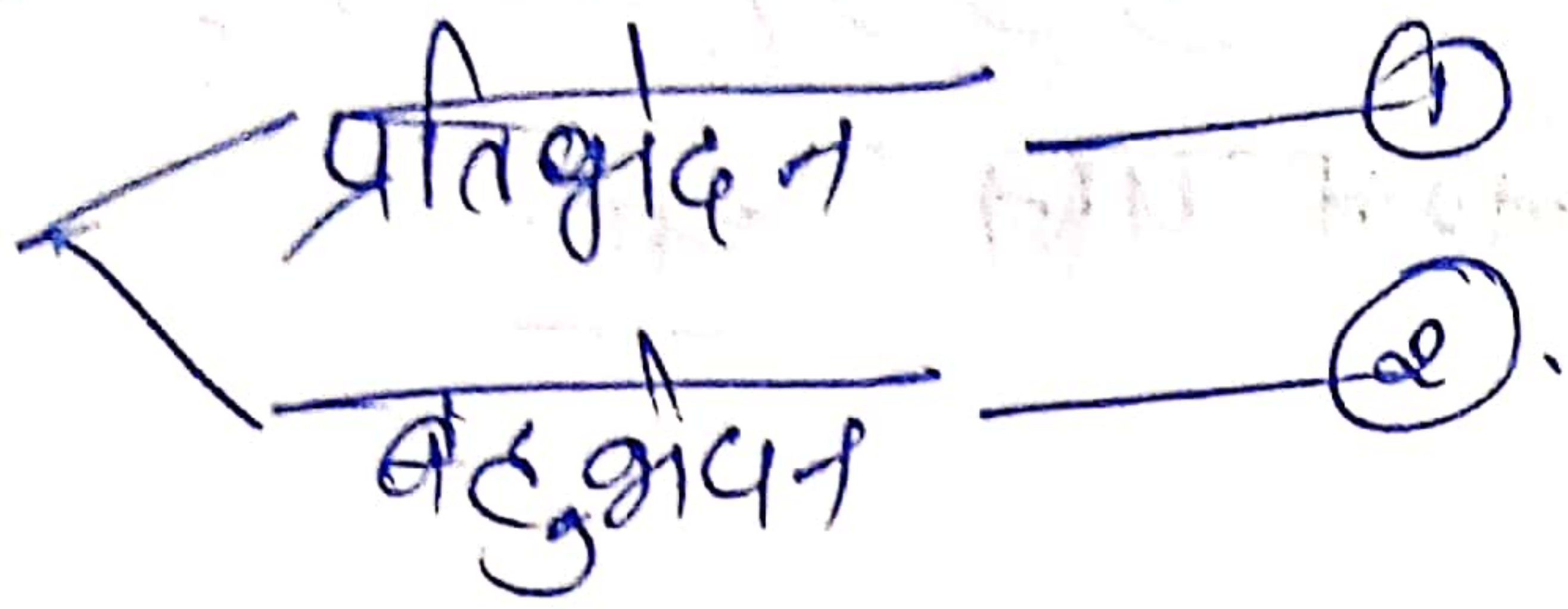
2) ideal incision.

- Qualities of good incisions are :-

- आयता
- विशाल ✓
- समः
- सुविशक्ता ✓
- निराश्रय

- knowledge of आग and पक्वा कक्षा -

Different incisions.



अतः If one incision is not enough to clear the wound completely

अतः - called as Multiple Incision.

- oblique Incision (त्रिशक) — ①
- circular Incision (चक्र आकृती) — ②
- semicircular Incision (अर्धचक्र आकृती) — ③.

पश्चात्कर्मा

- It should be reassured.
- Pressure should be applied all around fingers
- irrigated by कर्षा
- wound should be packed by gauze.
- Meddinal Paste should be Applied.
- fumigated by रक्षाधन दूध.
- Reeking गैस.

- लेपन - Fumigation should be carried out using drugs like जुजूजु, अरक, दाल, ससु, मिठक पात्र etc.

- दरदर - Dressing / Bandaging
- Should be removed on 3rd day and apply another Bandage just before after washing by दुध

- एथर - Surgeons should take remedial measures quickly
eg - Emergency laparoscopy

- Management - Relieved through warm मिठक mixed with अरक

Operative Procedures

Divided into 03 parts

- Pre-operative Preparation. — (1)
- Elective Operation. — (2)
- Post-operative care — (3)

Pre-operative Preparation

- Diet — (1)
- Blood tests — (2)
- fluid therapy — (3)
- Medications — (4)
- Nasogastric Aspiration. — (5)
- Antibiotics — (6)
- Shaving and Preparation — (7)
- Catheterisation (if necessary) — (8)

Physiotherapy

- Deep breathing exercise — (1)
- Tincture benzoin inhalation — (2)
- Change of position — (3)
- Free movement of limbs is allowed — (4)

II Elective operation

- Proposed operation and Anaesthesia — ①
- Written consent for Surgery and Anaesthesia — ②
- Shaving and Preparation of Local Part — ③
- Oral Medications — ④
- Blood tests — ⑤
- Nasogastric tube — ⑥
- Mouth care — ⑦
- Pre medication — ⑧

III Post-operative care

1. Name of the operation performed
- Type of Anaesthesia
 - vital sign
 - Daily Recording of fluid Intake
 - Medications
 - Diet
 - vomiting

अष्ट विधा शस्त्रकर्म

अष्ट विधा शस्त्रकर्म is directly co-relates with surgical technique and it's still relevant to modern concept.

संदर्भ - सुश्रुत आचार्य / अशुलाकृत

विभाषा - शस्त्रस्थ कर्म शस्त्रकर्म (अशुलाकृत)

The procedure performed by using शस्त्र are called as शस्त्र कर्म.

शस्त्र कर्म are follows :-

- | | | | | |
|--------------------|---|---|---|------------|
| 1) <u>छेदन</u> | — | ① | C | Excision |
| 2) <u>अच्छेदन</u> | — | ② | B | Incision |
| 3) <u>लेखन</u> | — | ③ | L | Scraping |
| 4) <u>प्राघ्न</u> | — | ④ | V | Puncturing |
| 5) <u>प्रेषण</u> | — | ⑤ | E | Probing |
| 6) <u>विश्रावण</u> | — | ⑥ | V | Drainage |
| 7) <u>आहरण</u> | — | ⑦ | A | Extracting |
| 8) <u>सीवन</u> | — | ⑧ | S | Suturing |

II शास्त्र used -

① द्वेष्टन → मण्डलगात्र, खारपात्र
वृद्धिपात्र, नखशास्त्र
अन्तरमुख

② भेषन → वृद्धिपात्र, नखशास्त्र
अर्धधार, अन्तरमुख

③ लेखन - मण्डलगात्र, खारपात्र
वृद्धिपात्र, नखशास्त्र

④ व्याधन - वृद्धिमुख, आरा, ऐषणी
शुची, कुठारिका

⑤ ऐषणा - ऐषणी

⑥ विक्रावण - शुची, अतिमुख,
अन्तरमुख, कुशपात्र

⑦ आश्रण - दन्तशिकु, बदिष

⑧ सीवन - शुची

छेदन - whole of the limb is cut-off from the parent.

- अर्बुद - ①
- अर्श - ②
- विदोकाण्ड - ③
- अमन्द - ④
- अस्थि मांसगत रोग - ⑤.

भेदन - It is made to achieve effective

drainage

- विस्फ
- अर्श
- प्रमेह पिडक
- स्वयंशोम
- शोफ
- तुण्डिकरी
- बहिर्गत अश्मरी (vesical calculus).

③ लेपन - This carried out to Remove
agrowth of an ulcer.

- ✓ रोहिणी
- ✓ शूल
- ✓ अक्षी
- ✓ मज्जल
- ✓ मांस कण्ड

• अक्षी and
मांस कण्ड
comes under
Both लेपन and
लेखन.

④ व्याधन - मुत्रवृद्धि (Hydrocele)
- दकोपर (Ascitis)

- ✓ घक्वा रक्तज गुल्म
 - ✓ विसर्प
- (Alcto-चरक)

⑤ • आधरणा - शीकरा — ①

✓ पन्तमल — ②

✓ कर्णमल — ③

✓ अशकरी — ④

✓ शीलय — ⑤

✓ मूत्रम मुठगर्भ — ⑥. (Obstructed labor)

⑥ ऐषण - माडी (Sinus).

- सैशाब्बाक्ष

- उन्मागि वण

⑦ विश्रावण - Abscess.

- कुष्ठ

- शाफ

- अबुफ

- ग्रन्थी

- उपलेश

- स्त्वय रोग

- शुभीर

⑧ शैवण शीवण

- मैव व्याधि

- सुलिखिता

- संधो वृणा

- बलसन्धि

① कौटिल्य

② कौटिल्य

③ कौटिल्य

④ कौटिल्य

⑤ कौटिल्य

⑥ कौटिल्य

⑦ कौटिल्य

⑧ कौटिल्य

⑨ कौटिल्य

⑩ कौटिल्य

⑪ कौटिल्य

⑫ कौटिल्य

⑬ कौटिल्य

⑭ कौटिल्य

⑮ कौटिल्य

⑯ कौटिल्य

⑰ कौटिल्य

Materials of Sizing

— सुकुम सूत्र — ①

— रंभत कंस्थ — ②

— स्नायु — ③

— बाल — ④

— मुक्ती — ⑤

— मुड्डी — ⑥

Sizing प्रकार

V	— <u>वैलिका</u> — (Continuous)
G	— <u>गोफाजिका</u> — (Blanket)
T	— <u>तन्नु सूकनी</u> — (Subcuticular)
R	— <u>समः ग्रन्थी</u> — (Interrupted)

सुची प्रकार

D	— <u>वृष्ठा सुची</u> — ①
T	— <u>त्र्यसत्रा सुची</u> — ②
V	— <u>धनुर्वक्रा सुची</u> — ③

शिक्षक कर्म जापत

— <u>डीन छेपत</u> —
— <u>अतिरिक्त छेपत</u> —
— <u>त्रिथक छेपत</u> —
— <u>आजमात</u> — ④

SUTURE MATERIAL.

Suture - Any thread or strand which
Brings in to opposition two surfaces

Ligature - Any thread or strand which obliterates
the lumen of ductular structures.

Ideal Suture Material

- ✓ Freely available — ①
- ✓ Should Not Promote Bacterial growth — ②
- ✓ Uniform diameter — ③
- ✓ Non, allergic — ④
- ✓ No carcinogenic — ⑤

C
I
M
S

Joining of two skin
surface through a
Medicated thread is
Known as Suturing

- varieties -
- Natural and Synthetic — ①
 - Absorbable and Non-Absorbable — ②

Types of Suturing -

- ① - Continuous — ①
- ② - Interrupted — ②
- ③ - Mattress — ③
- ④ - Sub-cuticular — ④

• Types of Needles

- ~~According~~ According to shape — (1)


- Apex to cutting edge — (2)

- Apex to eye — (3)

- Apex to tip — (4)

- Miscellaneous — (5)

(1) Continuous — — used to Anastomosis of gut — (1)
 — external oblique — (2)

 — Not used in presence of Infection — (3)

(2) Interrupted — on Interrupted distance — (1)

— Takes long times to put — (2)

— Individual Removal
 in case of Infection — (3)



(3) Mattress — Needle starts from one side — (1)

— vertical distance travel to the other side — (2)

Return to the same side by
 different punctures — (3)



— Reduces the subcutaneous
 dead space — (4)

(4) Sub-cuticular — Attractive, No scar mark — (1)

— Reduce irritation — (2)

— Difficult to put — (3)

— Separately closed — (4)

Needles :-

Sharp pointed structures used to puncture tissue for guiding the thread to suture area :-

composition :-

- 1) Stainless steel alloy — (1)
- 2) Resistant — (2)
- 3) Exposed to oxygen in air — (3)
- 4) Protective chromium oxide — (4)

Types :-

- 1) According to shape — (1)
- 2) According to cutting edge — (2)
- 3) According to eye — (3)
- 4) According to tip — (4)

According to shape —
Straight Needle — (1)
Curved Needle — (2)

According to cutting edge —
Round body — (1)
Cutting body — (2)

③ According to eye -

- Traumatic — ①
- Atraumatic — ②

④ According to tip -

- Triangular tip
- Round tipped
- Blunt point.

Needle point

Needle Body

Types of knots -

- Granny knot — ①
- Reef knot — ②
- Surgeons knot — ③

योग्या (Experimental Surgery)

योग्या deals with the Ayurvedic concept of experimental surgery.

परिभाषा -

योग्या सम्बन्धक कर्मभ्याम्

आचार्य सुश्रुत introduced the training of a surgeon

performing Basic Surgical
Para Surgical Procedures.

Training protocol was named as योग्या
called as योग्या सुत्र

Types of योग्या

- | | |
|---------------------|----------------------------|
| घेपन योग्या — (1) | विस्त्रावण योग्या — (8) |
| भोपन योग्या — (2) | बन्धन योग्या — (9) |
| लेखन योग्या — (3) | A अग्निक्षार योग्या — (10) |
| वधधन योग्या — (4) | K रुजस्त्रिधि बन्धन — (11) |
| एषण योग्या — (5) | P पीडन योग्या — (12) |
| ओहरण योग्या — (6) | |
| श्लीवन योग्या — (7) | |

① लेपन योग्य - To know the Application of force
- different types of tissues.
- different surfaces.

eg - Alabu - ①
Kushmanda - ②

② श्लेषन योग्य - About the tension of the wall.
eg - water filled leather Bag

③ लेखन योग्य - Removal of superficial thin tissue.

④ वेधन योग्य - To penetrate into vessels.
Model - vessels of dead Animals,
Lotus stem.

⑤ प्रेषण योग्य - Identify the Nature of foreign Body
- in size, in Number and fixity.
eg - Bamboo stem,
dried Alabu

आहरण योग्य - Behind the object and pull out
- Force and to Remove the foreign
Body.

Model - Pulp of Bilva fruit

सीवन योग्य - Suturing of layers of Varying
thickness.

eg - Thick cloth or leather

विस्त्रावण योग्य - Incision Not to go beyond skin

Model - Surface of shalmali
coated with Beewax.

बन्धन योग्य - 14 types of Bandaging
to heal the wounds

अग्निक्षार योग्य - Different types of अग्नि कर्म
used to heal.

अपविसीध बन्धन - Reconstruction of tissue.

पिडन योग्य - Proper Insertion of अस्ति नेत्र into the
opening.

Label - Model
- Below the object and below
- force and to know the force

Model - Model

Label - Model
- Model
- Model

eg - Model or Model

Label - Model
- Model

Label - Model

Label - Model

Label - Model

Label - Model

Label - Model

विश्वविद्यालय

Entry into Medical Profession.

विश्वविद्यालय literally means Highway
entry in Medical Profession.

Qualities of Doctors

1. अधिगत तन्त्रे
2. उपासित तन्त्रे
3. दृष्ट कर्मणि
4. कृतप्रयोगेन
5. शौचानुशातने
6. नीचमख्य रोमणा
7. शुचि
8. शुकल वस्त्रे
9. छत्रवता
10. सुमनसा
11. कल्याण विवाहात्
12. वन्द्य भूत
13. सुसख्य

शुकल वस्त्र

शुचि

उपासित तन्त्रे

दृष्ट कर्मणि

छत्रवता

शौचानुशात

विजय शान

कल्याण विवाहात्

Method of clinical examination

- सर्वविधा परिक्षा — ①
- त्रिविधा परिक्षा — ②
- Behaviour towards Ladies

- Good doctor should avoid sitting — ①
- Steeping and cutting jokes — ②
with Ladies
- should only food — ③
If offered by others.

मर्म

In आयुर्वेद मर्म is considered as 'जीवस्थान' vital spot and delicate structures of Body.

परिभाषा -

मर्मोण मांस सिरा स्नायु अस्थि संधि स्तम्भपाताः

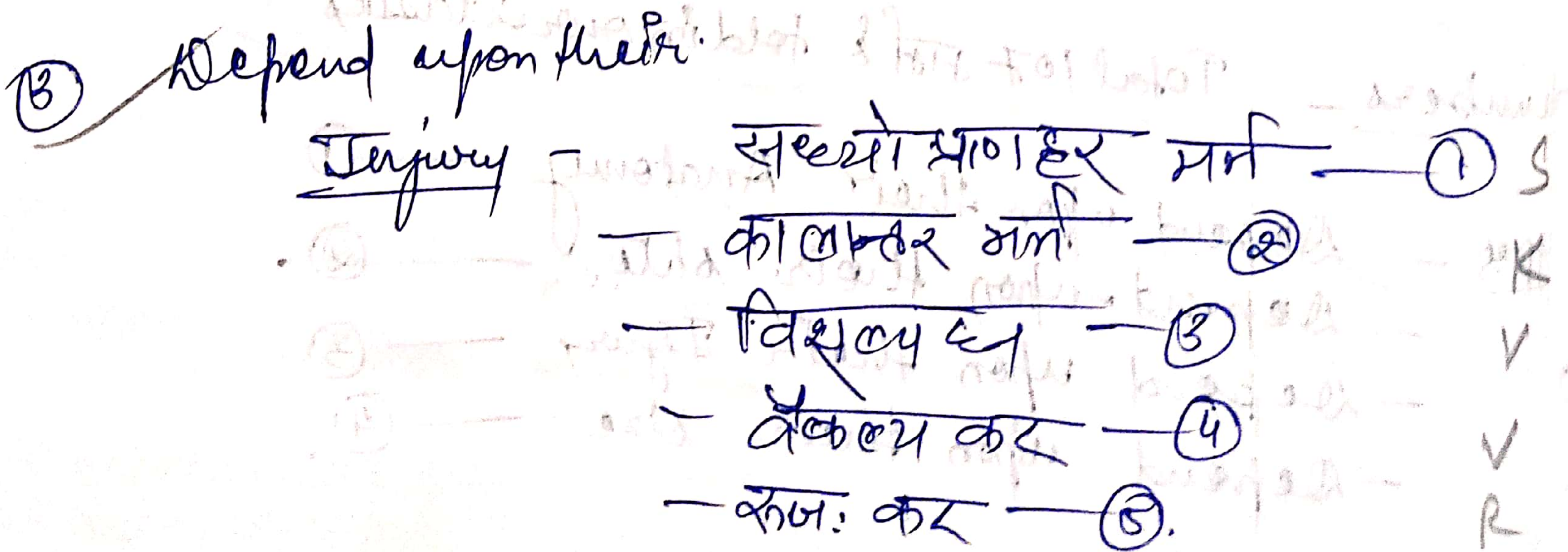
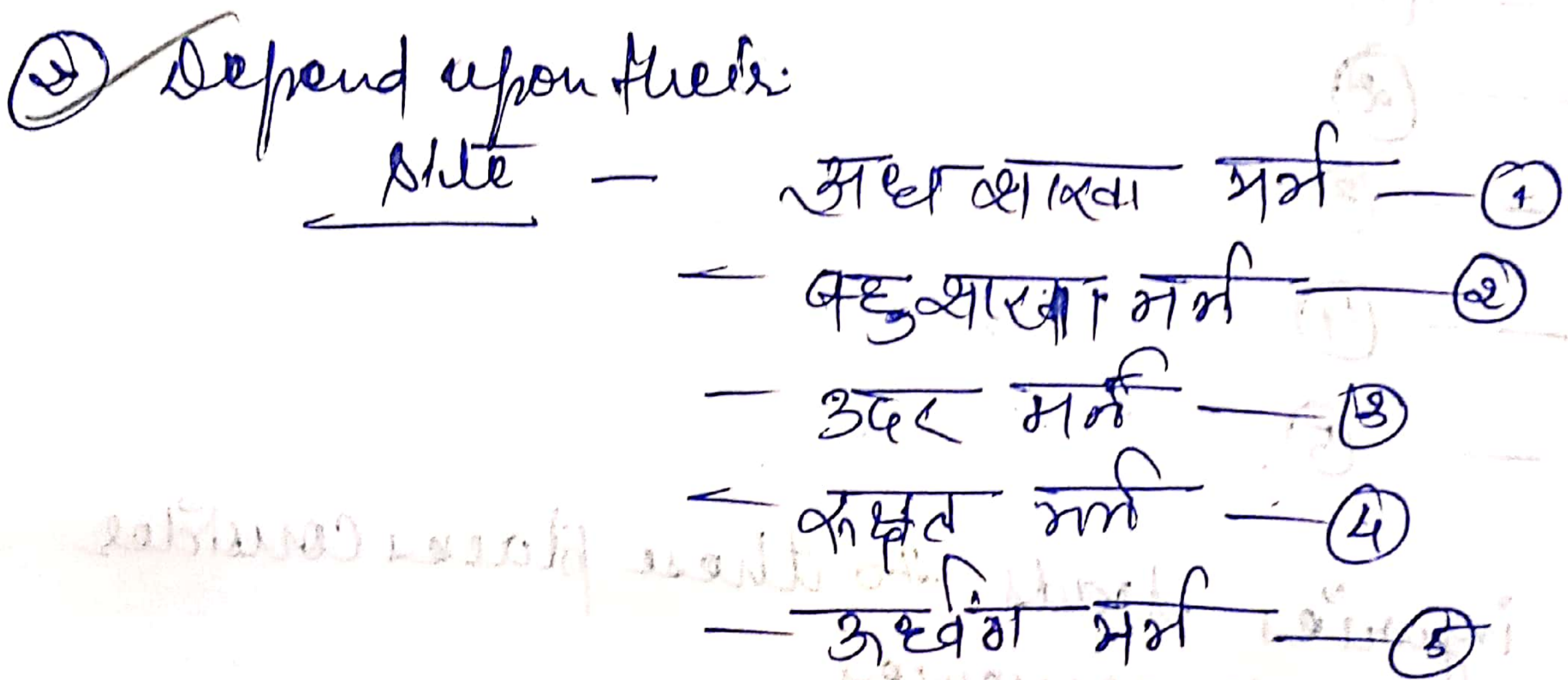
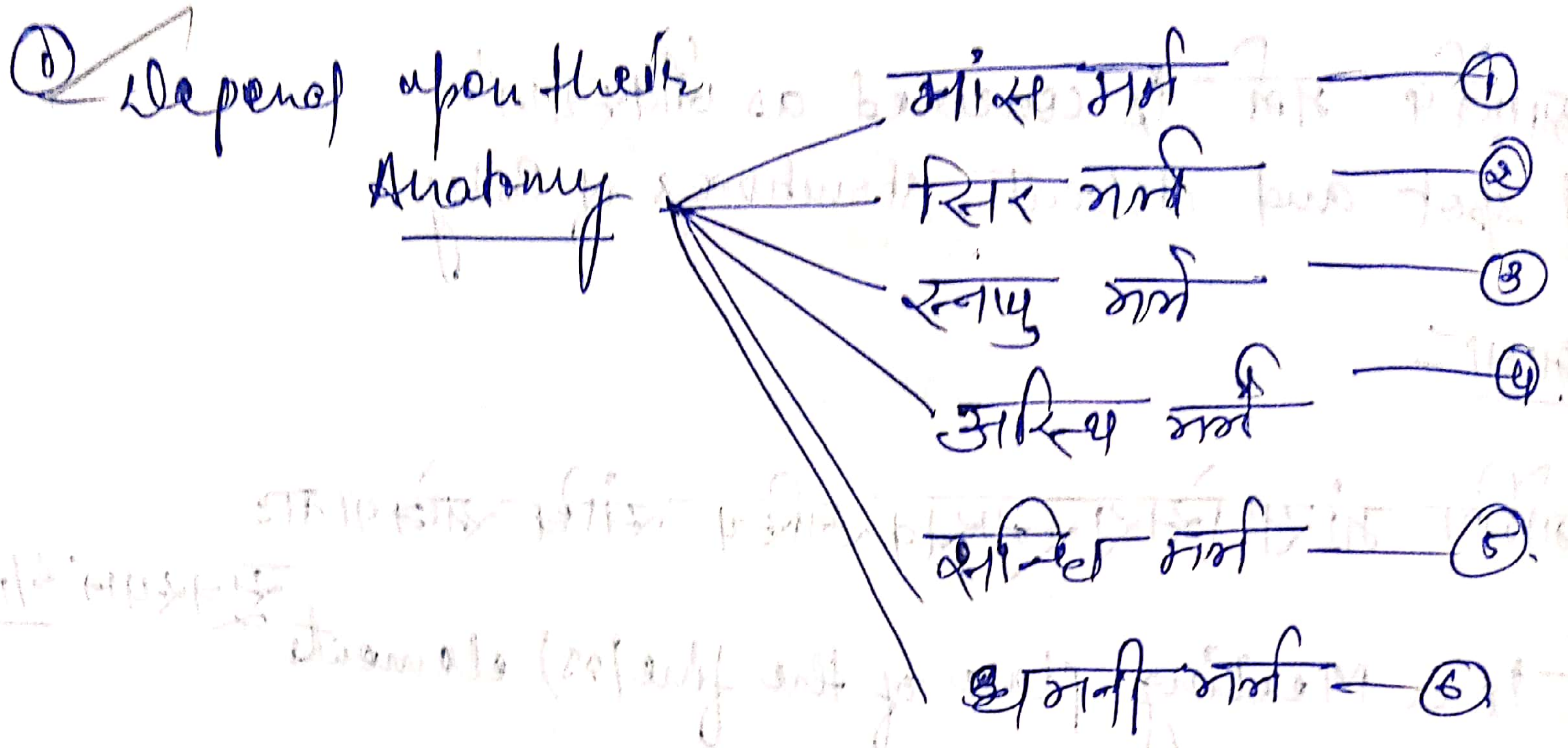
मर्म is a Meeting place of the five (5) elements सूत्ररूपान 6/10

- मांस — (1)
- सिर — (2)
- स्नायु — (3)
- सन्धि — (4)
- अस्थि — (5).

∴ Any injuries leads to these places consider as a serious consequences

Numbers - Total 107 मर्म's found in our classics.

- Types -
- Depend upon their Anatomy — (1)
 - Depend upon their site — (2)
 - Depend upon their Texture — (3)
 - Depend upon their size — (4).



Depend upon their size

- 04 अंगुल मर्म — हृदय, नाभि, कस्त
- 03 अंगुल मर्म — करपूर, जामु
- 02 Angula मर्म — मणिकंध, गुल्फ
- 01 Angula मर्म — स्तनमूल कुच
- 1/2 अंगुल मर्म — Remaining others,

हस्त चक्र

- स्वल्प आश्रित मर्म — ①
- आश्रित मर्म — ②

सर्वोत्तम मर्म

- Person dies immediately in their मर्म — ①
- अग्नि मध्यम प्रदोमिना — ②

— शूद्रा रका — ①

— अधिपति — ②

— शिखर — ③

— कण्ठ सिद्ध — ④

— गुल्फ — ⑤

— हृदय — ⑥

— कस्त — ⑦

— नाभि — ⑧

② अपलास - fake life of Individual in
15-30 days.

आग्नि and जल प्रधान प्रधान

अपलास ————— ①

अमस्तम्भा ————— ②

स्वनभूल ————— ③

स्वनरोहित ————— ④

सिमंत ————— ⑤

तल ————— ⑥

क्षीप्रा ————— ⑦

इन्द्रसिंह ————— ⑧

कतिकटरुण ————— ⑨

पाक्ष संधि ————— ⑩

③ विशोष दस्त - causes death soon after arrow.

उच्छेप — ①

रुधयनी — ②

④ वेकलका — लोहितारक्ष — ①

आणि — ②

जानु — ③

अवी — ④

कुच — ⑤

विटप — ⑥

Deformity of an organ

कुपरा — ⑦

कुम्भरे — ⑧

कसधरे — ⑨

विधुर — ⑩

शुद्धीकरण मर्म -

गुणक - ①

मणिवन्ध - ②

कुचक्षिण - ③

संशुद्धि

संशुद्धि

संशुद्धि

संशुद्धि

मर्मधातु निदान - ३५

लेपन - ①

शोषण - ②

आश्रय - ③

पट्टा - ④

कारण - ⑤

सामान्य लक्षण -

श्लेष्म - ①

प्रलय - ②

प्रमाद - ③

विचेष्टन - ④

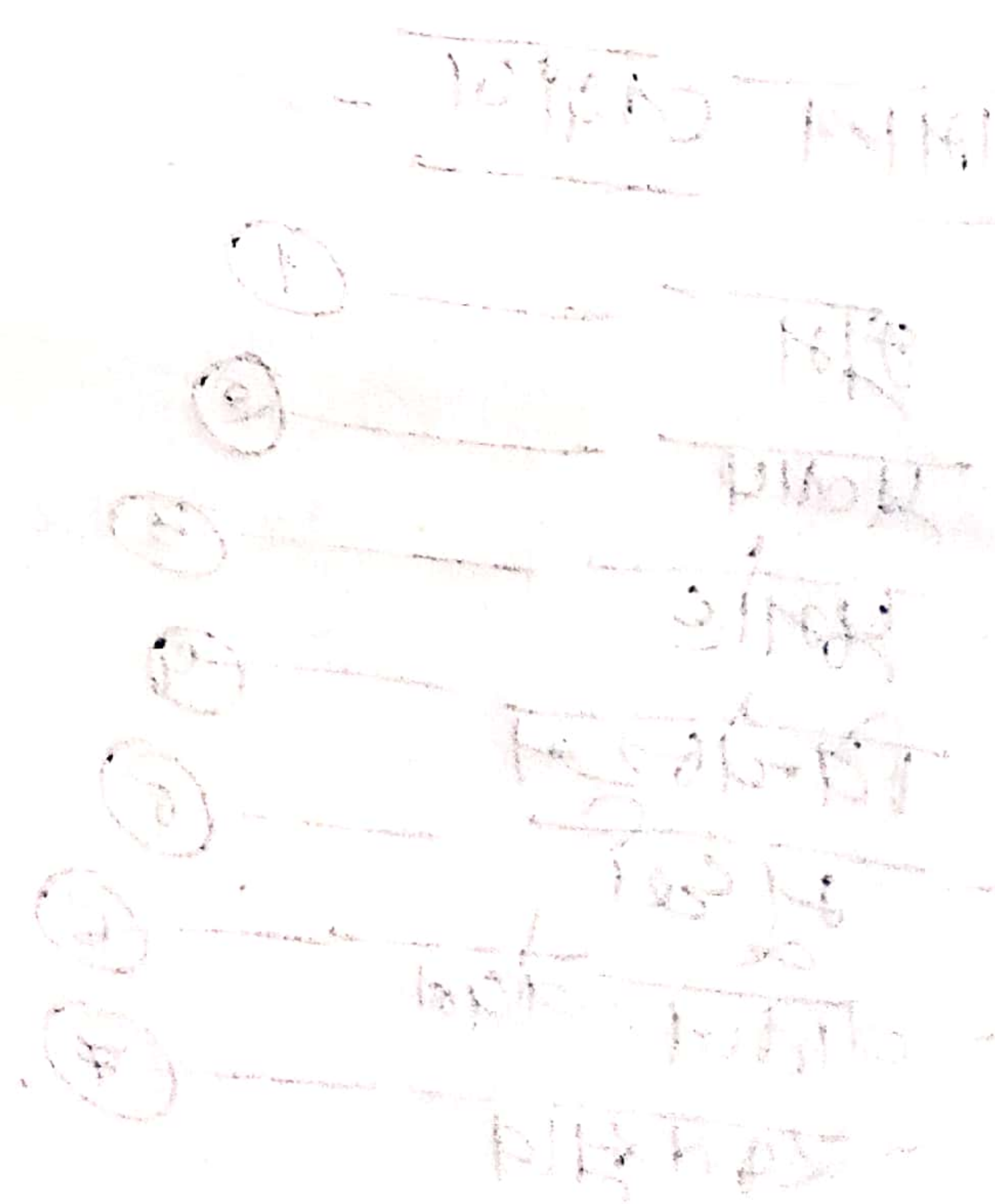
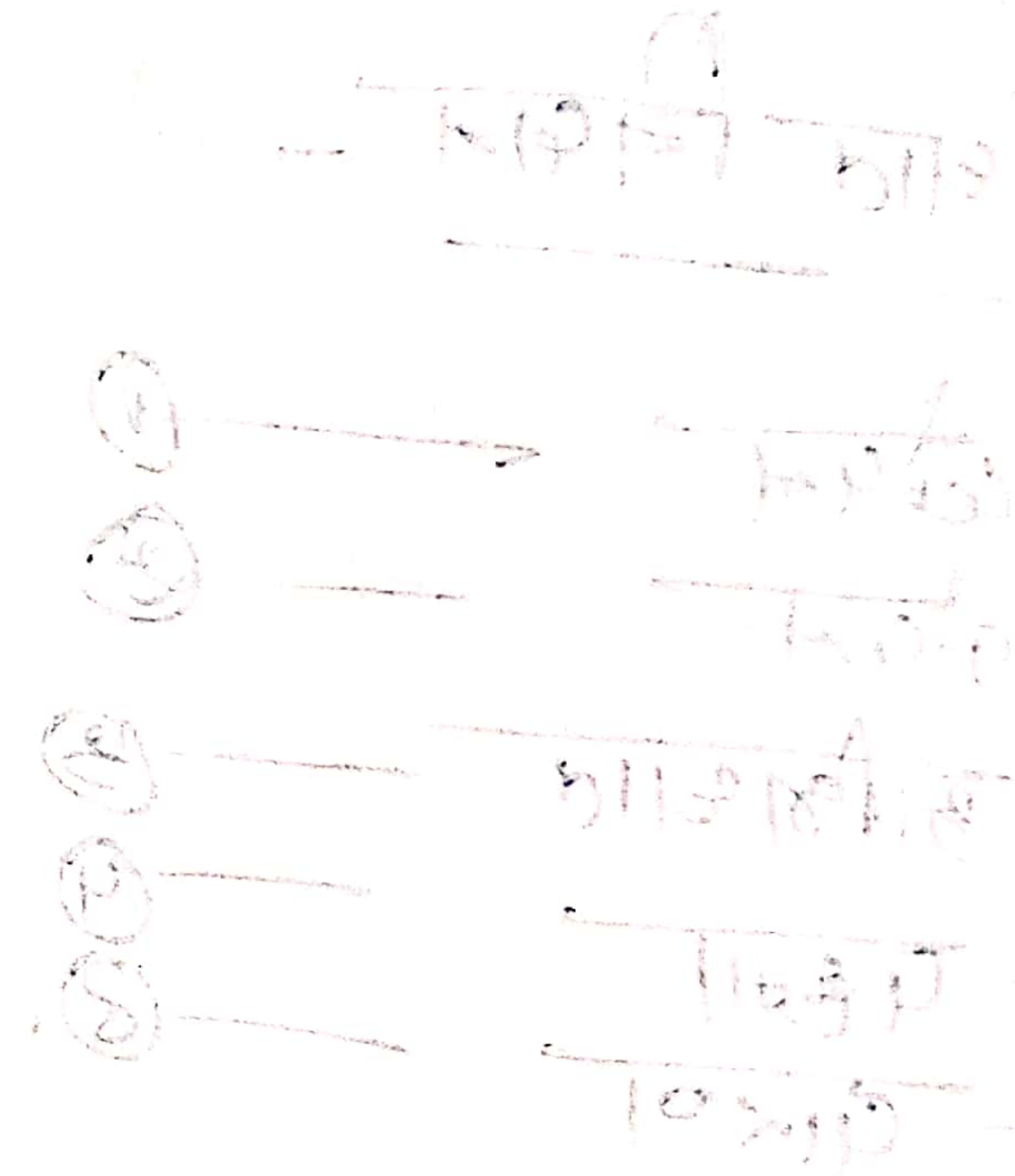
मूर्च्छा - ⑤

वातज वेपन - ⑥

रक्तक्षय - ⑦

Importance -

- Malignant exstrophy are difficult to cure.
- During surgery testis should be avoided.
- Testis is trispermic gonad.



क्षार and क्षार कर्म

- तत्र क्षरणात् क्षणनाद्या क्षारः

- क्षरणात् and क्षणनाद्य गुणः is known as क्षार

Factors -

- प्रधानता (Importance) — ① 3M

- गुण — ② 3M

- कौशल्य — ③ 3M

- कर्म — ④ 3M

- प्रकार — ⑤

- अयोग लक्षण — ⑥

- योग लक्षण — ⑦

- उपद्रव — ⑧ — व्याधितः

- चिकित्सा — ⑨ — क्षारसूत्र

① प्रधानता — क्षेपन कर्म — ①

— क्षेपन कर्म — ②

— लोचन कर्म — ③

— त्रिदोषहण — ④

— त्वक् विकारः — ⑤

— क्रिया नकारण — ⑥

गुण - अति तीक्ष्ण - ①

जम्बु - ②

शुक्ल - ③

लक्षणा - ④

पिच्छिल - ⑤

स्निग्ध - ⑥

शीघ्र - ⑦

दोष - अति मार्कव - ①

अति शुक्लता - ②

अति उष्ण - ③

अति तीक्ष्ण - ④

अति पिच्छिल - ⑤

साम्प्रत - ⑥

हीनसूत्र - ⑦

अपक्वता - ⑧

कर्म - रोपण - ①

पाचन - ②

विलासन - ③

शीघ्रता - ④

स्तेमना - ⑤

लेखन - ⑥

शोधन - ⑦

प्रकार / types

प्रतिसारणीय क्षार (externally used)

घानीय क्षार (Internally used)

— ①

— ②

प्रतिसारणीय

मृदु

मध्यम

तीक्ष्ण

Indications

कृच्छ

कटिवा

किलस

भ्रमन्ध

अबुप

अक्षी

चर्मरोग

कृमि रोग

घानीय क्षार

Indications

गार विष — ①

मुलम — ②

उपर — ③

अजीर्ण — ④

अक्षीक — ⑤

अनाह — ⑥

अक्ष्मरी — ⑦

असह्यतल विषधी — ⑧

सम्भक्त लक्षण

- व्याधिहर
- लंघन
- अस्राव

तीन लक्षण

- लोच
- कण्डू
- व्याधि वृद्धि

अतिरस्यक्त लक्षण

- काल ①
- पक्व ②
- स्राव ③
- अगम्यता ④
- पिपासा ⑤
- मूत्र ⑥

- ① - ...
- ② - ...
- ③ - ...
- ④ - ...
- ⑤ - ...
- ⑥ - ...
- ⑦ - ...

- ...
- ...
- ...
- ...
- ...
- ...
- ...

शर सूत्र

शर सूत्र is a Medicated thread capable to perform excision and heal the injury by its chemical

Action:

Factors

शर सूत्र cabinet — (1)

शर सूत्र Preparation — (2)

शर सूत्र cabinet

Having two chambers — (1)

Large chambers — (2)

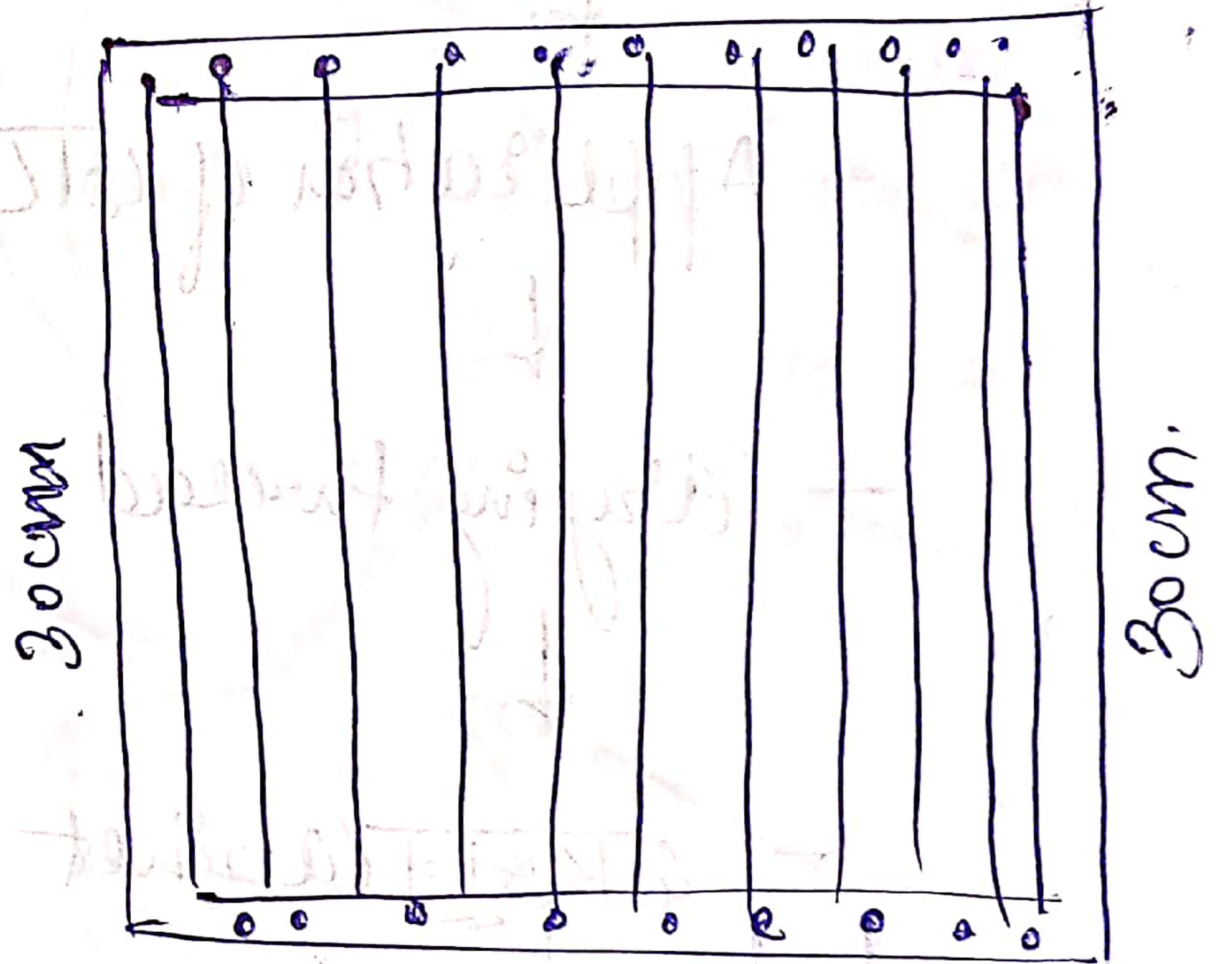
Small chambers — (3)

Large chamber called Hangers — (4)

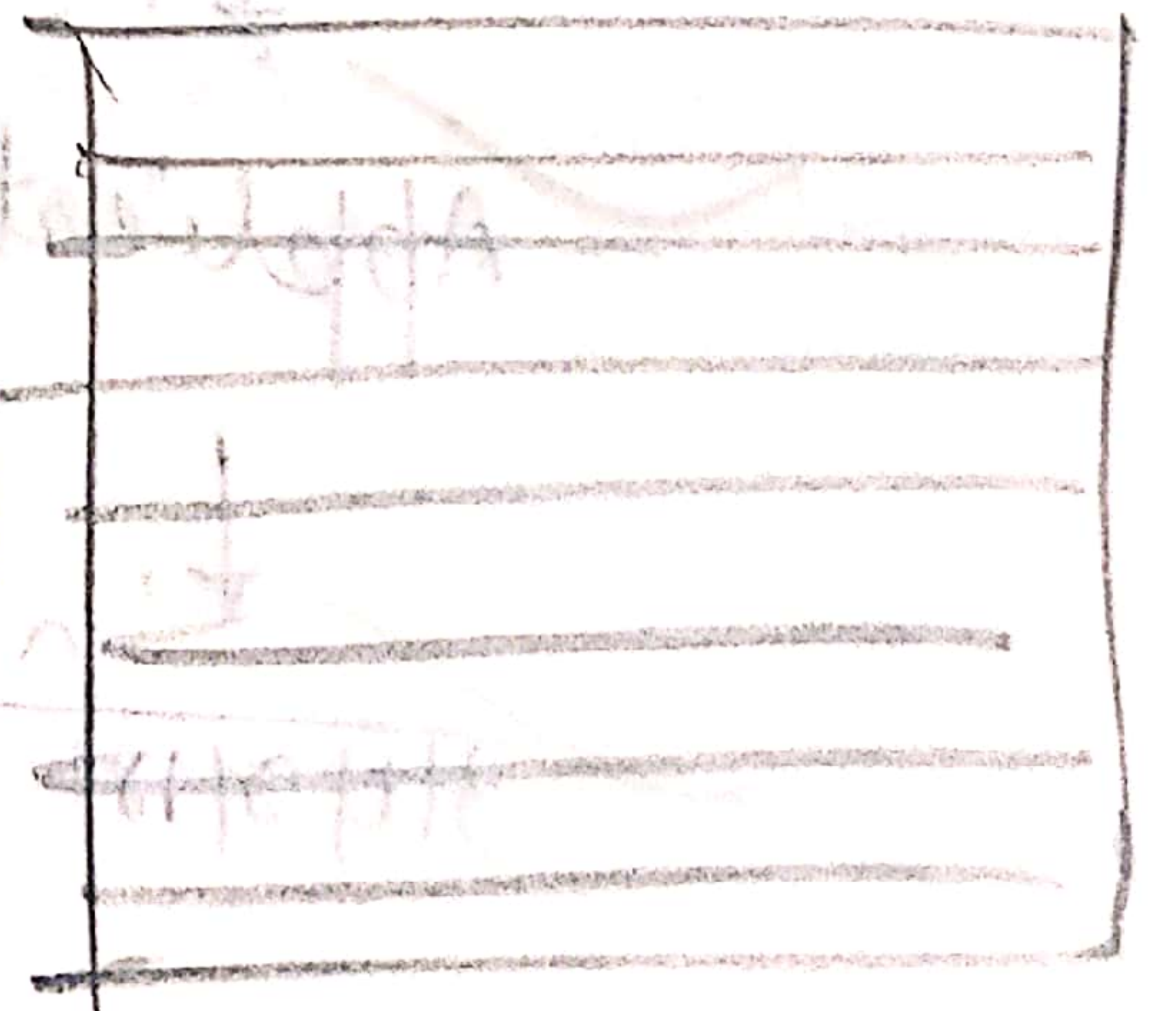
Small chamber called Hot air Blower — (5)

Capacity - 900 - 1600 threads — (6)

width 30cm — (7)



शर सूत्र cabinet



② Preparation of Ksharsutra

अपमार्ज क्लार — ①

↓

स्नुही collection — ②

↓

Application of क्लार — ③

↓

drying thread — ④

↓

क्लारसूत्र cabinet — ⑤

↓

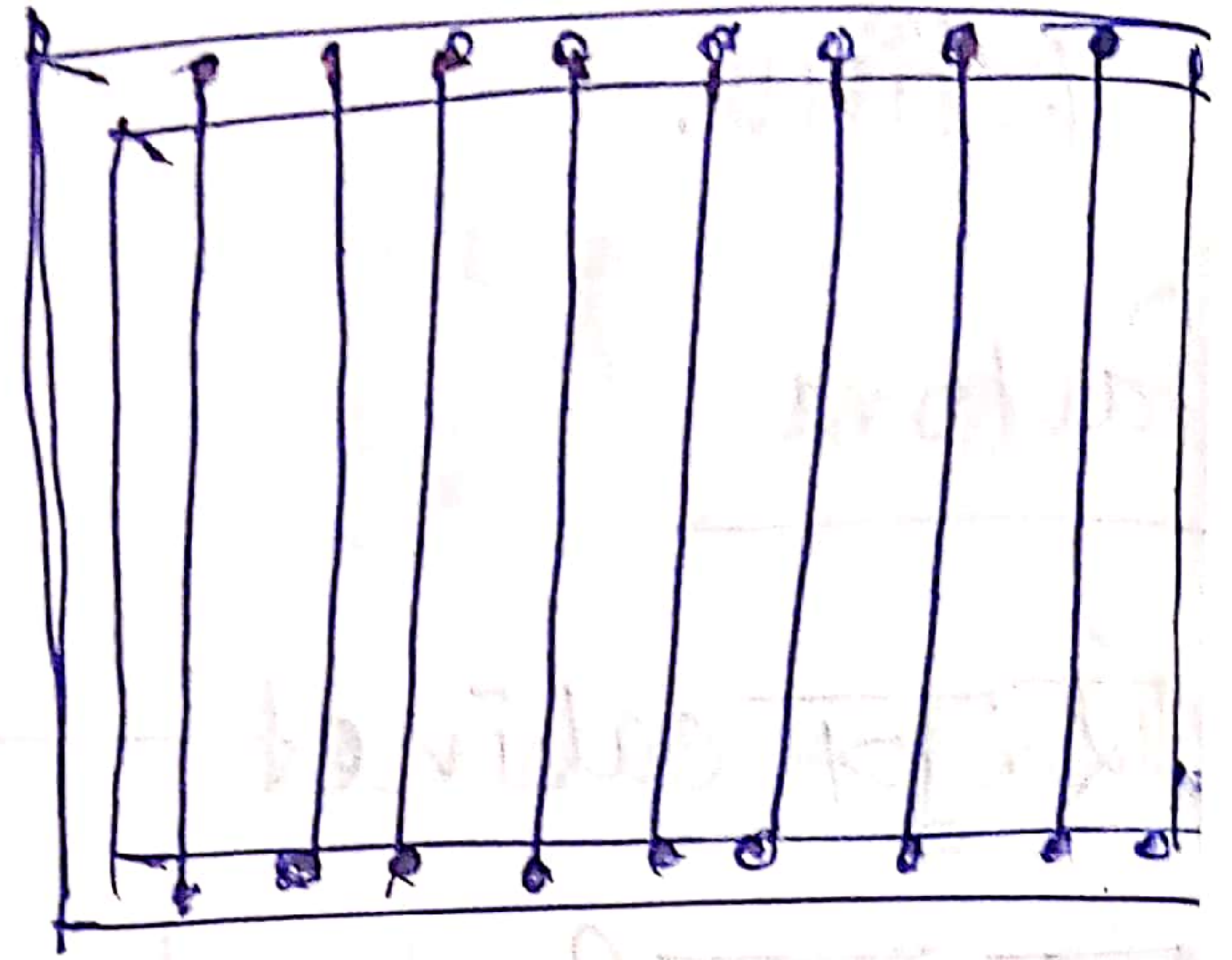
Application of स्नुही — ⑥

↓

Application of हरिद्रा — ⑦

↓

अपमार्ज क्लारसूत्र — ⑧



11 coating of क्लार
क्लार wire done

7 coating of स्नुही
अपमार्ज क्लार

3 coating of स्नुही
चूर्ण

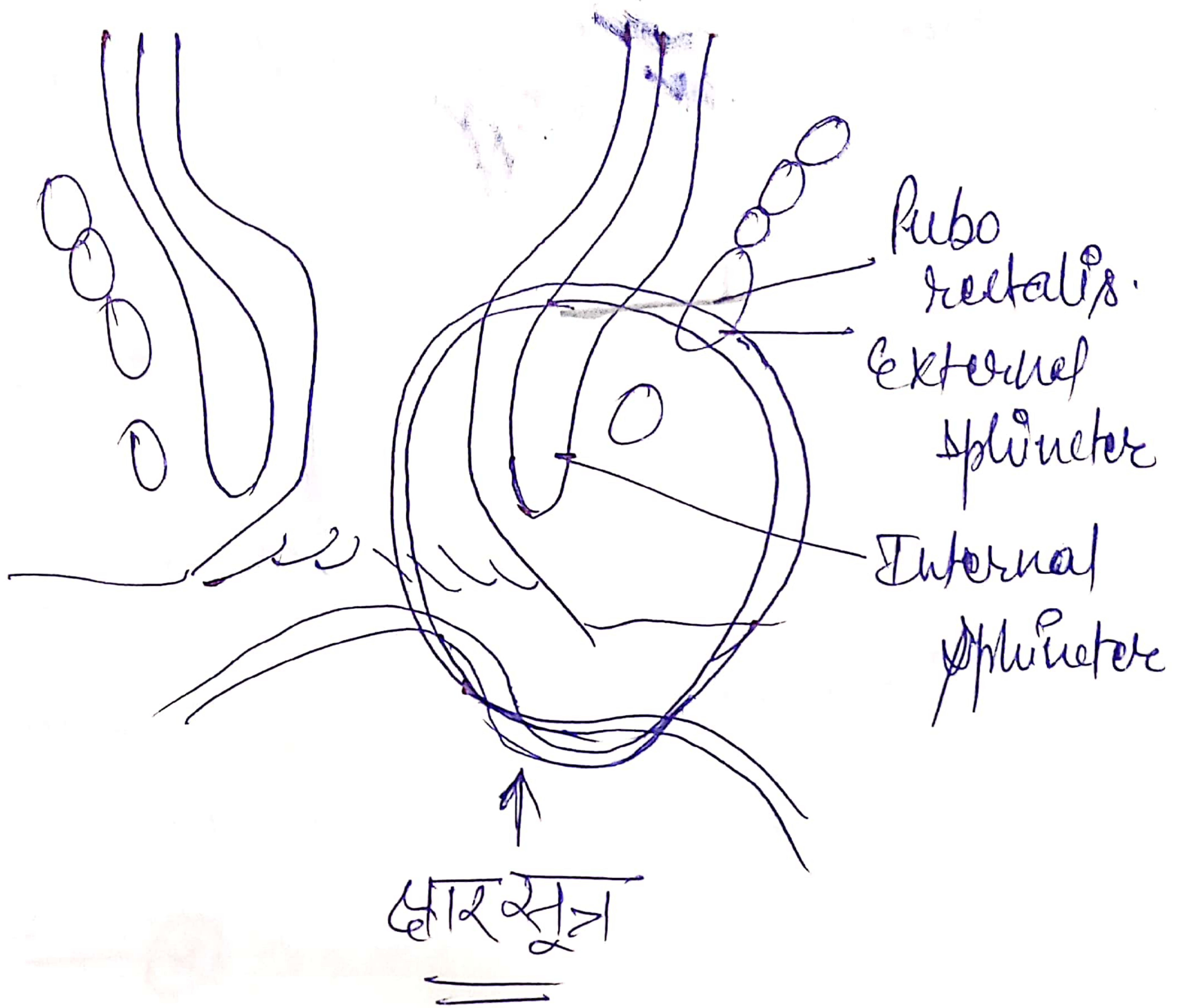
1 coating fore side

PH value — 9.7

Thread size — 10/0

Seal on glass tube

क्षारसूत्र in Ano rectal diseases.



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Handwritten text below the diagram, possibly a label or a note, which is mostly illegible.



Handwritten text below the small drawing, possibly a label or a note, which is mostly illegible.

अग्नि कर्म

The procedure which is performed with the help of अग्नि for treating the व्याधि (diseases) is called अग्नि कर्म.

श्लोक - अग्निना क्रियते इति अग्नि कर्म ।

वृहन्नायक ०१ (Instruments)

The Instruments Required for अग्नि कर्म are :-

1. चक्र वाह — ①
2. मांस वाह — ②
3. सिर वाह — ③
4. स्नायु वाह — ④
5. अस्थि वाह — ⑤
6. सन्धि वाह — ⑥

अग्नि कर्म काल - अग्नि कर्म can be done in all seasons except शरद and शीत शरद.

Because in these seasons aggravation of विद्य occurs.

- varieties. — A/c to substances. — ①
- A/c to tissues — ②
- A/c to shape — ③
- A/c to diseases. — ④

- ① A/c to substances. — फल — पिपली — ①
- स्निग्ध — मधु, घृत — ②

- ② A/c to tissues. —
- लवक तन्ध — ①
 - मांस तन्ध — ②
 - सिर तन्ध — ③
 - रज्जु तन्ध — ④
 - अस्थि तन्ध — ⑤

- ③ A/c to shape = वलय (Circular) — ①
- A/c to shape — बिंदु (Dot) — ②
- विलेखा (Straight line) — ③
- प्रतिसारणा (flat) — ④

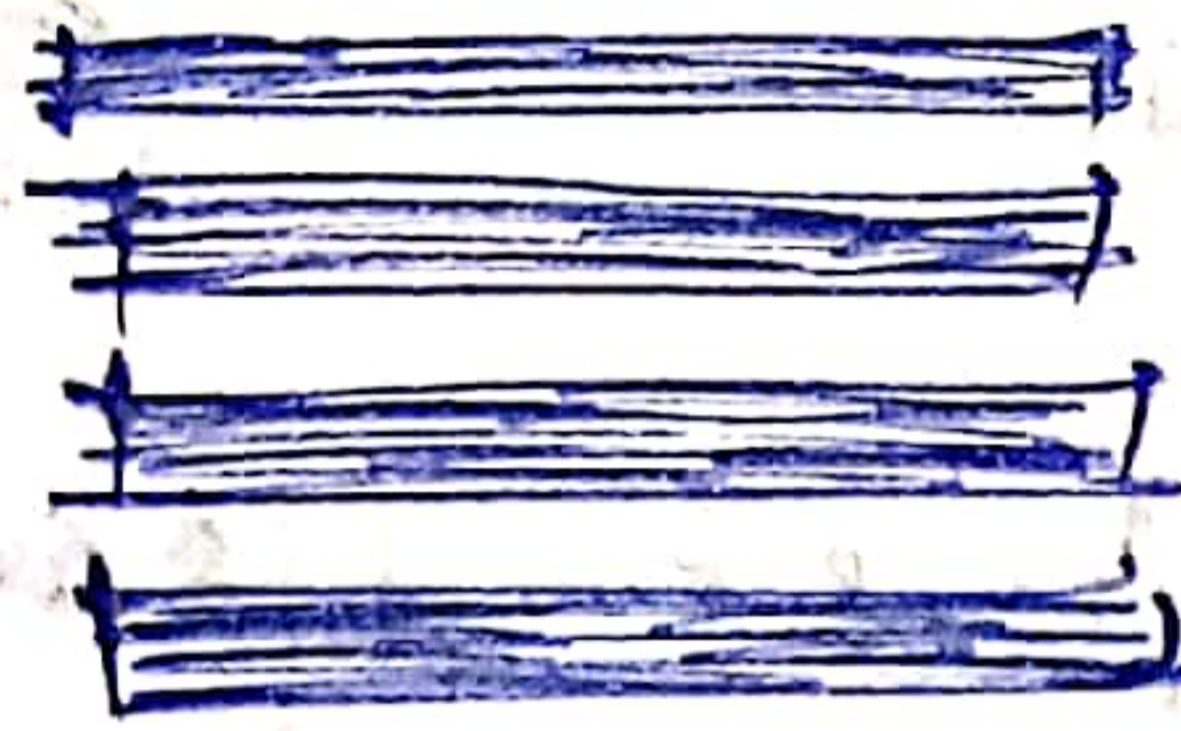
diagrams -
Alto वल्ल



वलय — ①



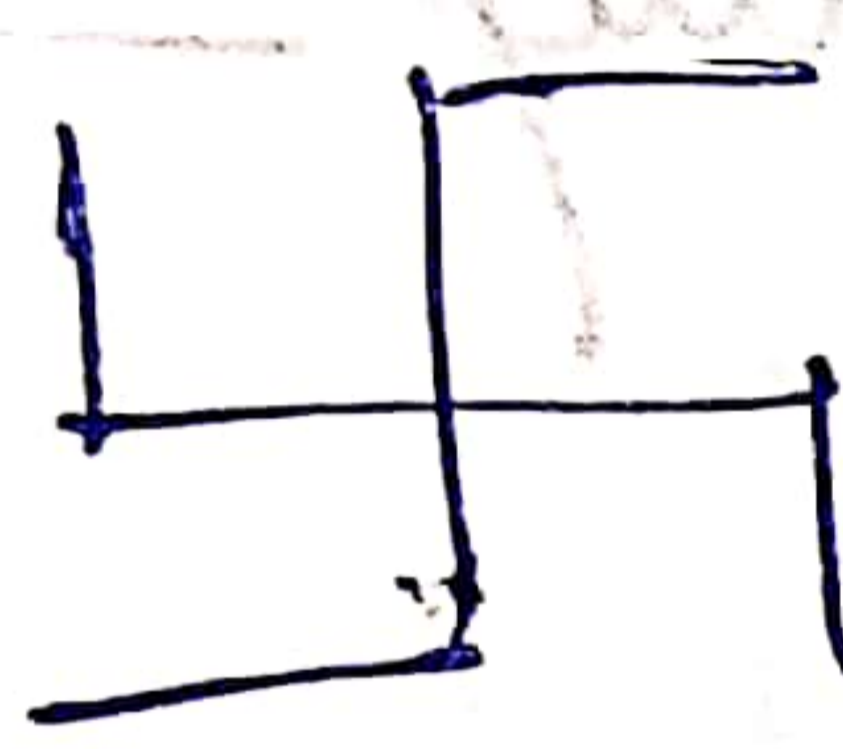
विंदु — ②



प्रतिशिरण — ③



अर्धचन्द्र — ④



स्वास्थिका — ⑤



अस्थायि — ⑥

types -

Regular

Dotted

Straight line

Semi lunar

4 fated marked

8 fated marked

Alto Lomir

- Alto diseases -
- वेदन (Surgical excision)
 - शेदन (Surgical Incision)
 - शुद्ध भाग

Types of अग्नि कर्म

- लुपत — ①
- दुग्ध कर्ष — ②
- सम्यक् कर्ष — ③
- अग्नि कर्ष — ④

① मृगत केश — Paled's colouration —
at the site of injury —

② पुलकेश — Blister formation — ① (कृमि)

— पिंड — ②

— Inflammation — ③

— take long time to heal — ④

③ श्याम केश — Blackish colour — ①

— superficially — ②

④ शुद्ध केश — Deep burn — ①

— excessive pain — ②

— वद — ③

— पुंड — ④

— केश — ⑤

— दोष — ⑥

— Take long time to heal — ⑦

• specific sites of अक्षत — शिरः and अक्षत
— दन्त शिर (eyelids)

Procedure (अग्नि कर्म विधि)

- युवक - Pt. Has taken विषाद आहार

- विधि - Pt. who is eligible for अग्नि कर्म should perform all auspicious ceremonies

↓
- Ready with all the equipments

↓
- sit or lie down with his head

↓
- Construct a small open hearth fixed with Bellows.

↓
- then wood of खट्व to be put in, and set fire

↓
- After Red burning coal is ready Physician should put jambavasta into hearth.

↓
- then take them out and placing mark in a circular or semicircular forms.

आंजन should be done with the
last time - till the symptoms
of अपघ्न are manifest

अपघ्न - Anointed with
Ghee and अपघ्न

अपघ्न - Clinical features

- Dyspnoea ————— ①
- Excessive cough. (कफ) ————— ②
- Burning sensation | (गर्भ) ————— ③
- Redness of eyes ————— ④
- ज्वर ————— ⑤
- Loss of consciousness ————— ⑥

रक्तमोक्षण

रक्तमोक्षण is a type of शोधन कर्म
It's about Blood cleansing Procedure
which are mentioned in पंचकर्म and शोधकर्म
respectively.

Ref - शोधन तंत्र / पंचकर्म

रक्त - Blood — ①

मोक्षण - Releasing — ②

श्लोक -
रक्तस्य मोक्षणं रक्तश्रावः ॥

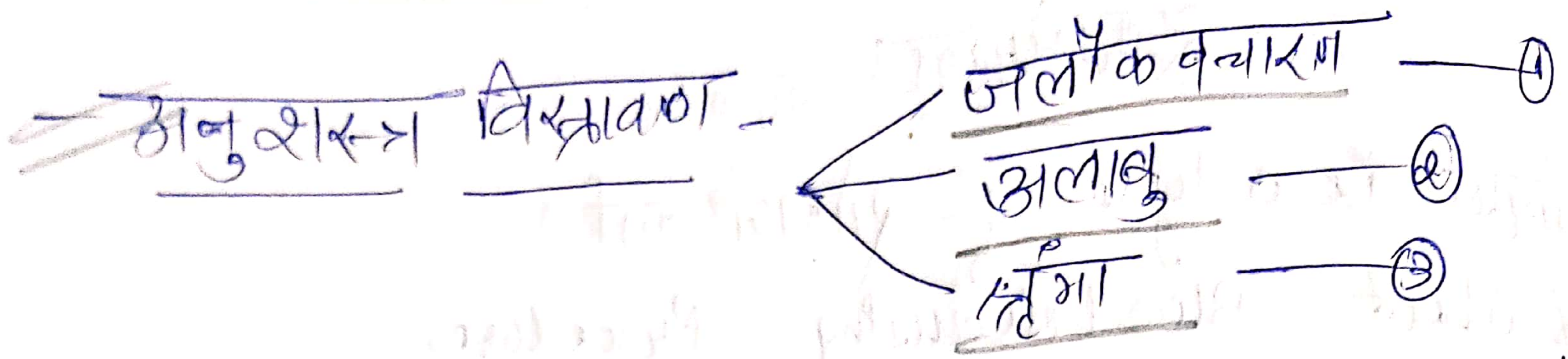
Classification -

← शक्ति विस्त्रावण — ①

← अनुशक्ति विस्त्रावण — ②

← शक्ति विस्त्रावण — प्रक्षेप — Prickling — ①

सिरव्याध — Puncture — ②



जलौक कंचारण - leech therapy (पिच केंच)

अलावु - extracting blood (कण केंच)

सृंगा - cow's Horn (वात केंच)

यंत्र प्रयोग - घटी यंत्र प्रयोग

Indication of रक्तमोक्षण

Contraindication

- ✓ उर्वर
- ✓ शुष्म
- ✓ कुण्ड
- ✓ अग्नादि
- ✓ अक्षरु
- ✓ अक्षि
- ✓ विस्फि
- ✓ वातरक्त

- क्षीण
- रक्तमि
- पाण्डु
- अक्षि
- रक्त
- गर्भाणि
- रक्षि

रक्तमोक्षण कालः - Autumn (हेमन्त ऋतु)

Age group - 16 yrs below Best time.
- Above 70 yrs.

जलोक्वचारण

- Refers to leech.

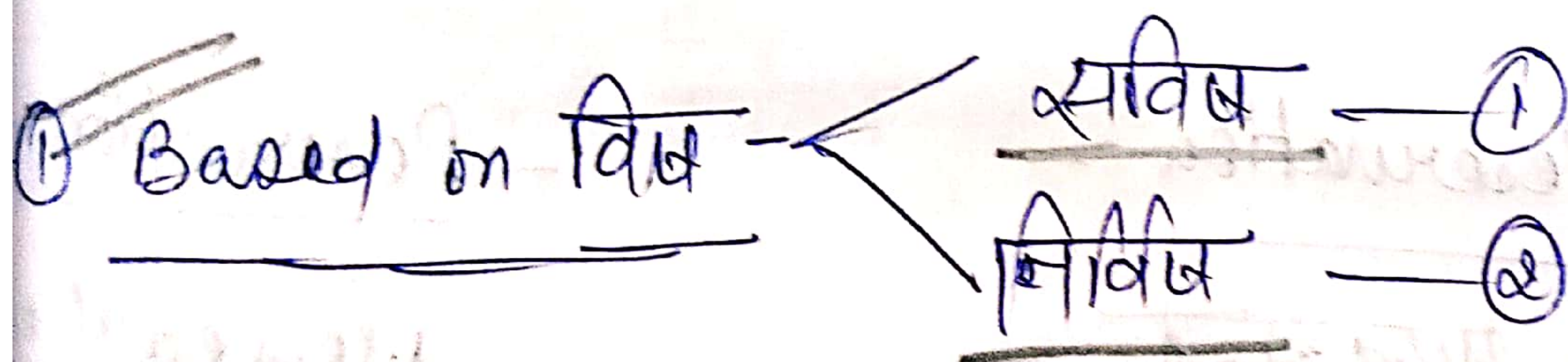
- A type of secondary खतमोक्षण

- Applying leech to specific site and allow it
initiated खत.

- Non-poisonous (निविष) leeches are used.

Classification -

- Based on विष — ①
- Based on लिंग — ②
- Based on विधा — ③



- सविष
- कृष्णा — ①
 - कुबेरा — ②
 - अलमर्षा — ③
 - समुद्रिका — ④

- ② निविष
- कपिला — ①
 - पिङ्गला — ②
 - शङ्कुमुषी — ③
 - मूषिका — ④

② Based on sex —

~~पुरुष जलौक — ①~~

~~स्त्री जलौक — ②~~

~~पुरुष जलौक —~~

~~Hard skin — ①~~

~~Big head — ②~~

~~semi-demar — ③~~

~~lot of tails — ④~~

~~Highly vitiated — ⑤~~

~~असुखी लैला~~

~~स्त्री जलौक~~

~~Delicate —~~

~~Thin cut —~~

~~Small sized Head.~~

~~Lower body —~~

~~Large~~

~~असुखी लैला —~~

Collection and Preservation —

~~Best time शरद ऋतु~~

~~Removed by sprinkling
शुद्ध जल over their mouths
and then collected.~~

Preservation

~~New earth
Pot~~

~~Every 3rd
water shd
be change~~

~~After old
Pot shuld b
change~~

जलकचारा विधि -

- पूर्वकर्म — ①
- प्रधानकर्म — ②
- अस्वात कर्म — ③

पूर्वकर्म - संभारसंग्रह

- Preparation of equipments
- Preparation of leeches
- Preparation of Pt.

— स्नेहन

— अङ्गुण

— स्वयं

प्रधान - विरुद्ध चिकित्सा

soil rubbed on the skin so, that Jalok will easily attached.

Jalok will picked up b/w

thumb and Index finger

Mouth is held close to the affected site

then leech Applied.

- observation and care
- covered by gauze piece.
- Rhythmic waves
- sucking Pure blood.

पश्चात् कर्ष - Remove the बिलोक through sprinkling शैलक लवण

- the wound smeared with शैलक लवण and lightly Bandaged.

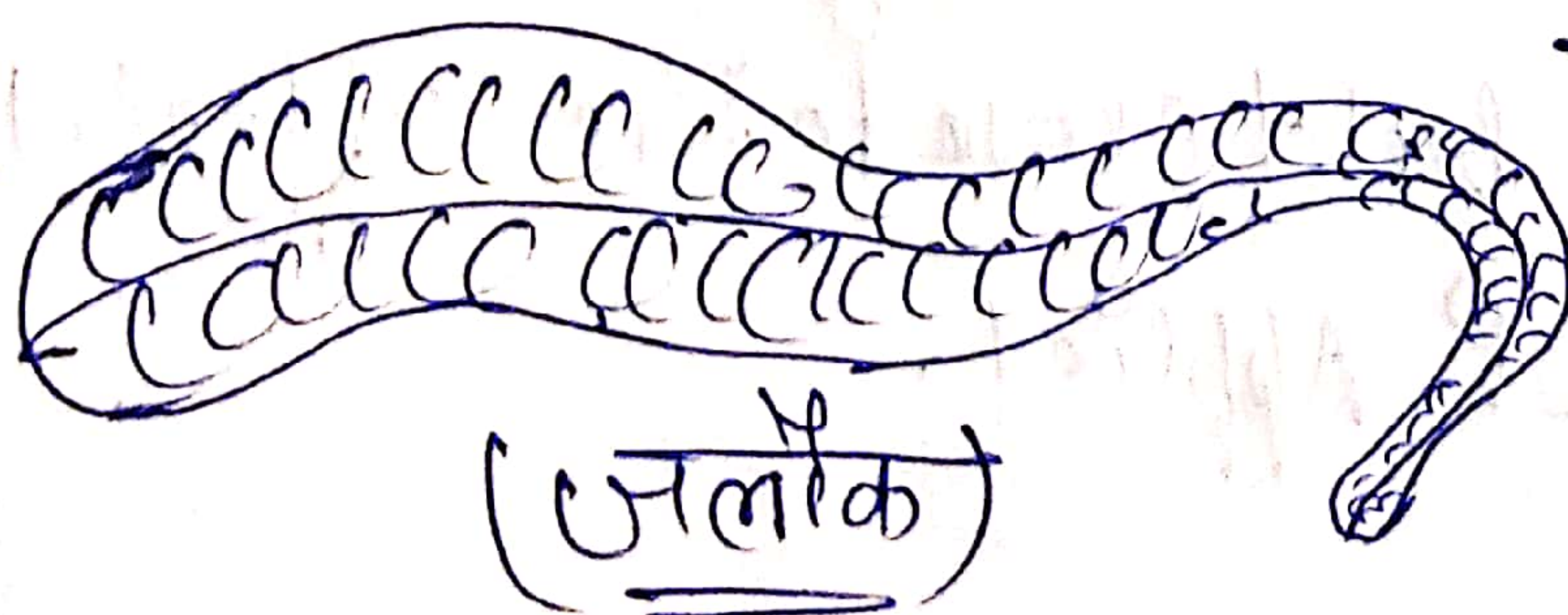
- After that बिलोक placed to the clean water.

complications -

- श्ले
- कण्डू
- पिण्ड
- शूल
- दिसि
- वात
- शूल

पश्चात्/ शिमेया -

- शामि
- शिकल
- शाल शाल
- कण्डू
- शाल शाल
- शूल



प्रवेष्ट (Ligation) (Incision)

प्रवेष्ट is directly co-related with the therapeutic procedure of Incising the edge superficially.

Second part of प्रवेष्ट

- पूर्वकर्म — ①
- प्रधान कर्म — ②
- पश्चात् कर्म — ③

पूर्वकर्म - संभार संग्रह -

- रक्त पूर्वक — ①
- रक्त संकलन — ②
- रक्त संग्रह — ③
- रक्त पतन — ④
- रक्त — ⑤

- प्रधान कर्म -
- Affected Area should be cleaned well
 - Ligation or Incision should be made
 - through Scalpel Blade (मुख्य संभार संग्रह)
 - Area of प्रवेष्ट should be snaped.

- प्रथम - मं अति उलान - ①
- मं अति गंधीर - ②
- असन किरण - ③
- मं अति त्रियक - ④

पश्चात् कर्म - When Bleeding stops
wound Area's dressed up.

- Apply - जातस्यै हत - ①
यस्मिन्मधु पूर्ण - ②

शोम लक्षण

- इन्तलुल
- क्षोप कुण्ठ
- ज्वर शोम
- पिडित रक्त

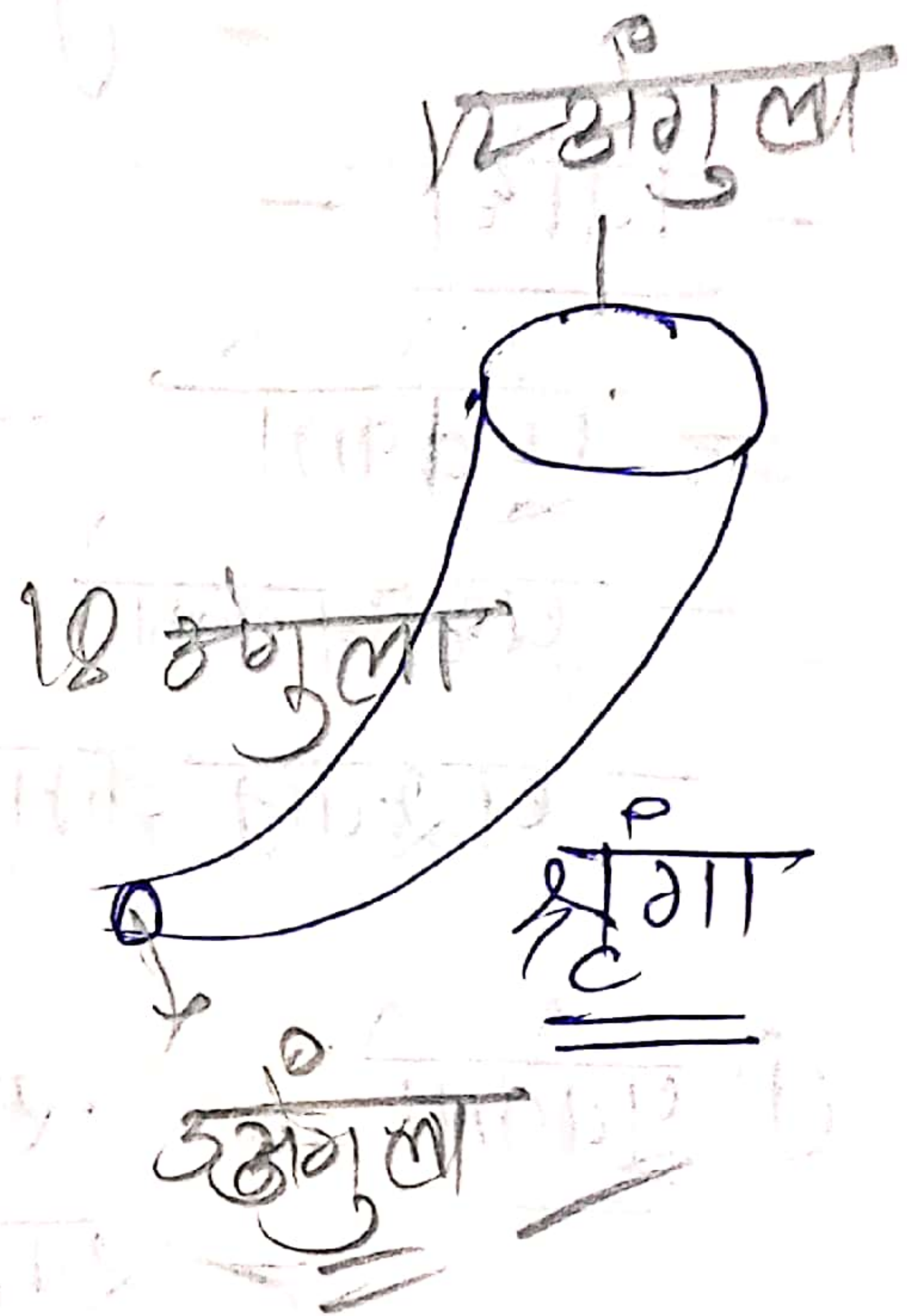
अशोम लक्षण

- ① - Before सिरा व्याध
- ② - After सिरा व्याध
- ③ - जलक क्वरण
- ④ - मर्म स्थान

शुद्धा

Apply cow horn to let out blood.

- Qualities -
- slender
 - straight
 - 18 अंगुल length
 - 12 अंगुल - circumference
 - 0.5 अंगुल - diameter



- Procedure -
- Cleaned well on both side
 - Multiple Incision Made on selected site
 - cover the site by broad end of horn
 - Suck forcefully
 - collect vitiated blood
 - then clean the site
 - एरिद्रा गुठ sprinkled
 - tightly Bandaged,

Modern - Mouth Aspiration
meter gauge Attached
force maintained.

सिराचार -

- one of the Important Methods of सिराचार
- Puncturing a vein for therapeutic Purpose

विधि -

- पुनः कार्य — ①
- प्रधान कार्य — ②
- पश्चात् कार्य — ③

- ① पुनः कार्य —
- सिराचार — ①
 - रक्त प्रतिक — ②
 - रक्त रोकथाम — ③
 - रक्त संधान — ④
 - रक्त पचन — ⑤
 - रक्त अकारण — ⑥

② प्रधान कार्य - It should be made sit comfortably
Abol. — ①

- Select the site of सिराचार
- tightly Bandaged should be tied.
- Raise the vein by tapping.
- Puncture the vein comfortably.

સાધ વિશ્લાવના મેત્રા

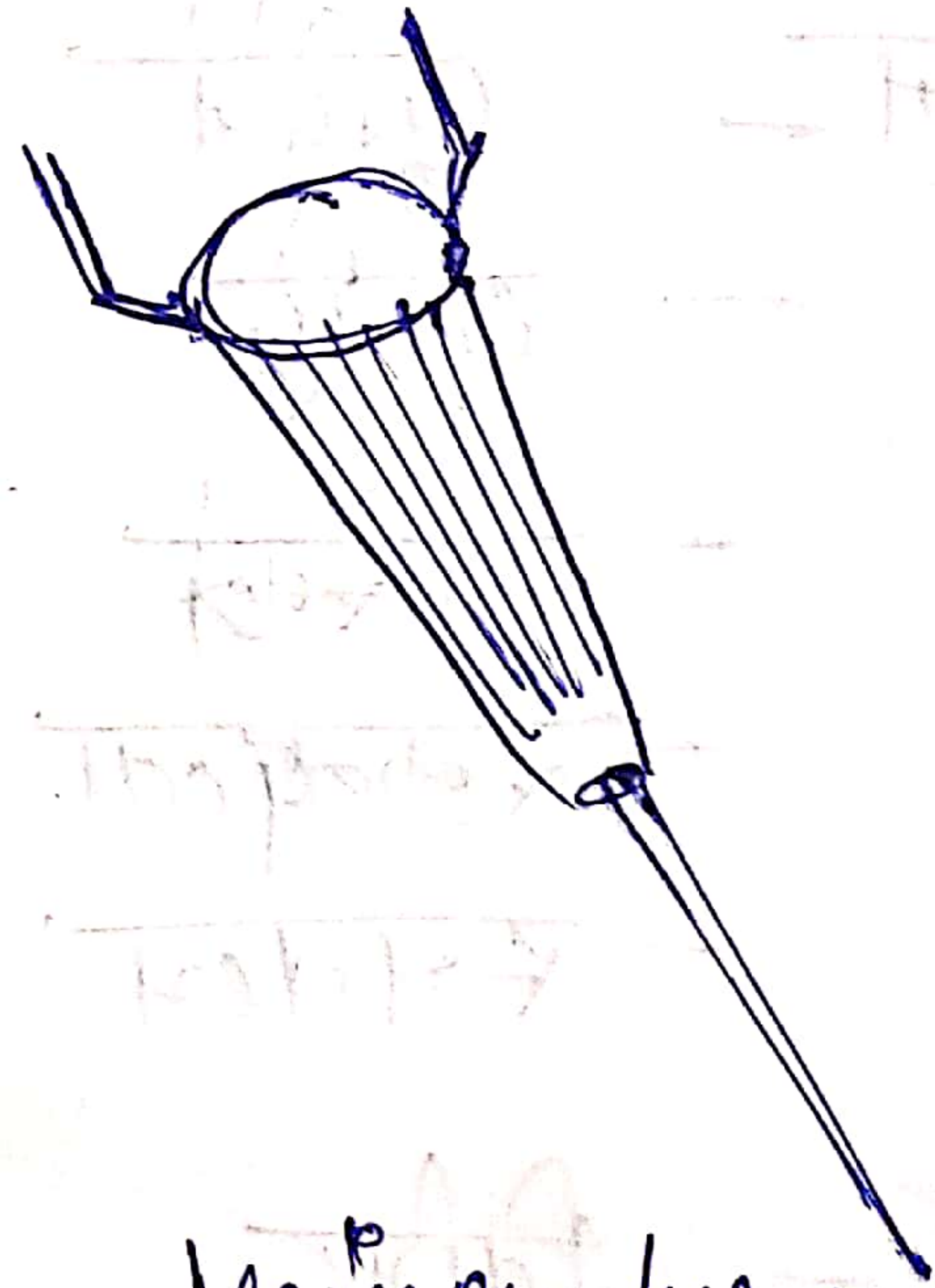
- ✓ બેદમ — પ્રકથા — 64 ml — ①
- ✓ મધ્યમ — 1/2 પ્રકથા — 32 ml — ②
- ✓ ઊંચ — 1 કુવલ — 196 ml — ③

પરચ્ચત કમ

પથ્થા સિમથા

- પથ્થા — લઘુ ઓથ
- કીપન
- વિશ્વામ
- ઝતિ ઝાપાન Net

- અપથ્થા — ઝતિ ઝાન ઝાથલ
- ઝતિ ઝીત ઝાથલ
- ઝથપાઝાના
- ઝતિ કોથ
- વિકસવન
- ગુલ ઝાથલ



Vein puncture
Instrument / Syringe

सम्भक्त व्याधा लक्षणानि -

- लाघव — ①
- वेयना क्षाति — ②
- व्याधि-वंग क्षया — ③
- मनो मसक — ④

- डीन - दुर्दिन
- दुर्विद्यु
- अस्विन्न
- स्कन्धला
- सत्रवज्र

- डीति - तिमिर
- दाह
- कलस
- पाण्डू
- मूषण
- दिवका
- श्वस

दुष्ट व्याधा

- दुर्विधा
- अस्विन्न
- कुनिता
- स्त्री-गर्भ
- अव्याध
- विदूरत
- वेपिता
- त्रियक विद्यु
- अविद्या
- पुनः पुनः

बन्धन (Bandages)

बन्धन directly co-relates with the Artificial
wound cover

बन्धन प्रयोजन :-

- ✓ शुद्धि — ①
- ✓ प्रण — ②
- ✓ शीपण — ③
- ✓ अस्थि — ④
- ✓ सन्धि — ⑤

Helps to keep wound clean — ①

Promotes Healing — ②

Immobilizes the Bones and joints — ③

बन्धन प्रकार :-

— क्षौम — ①

— कापिसा — ②

— आविक — ③

— दुबूल — ④

— कौशिय — ⑤

— पत्रोठा — ⑥

— चीनपट्ट — ⑦

— यमि — ⑧

— अनावकला — ⑨

- अलावू — (11)

- लाला — (12)

- विदल — (13)

- रज्जु — (14)

- सन्धानिका — (15)

- लोहा — (16)

③ कवलिका (Kavalika) ∴

- कवलिका directly co-relates with the Cotton Pad.

- 2 or 4 folds of soft cloth over wound

Protect from Injury is called कवलिका

- औषध संस्थापन — (1)

- पत्राणि — (2)

- द्विभुजा — (3)

- त्रिभुजा — (4)

- चतुर्भुजा — (5)

- कपट — (6)

विशिका (Gauze Piece)

दलहो says - Application of chads over दक
चूद

or सूत and keep over wound
called विशिका (वीन).

पिचु (Cotton Swab)

पिचु means cotton deveid of बीज.

पिचु: तूल बीजवीन का पिस । सुसू 13/19

बन्धन प्रकार -

Alto सुगुन → 14 types — ①

Alto वाशक 2 → 15 types — ②

Alto चरक → 02 types — ③

Types / प्रकार

कोश	①	Circular	K
दाम	②	sling	D
स्वस्तिका	③	Spiral	S
अनुवेल्लता	④	Spiral	A
मुताली	⑤	circular	M
मोसल	⑥	Abdominal Binders	M
स्वस्तिका	⑦	Stump	S
यमक	⑧	Twin	Y
खंडवा	⑨	Four-tailed	K
चीन	⑩	eye	C
विबन्ध	⑪	Many tailed	B
विमान	⑫	Head	B
अभयक	⑬	T-Bandage	G
पञ्चाङ्ग	⑭	Many tailed	P
उत्सर्ग	⑮	Arm sling	U

A/c to site -

- Tight Bandage — ① — गणक
- Loose Bandage — ② — स्थायित्व
- Ideal Bandage — ③ — समा
- Bandage Knot position — ④.

Indications -

अभिपरित बन्धे

— वेदनापथ

— मायव

— सुखशील

— शरी

— Alleviate pain

— Purify Blood

— Make part soft

— Gives comfort sleep.

— Able to walk

— Sit comfortably

Contra Indications

— caused by पित्त, खन, अग्निमान
and विष

— एत

— वेदना

— कोष्ठ

— oedema

— शूल

— मनःपित्तिका

Gangrene

बन्धन विधि :-

श्री १०

- ① - स्पष्ट भाषण - 100%
- ② - स्पष्ट भाषण - 90%
- ③ - स्पष्ट भाषण - 80%
- ④ - स्पष्ट भाषण - 70%

- 100% स्पष्ट भाषण
 - 90% स्पष्ट भाषण
 - 80% स्पष्ट भाषण
 - 70% स्पष्ट भाषण
 - 60% स्पष्ट भाषण
 - 50% स्पष्ट भाषण
 - 40% स्पष्ट भाषण
 - 30% स्पष्ट भाषण
 - 20% स्पष्ट भाषण
 - 10% स्पष्ट भाषण
 - 0% स्पष्ट भाषण

BANDAGING

Bandaging directly co-relates with Artificial wound cover.

Supportive Medical device — (1)

Provide support — (2)

Provide Relaxation — (3)

cover wound fully — (4)

Dressing Materials used

Cotton — (1)

Gauze — (2)

Pad — (3)

Adhesive
Plasters — (4)

Materials For Bandages

Cotton Bandages — (1)

Elastic Bandages — (2)

Adhesive Bandages — (3)

o Types of Bandaging

- ① Roller Bandages ——— ①
 - Circular Bandages ——— ②
 - Spiral Bandages ——— ③
 - Reverse Spiral Bandages ——— ④
 - Recurrent Bandages ——— ⑤
-

- ② Head Bandage ——— ②
- Eye Bandage ——— ③
- Barrel Bandage ——— ④
- T-Bandage ——— ⑤
- Scrotal Bandage ——— ⑥
- Stump Bandage ——— ⑦
- Finger Bandage ——— ⑧
- Hand Bandage ——— ⑨
- Elbow Bandage ——— ⑩
- Ankle Bandage ——— ⑪

Rules of Bandaging

- Correct size of Bandage — (1)
- Stand in front of Hand — (2)
- Placed in a proper position — (3)
- Should be on outer aspect — (4)
- Turn outwards — (5)
- Fixed by taking two turns — (6)
- Overlap $\frac{2}{3}$ rd — (7)
- Equal Pressure — (8)
- Absorbent cotton (use) — (9)
- Finished with complete turn — (10)

Handwritten text at the top right, possibly a page number or date.

- ① - ... of ...
- ② - ... of ...
- ③ - ... in a ... position
- ④ - ... need ...

⑤ - ... out ...

⑥ - ...

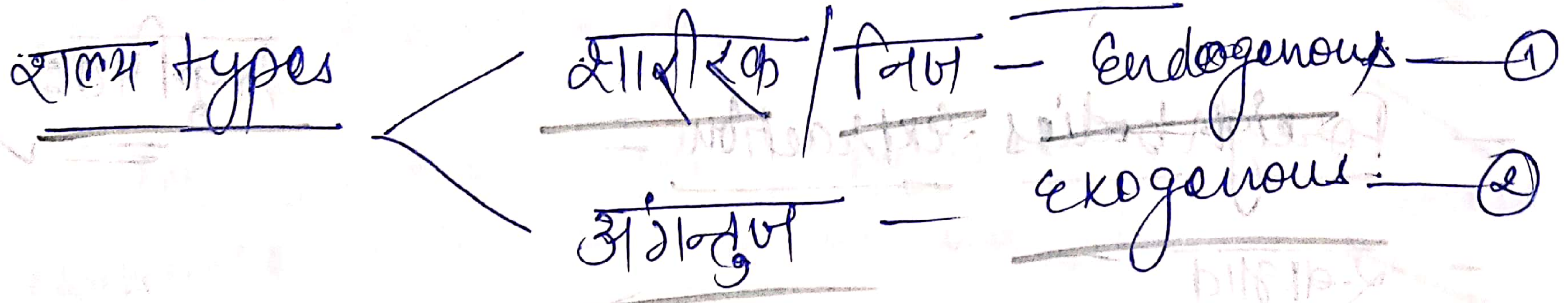
⑦ - ...

⑧ - ...

⑨ - ...

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गणक रोग (Foreign Bodies in tissue)



- रोग गति
- अधो गति — up wards.
 - अधो गति — downwards.
 - अवचीन — Backward.
 - त्रिभुज — side
 - रिजु — straight.

सामान्य लक्षण -

- शोक — ①
- वेदन — ②
- पिडका — ③
- स्पाव — ④
- स्फुटस्फुट — ⑤
- अचिंत — ⑥

विशेष लक्षण -

- लोक घात रोग
- मांस घात रोग
- पेशा घात रोग
- सिरघात रोग
- स्नायुघात रोग
- स्त्रोतो गत रोग
- धमनीगत रोग
- अस्त्रि गत रोग
- संधिगत रोग

रोग युक्त लक्षण

~~कोष्ठगत शूल~~
~~मर्मगत शूल~~

Asphyxia -
 - कोष्ठ पीड वा
प्रकृषितः ✓

Foreign bodies extraction -

~~र-वाग्नाद~~
~~प्राचन~~
~~गोचन~~
~~लायन~~
~~पीडन~~
~~प्रमाजिन~~
~~निश्मापिन~~
~~वमन~~
~~विरचन~~
~~प्रक्षालन~~
~~प्रतिमर्श~~
~~प्रवाहणम्~~
~~आयुधोत्थम्~~
~~अश्लेष्कान्ता~~
~~दुष~~

शूलनिर्मुक्तम्
 शूलनिर्मुक्तम्
 शूलनिर्मुक्तम्
 शूलनिर्मुक्तम्
 शूलनिर्मुक्तम्

① - कर्षणम्
 ② - शूलनिर्मुक्तम्
 ③ - शूलनिर्मुक्तम्
 ④ - शूलनिर्मुक्तम्
 ⑤ - शूलनिर्मुक्तम्
 ⑥ - शूलनिर्मुक्तम्

~~शूलनिर्मुक्तम्~~
~~शूलनिर्मुक्तम्~~
~~शूलनिर्मुक्तम्~~

(शूलनिर्मुक्तम्)

Fluid, electrolyte, Acid Base Balance

water and electrolytes.

- water and electrolyte imbalance directly
co-relates with the Anions and cations process.
- diagnosis process.

Factors -

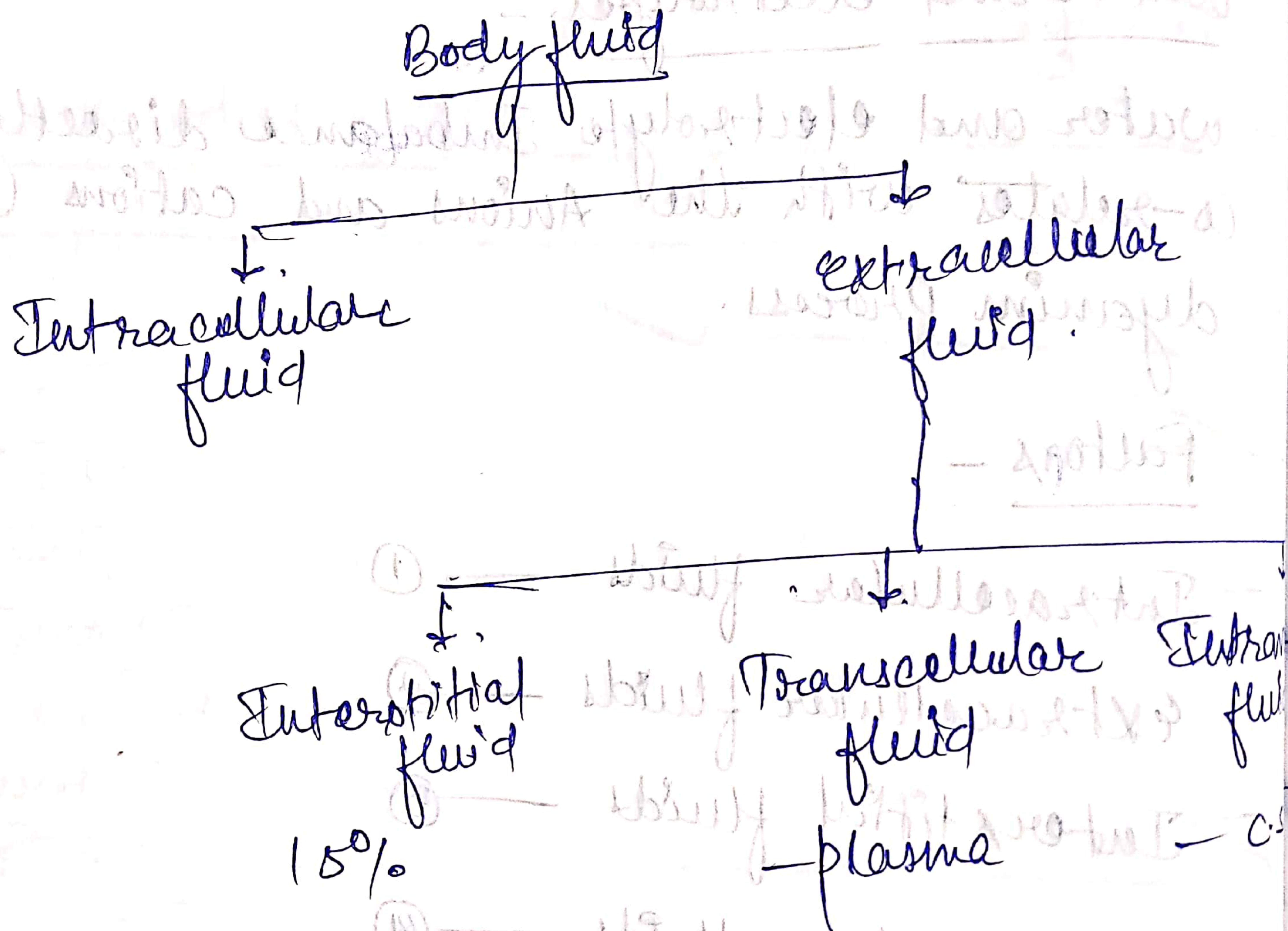
- Intracellular fluids — (1)
- Extracellular fluids — (2)
- Interstitial fluids — (3)
- Transcellular fluids — (4)
- Intravascular fluids — (5)

Composition chart -

- Total Body fluid — 60%
- Plasma — 92% water — 55% Blood Plasma
- CSF — 45% RBC
- ISF

chest cavity — (7)

Flow chart



Electrolytes

- Cations — ①
- Anions — ②
- osmosis — ③
- diffusion — ④
- filtration — ⑤

composition chart
Total Body fluid 60%
plasma 92%
92%
92%

- Cations - Sodium (1)
 - Potassium (2)
 - Magnesium (3)
 - Hydrogen (4)

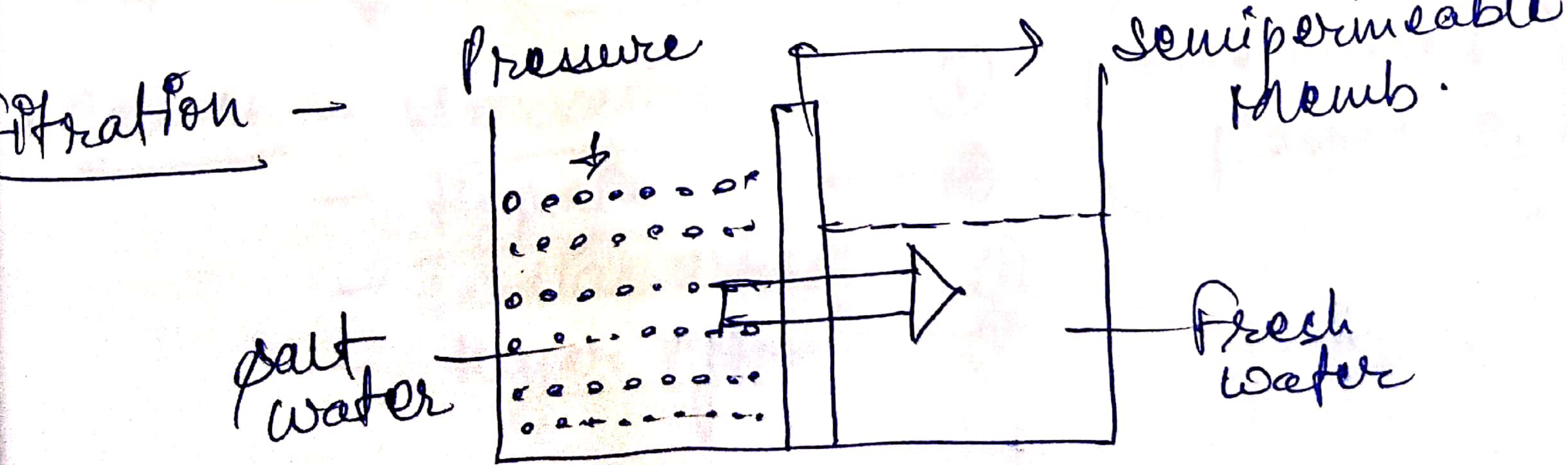
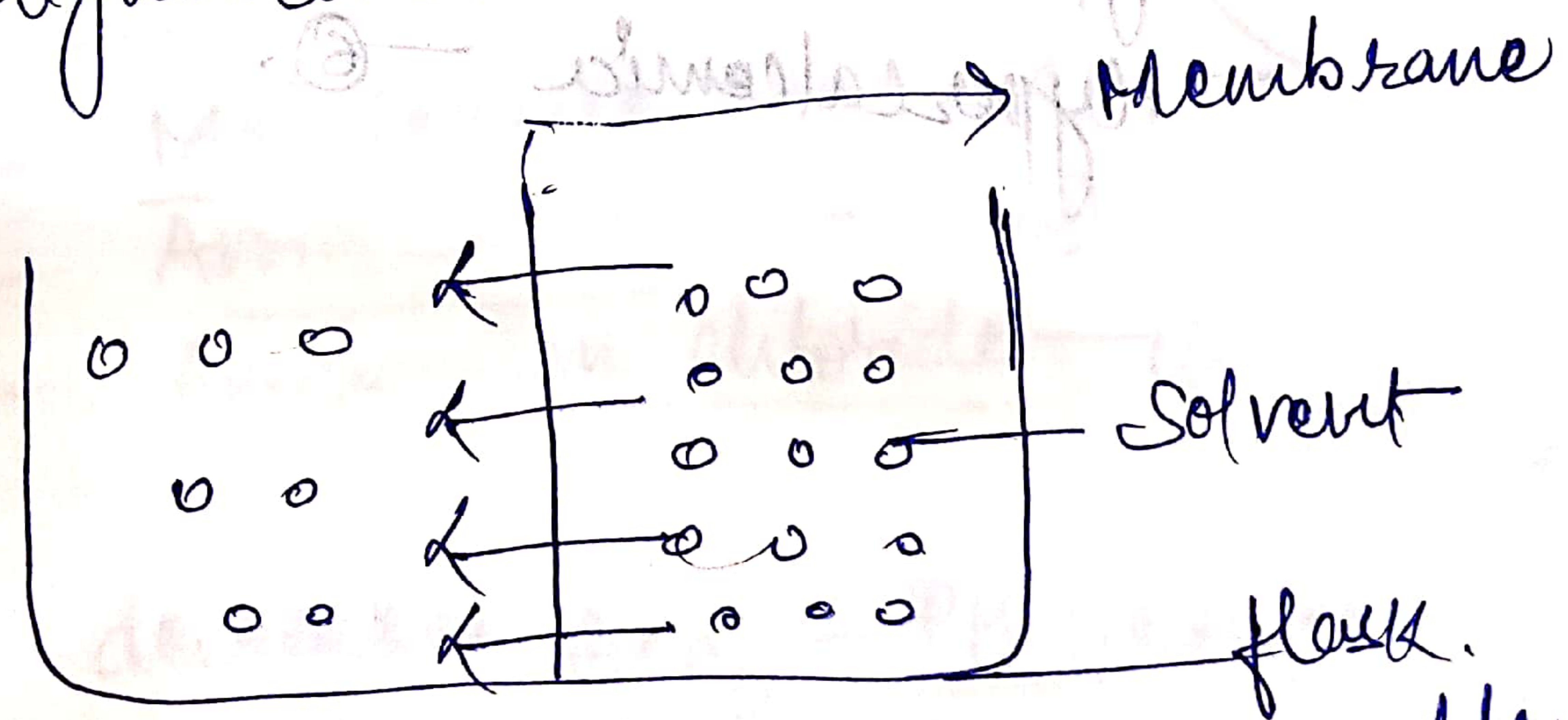
quantity - steady
 more -
 speed -
 specified -

- Anions - Chloride
 - Bicarbonate
 - phosphate
 - sulphate

concentration
 similar to oxygen
 similar to oxygen
 similar to oxygen

Osmosis - low concentration → high concentration

Diffusion - higher concentration → lower concentration.

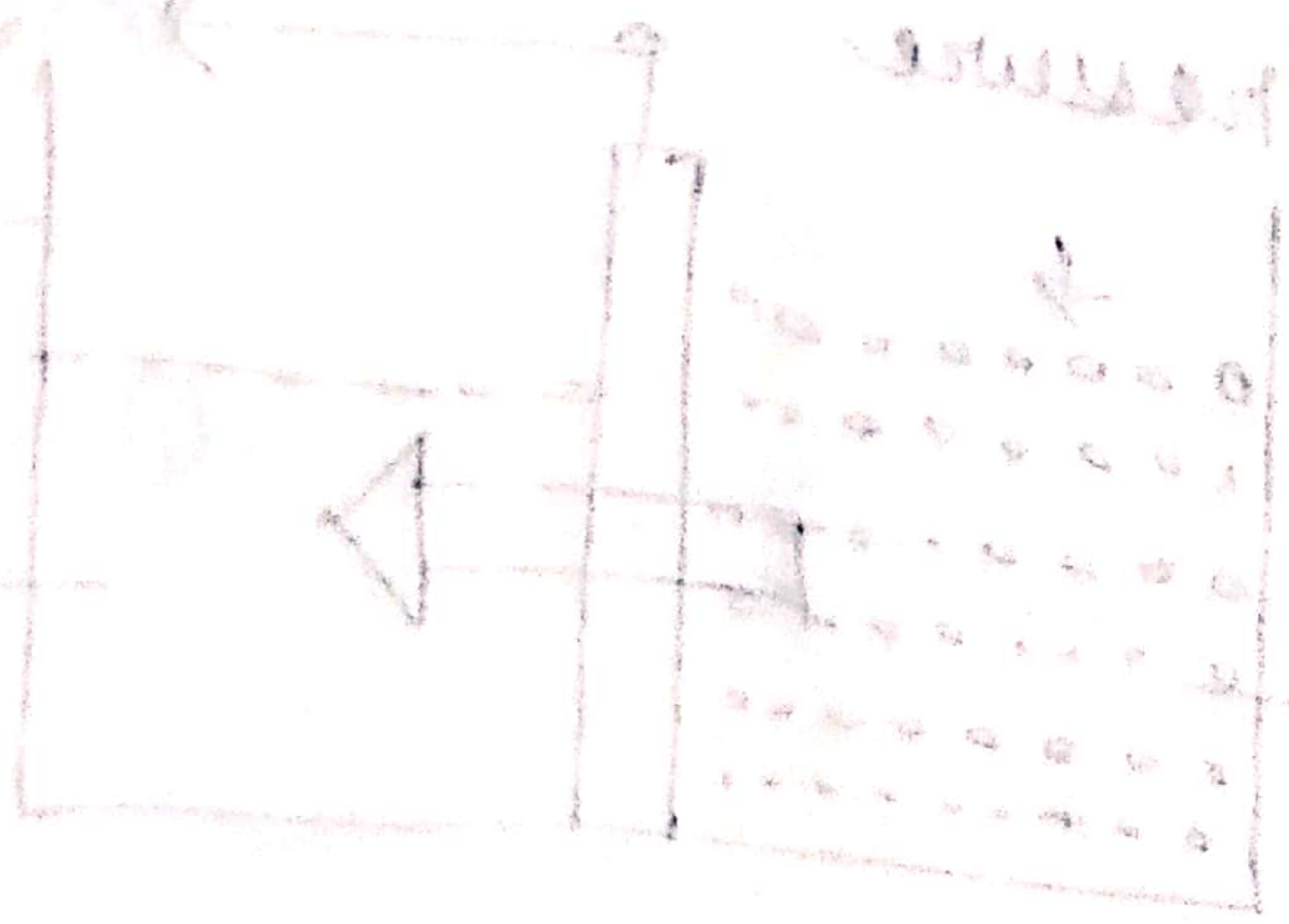
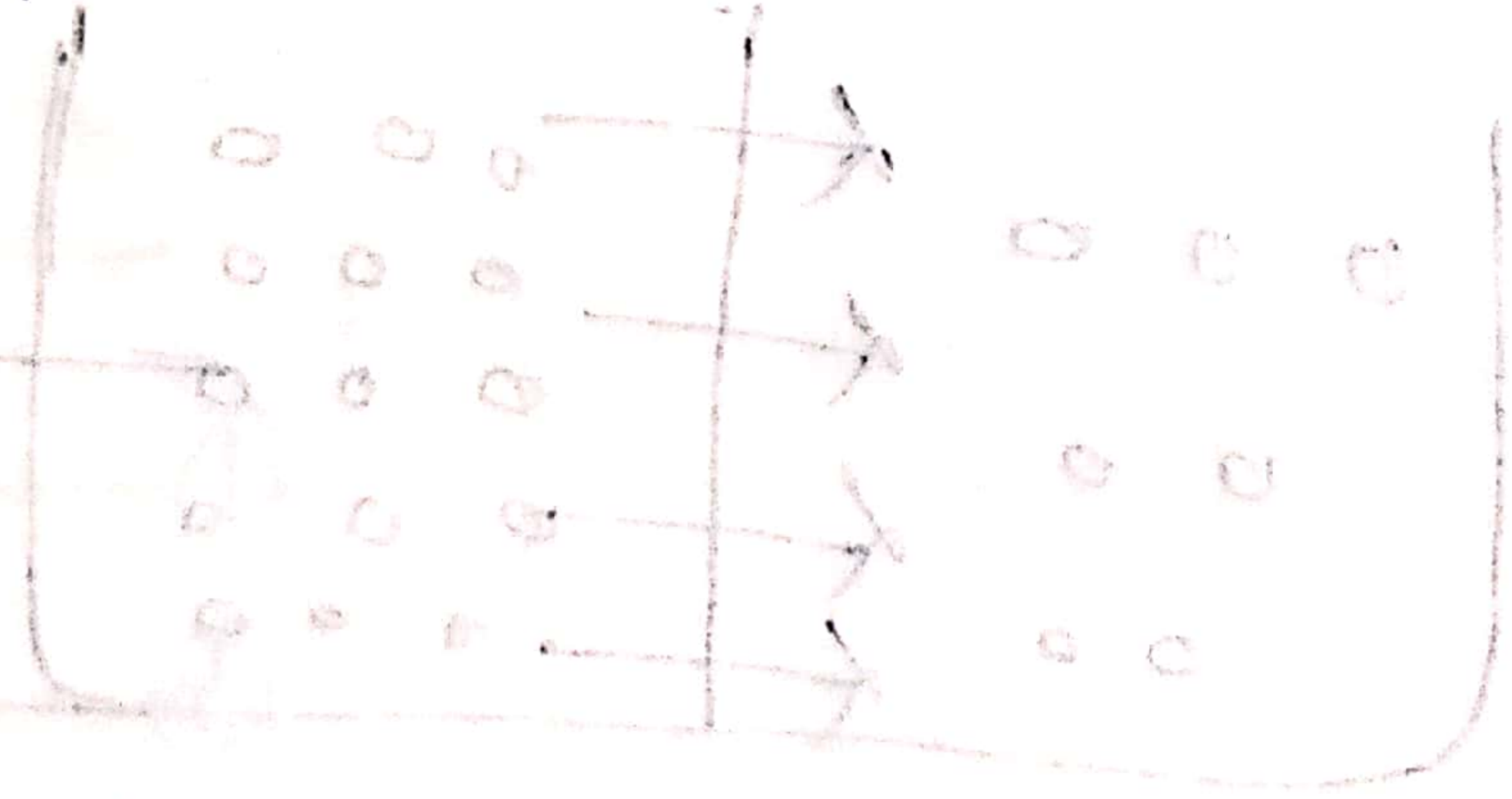


chest ... (7)

- Routes
- Kidney — ①
 - Skin — ②
 - Lungs — ③
 - GI Tracts — ④

Fluid volumes

- Hyponatremia — ①
- Hypernatremia — ②
- Hypokalemia — ③
- Hyperkalemia — ④
- Hypocalcemia — ⑤
- Hypercalcemia — ⑥



Water

osmosis

Acid Base disorders

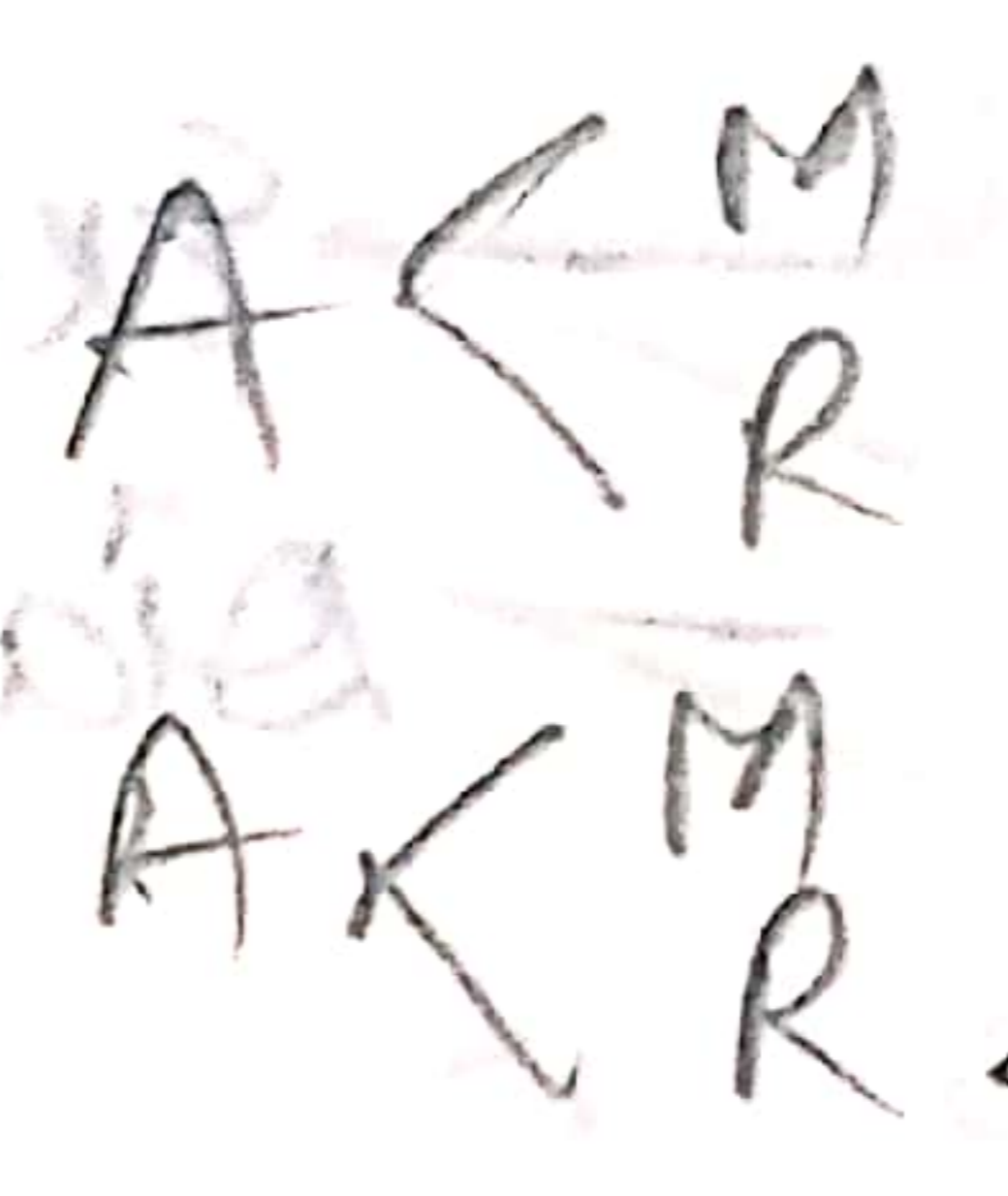
Alkalosis
Acidosis { Metabolic and Respiratory }
 { Metabolic and Respiratory }

Alkalosis - (Metabolic)

- Increases HCO_3^- By which pH increases.

Causes:

- Vomiting
- Acid ↑
- Stenosis
- Headache



Treatment

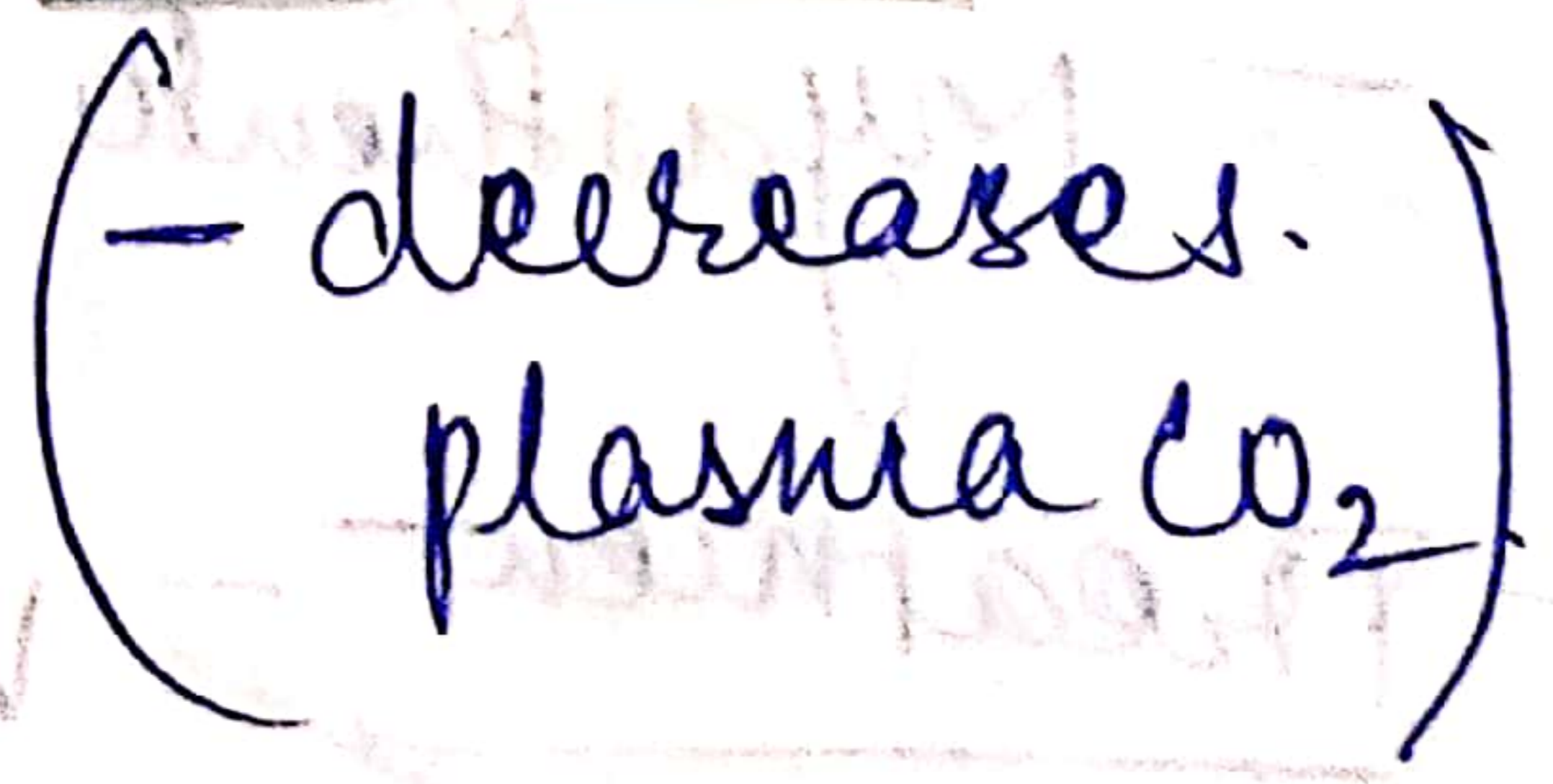
- Maintenance — ①
- Avoid cause — ②
- Ammonium chloride — ③

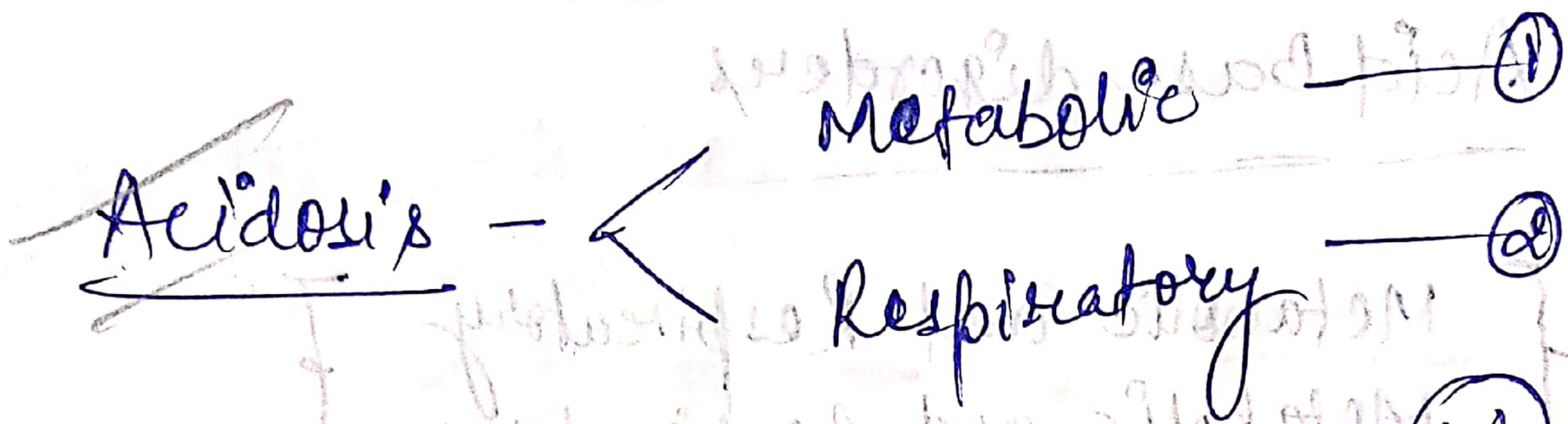
Respiratory

decreases HCO_3^- - pH reduces.

Causes:

- Starvation — ①
- Hypoxia — ②
- Cardiac arrest — ③
- Hyper pyrexia — ④





Causes

- Diabetes
- Hypoxia (Metabolic)
- Starvation
- Cardiac arrest
- Excessive Exercise
- Diarrhoea

(M)

Causes

- Chest Injuries
- Bronchitis
- Airway obstruction
- Myasthenia gravis

Treatment

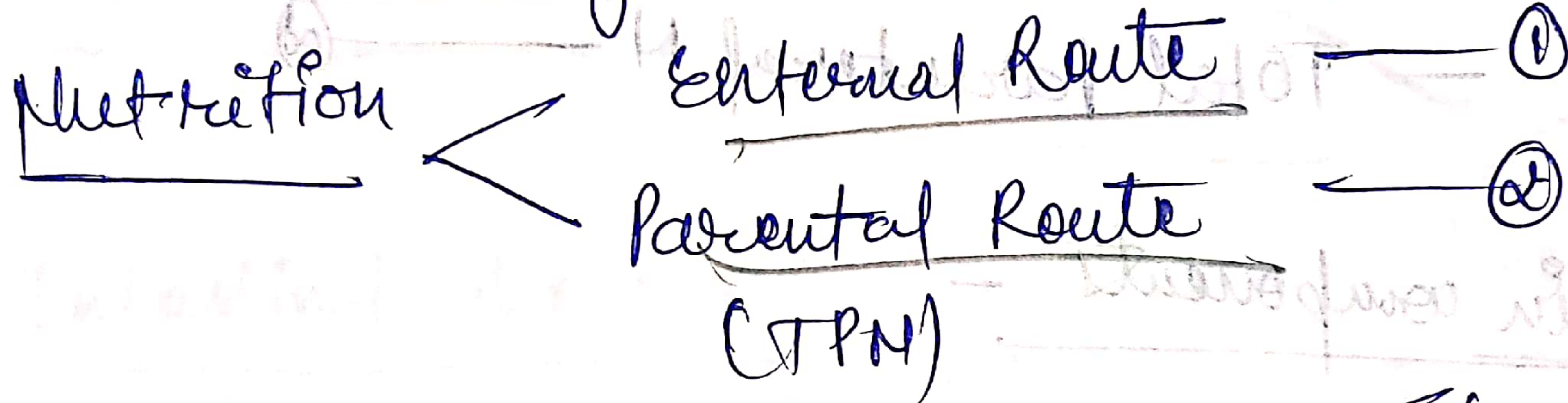
- ventilation --- (1)
- Muscle Relaxation --- (2)

(R)

Nutrition

Nutritional requirements

- 2900 - 2500 Kcal/day
- 1800 - 2000 Kcal/day
- 500 Kcal/day



Administration

- 50 ml every 4 hrs
- 100 ml every 4 hrs
- Milk added

① (Enteral Route)

Complications

- Vomiting — ①
- Diarrhea — ②
- Bowel distension — ③
- Sinusitis — ④

Chest

② TPN (Total Parenteral Route) N (Nutrition)

Method of feeding that by pass the gastro-intestinal tract.

Types - Parenteral N. ①
① Total Parenteral N ②

3 main components

Lipids

Emulsions ①

Proteins ②

Dextrose ③

Vein used

superior vena cava is used for TPN

Complications

Fatty

Hepatitis

Chirrosis

Quantity

500 milliliters.

Pyloric stenosis

Gastric outlet obstruction

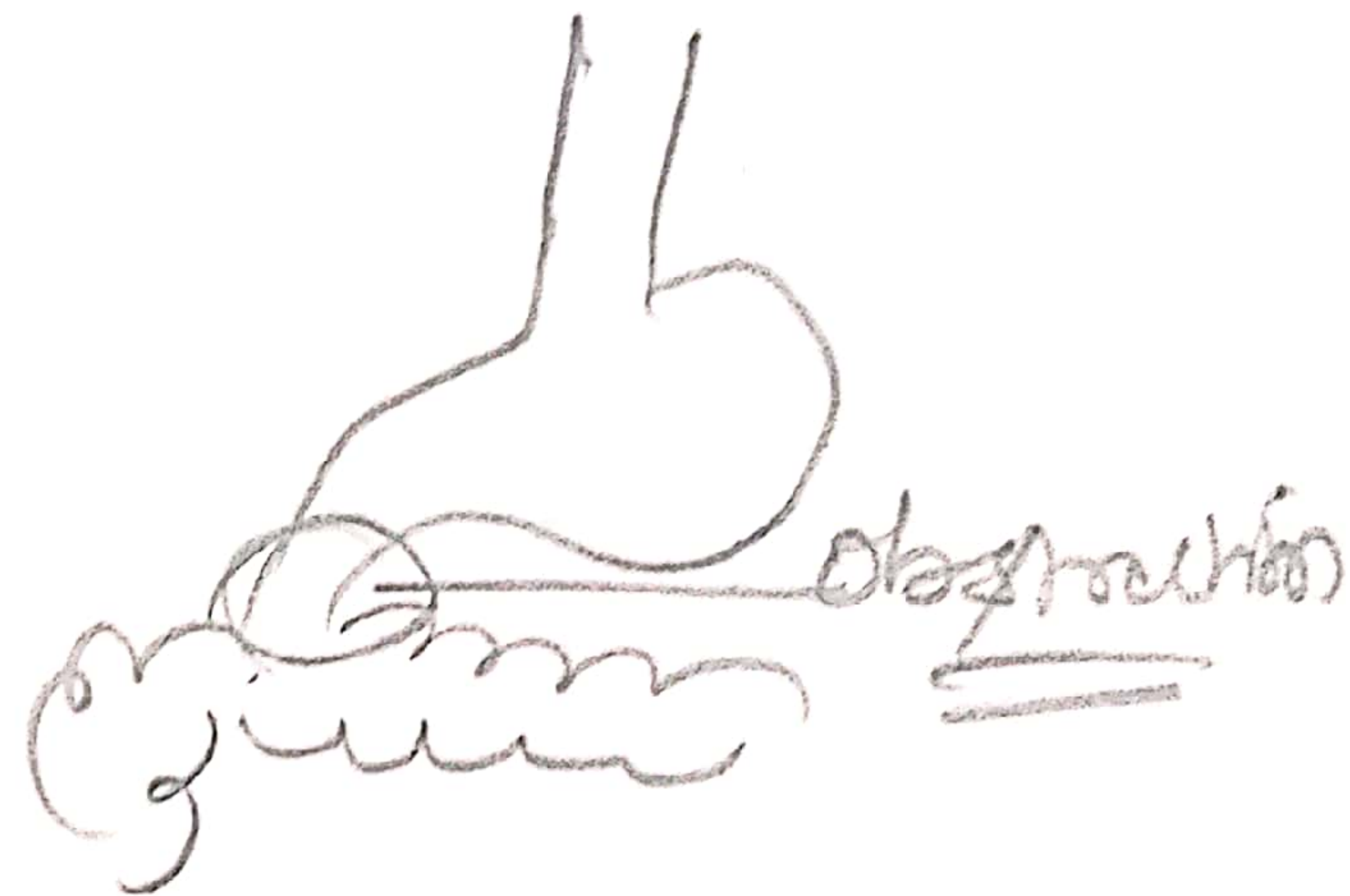
A condition in which the opening b/w the stomach and small intestine thickens.

- Babies under six months

Intestinal obstruction

- Bowel obstruction -

- A GIT condition in which digested material is prevented from passing normally the bowel.



Anuria - Failure of kidneys to produce urine.

- High GFR — (1)
- Mild CKD. — (2)
- Moderate CKD. — (3)
- Severe CKD. — (4)
- End stage CKD — (5)
- Chest X-ray — (6)

Pharmacokinetics

Pharmacodynamics

A measure of the extent to which the drug is absorbed and distributed in the body.

Pharmacokinetics

Pharmacodynamics

Pharmacokinetics

A drug is present in the body in a concentration which is sufficient to produce a therapeutic effect.

Pharmacokinetics - Failure of delivery to the site of action

- 1. Absorption
- 2. Distribution
- 3. Metabolism
- 4. Excretion

रक्तस्राव (Haemorrhage)

- Medical emergency ✓

- S rupture of Artery

- Vein

- Capillary

- Haemo - Blood

- rhaige - Blood come out
(Burst) ✓

Classification -

- Based on source — ①

- Based on time — ②

- Based on type — ③

- Based on condition — ④

- Based on possibility — ⑤

- Based on quantity — ⑥

① Based on source

- Arteries — ①
- Veins — ②
- Capillaries — ③

② Based on time

- Primary — ①
- Secondary — ②

③ Based on type

- Revealed — ①
- Concealed — ②

④ Based on condition

- Acute
- Chronic

⑤ Based on Possibility

- Surgical
- Non-surgical

⑥ Based on Quantity

- Mild
- Moderate
- Severe

Pathophysiology

Class - I 700 ml Blood loss

Class - II 800-1000 ml Blood loss

Class III 1000-2000 Blood loss

Class IV > 2000 Blood loss

management -

- ✓ Hospitalization — ①
- ✓ Ventilation — ②
- ✓ CBC — ③
- ✓ Blood transfusion — ④
- ✓ dressing — ⑤
- ✓ suturing — ⑥
- ✓ cauterization — ⑦

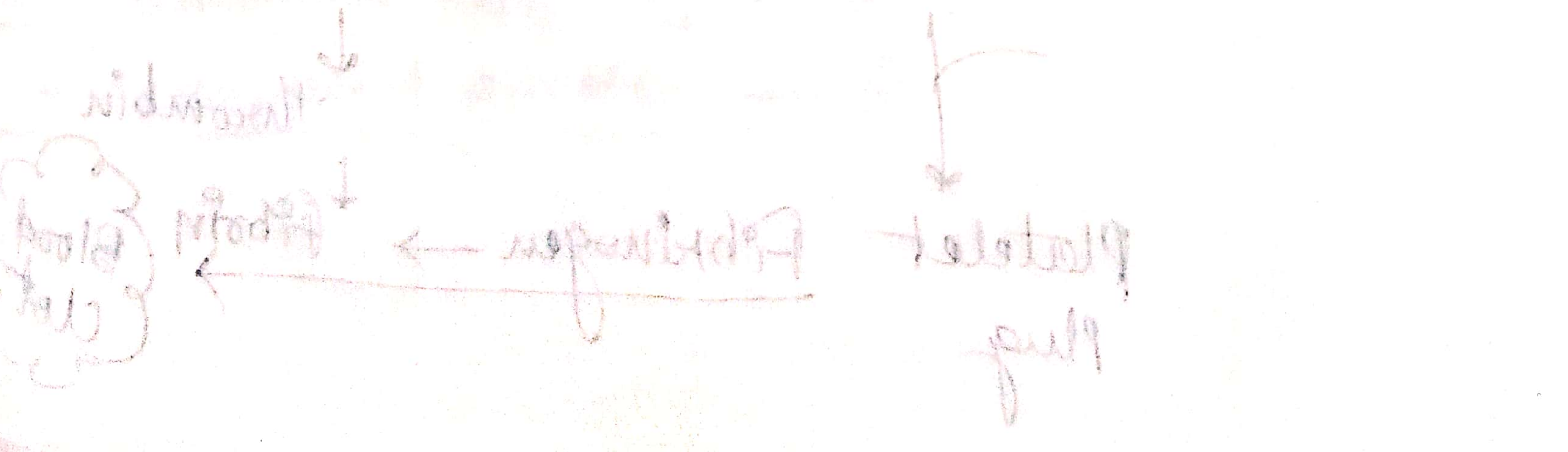
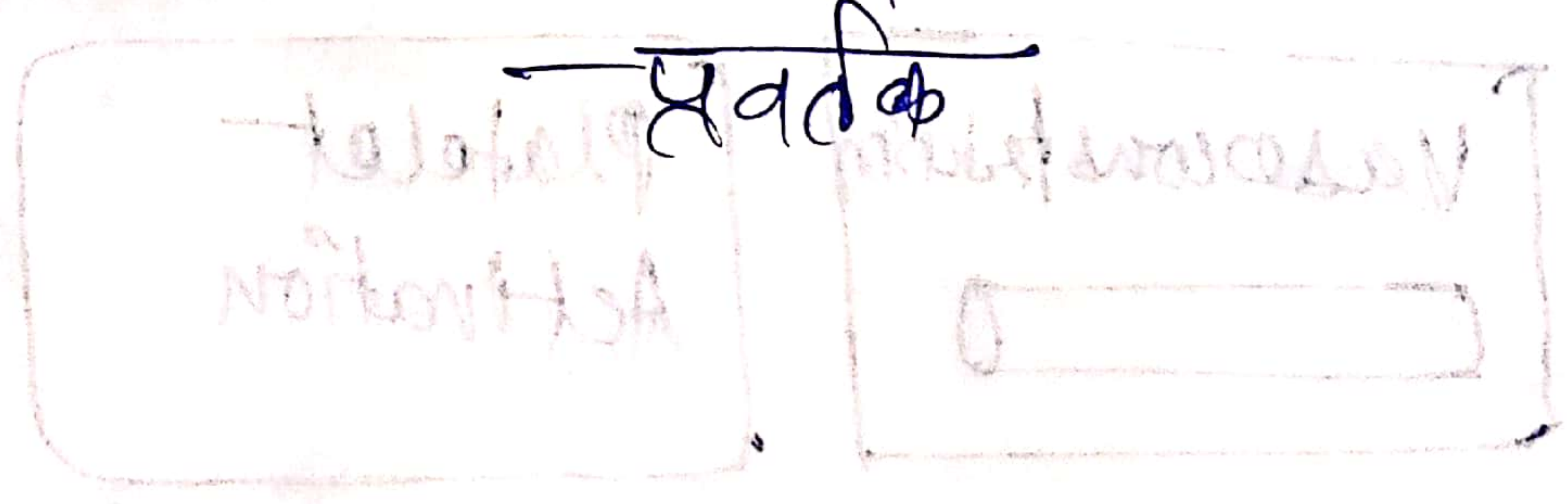
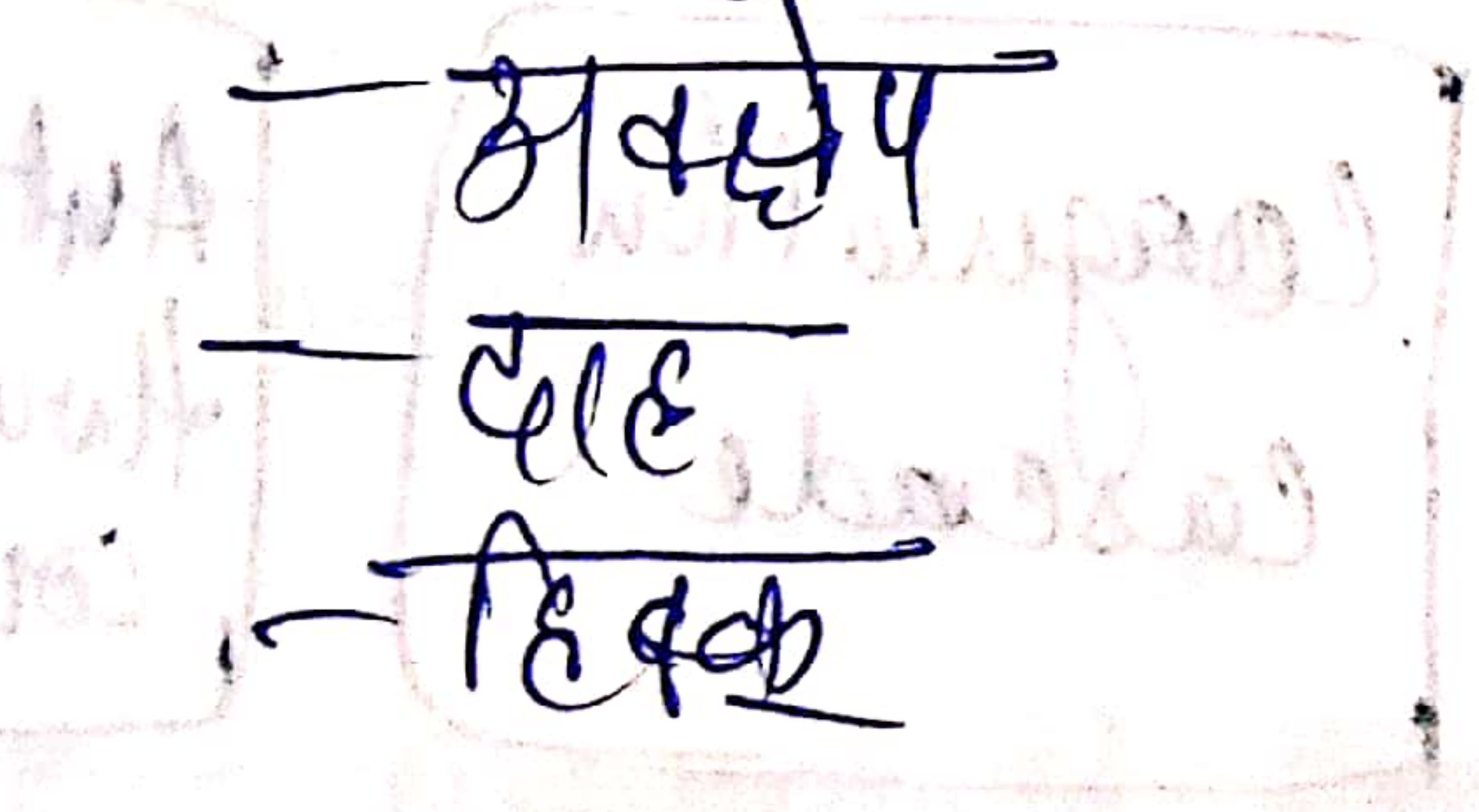
Vasospasm
 Platelet Activation
 Vasoconstriction
 Hemorrhage
 Thrombocytopenia
 Hemorrhage
 Thrombocytopenia

अनिर्दिष्ट लक्षण

- Headache
- Blindness
- Tinnitus
- धातु क्षय

४५० स्तम्भिक आयु

- शरीरान
- रक्तान
- पाचन
- दृष्टि
- श्रवण



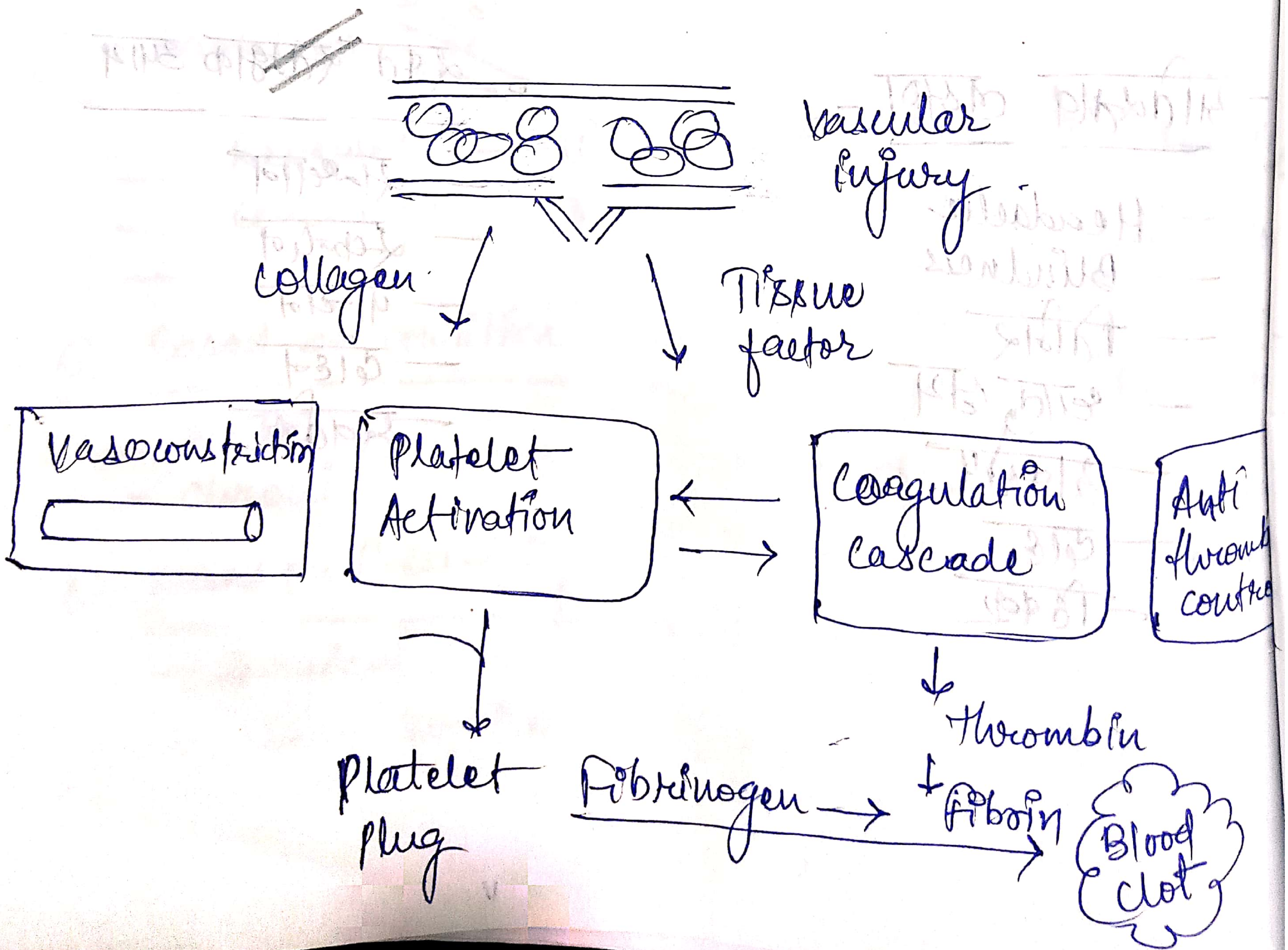
Haemostasis

(2022-1910)

- ✓ Vasodilation — ①
- ✓ Platelet Activation — ②
- ✓ Coagulation — ③
- ✓ Antithrombotic — ④

} Major components of Haemostasis

• Diagrammatic Representation



खून का अणु (Blood Transfusion)

Blood transfusion is the process of transferring Blood Products into a person's circulation Intravenously.

Blood groups -

Blood type

- A+
- O+
- B+
- AB+
- A-
- O-
- AB-

Donate type

- 1. A+ AB+
- 2. O+ A+ B+ AB+
- 3. B+ AB+
- 4. AB+
- 5. A- AB-
- 6. Everyone
- 7. AB-

AB- universal recipient — (1)
O- universal donor — (2)

Blood Products

- Packed red cells — ①
- Platelets — ②
- Fresh frozen plasma — ③
- Cryoprecipitate — ④
- Fibrinogen — ⑤

Blood transfusion types

- Red Blood cell — ①
- Platelet transfusion — ②
- Plasma transfusion — ③

- Criteria
 - Right blood — ①
 - Right Patient — ②
 - Right time — ③
 - Right Place — ④

Blood Transfusion Steps

- Find current type
- then Cross Match
- Consent and PT History
- obtain large bore IV
- Assemble supplies
- obtain blood

Indications -

- Blood loss — ①
- Massive Burns — ②
- Anaemia — ③
- major operations — ④
- Sepsis — ⑤
- Bleeding disorder — ⑥
(Haemophilia)

Storage - 4°C (2-6°C)

Complications

- Allergy
- Fever
- Blood Borne Infection

TRALI

- Major Incompatibility Rxn
- Minor Incompatibility Rxn

Blood Transfusion

- ①
- ②
- ③
- ④
- ⑤
- ⑥

Indications

- ①
- ②
- ③
- ④
- ⑤
- ⑥

Page No. / Date

Antibiotic, Analgesics and Emergency drugs.

- Antibiotics drugs. — This is a type of Antimicrobial drug used in treatment and prevention of bacterial infection.

Antibiotics types

- Penicillins
- Lincomycins
- ① — Aminoglycosides
- ② — Tetracyclines
- Glycopeptides
- Sulfonamides
- Macrolides.

Gram +ve ✓
Bac ✓
— Penicillin — ①
— erythromycin — ①

Gram -ve
Bac
— Streptomycin — ②
— Gentamycin — ②

Analgesics

Analgesic is directly correlates with the a substance that Reduces Pain.

Types

- ✓ opoid Analgesics — ①
- ✓ Non-opoid drugs — ②

- ① opoid drugs
 - Morphine — ①
 - Tramadol — ②

- ① Morphine
 - Dose — 10-15 mg
 - uses
 - depressant
 - stimulation
 - Analgesic
 - Sedation

- ② Tramadol
 - Dose — 50-100 mg
 - Indication
 - Medium
 - Short pain
 - Chronic pain

② Non-opioid drugs -

- ✓ Mephenamic Acid — ①
- ✓ Diclofenac sodium — ②
- ✓ Paracetamol — ③
- ✓ Piroxicam — ④

✓ Emergency drugs

- ✓ Adrenaline — ① 0.5 to 1 ml.
- ✓ Insulin — ② 2 ml. (40 units/ml)
- ✓ Fentanyl — ③ 2 ml
- ✓ Morphine — ④ 1 ml amp.
- ✓ Mannitol — ⑤ 100 ml to 300 ml.
- ✓ Diazepam — ⑥ 2 ml amp.
- ✓ Captopril — ⑦ Angiotensin II
Hypertension

① new - opened class

② Magnesium Acid

③ nitric acid solution

④ potassium

⑤ Potassium

Emergency class

1st to 2nd

(1st/2nd)

1st camp

1st to 2nd

2nd camp

Hydrogen peroxide

① Acetic Acid

② Hydrogen

③ Hydrogen

④ Hydrogen

⑤ Hydrogen

⑥ Hydrogen

⑦ Hydrogen

Diagnostic techniques

X-Ray

Imaging techniques

ultrasonography

CAT scan

- MRI

- Biopsy

Ray - X-Ray are a type of radiation called electromagnetic waves.

X-Ray creates pictures inside your
Body

- present ⁱⁿ the form of different shades of black and white.

Types - Common X-Rays areas follows $\frac{P}{\circ}$

Abdominal X-Ray — ①

Barium X-Ray — ②

Bone X-Ray — ③

Chest X-Ray — ④

- Dental X-Ray ——— (5)
- Hand X-Ray ——— (6)
- Joint X-Ray ——— (7).

• Basic types of X-Ray -

- ✓ CAT Scan ——— (1)
- ✓ Fluoroscopy ——— (2)
- ✓ Angiogram ——— (3)
- ✓ Chest Radiograph ——— (4)

• Views of X-Ray -

- Antero-posterior view ——— (1)
 - Postero Anterior view ——— (2) Standing view
 - Lateral view ——— (3) Water's view
 - Skyline view ——— (4) oblique
- Common types of X-Ray -
- Chest X-Ray -
 - diagnostic X-Ray examination.

Abdominal X-Ray films -

calcifications

Dilated gut

Intraperitoneal gas

- Abnormal places.

- Non-biological objects

- Pathological calcifications

Should be looked.

Radiography types -

Intrahepatic cholangiography — (1)

Biliary contrast Radiography — (2)

Percutaneous trans hepatic cholangiography — (3)

Endoscopy Retrograde Pancreatography — (4)

T-tube cholangiography — (5)

- o USG
- o Ultrasonography

— ultra sound is the frequency range of 1-20 MHz is used in diagnostic ultrasonography.

— lower compressibility results in higher velocity.

✓ 330 m/s in air (lungs) — ①

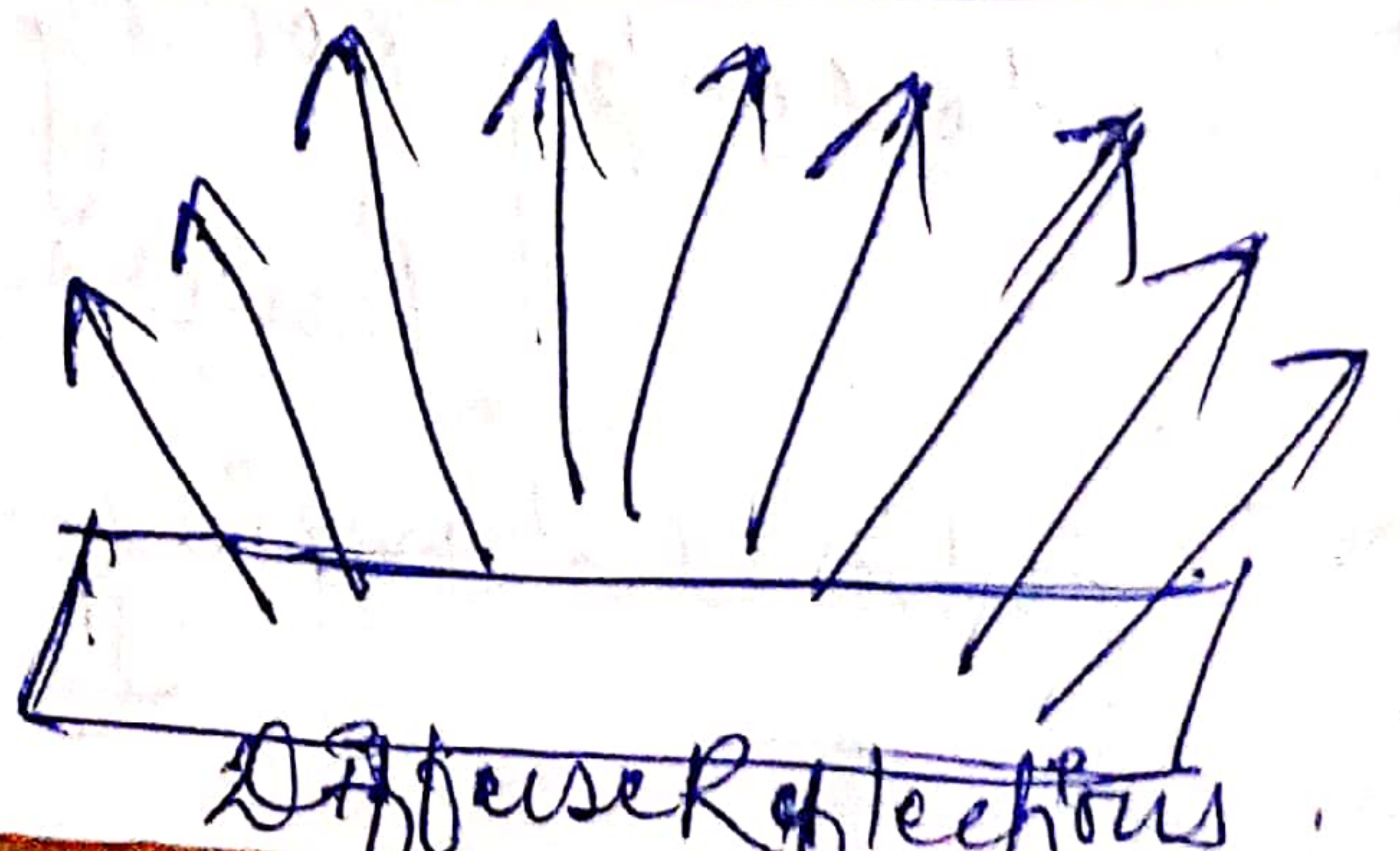
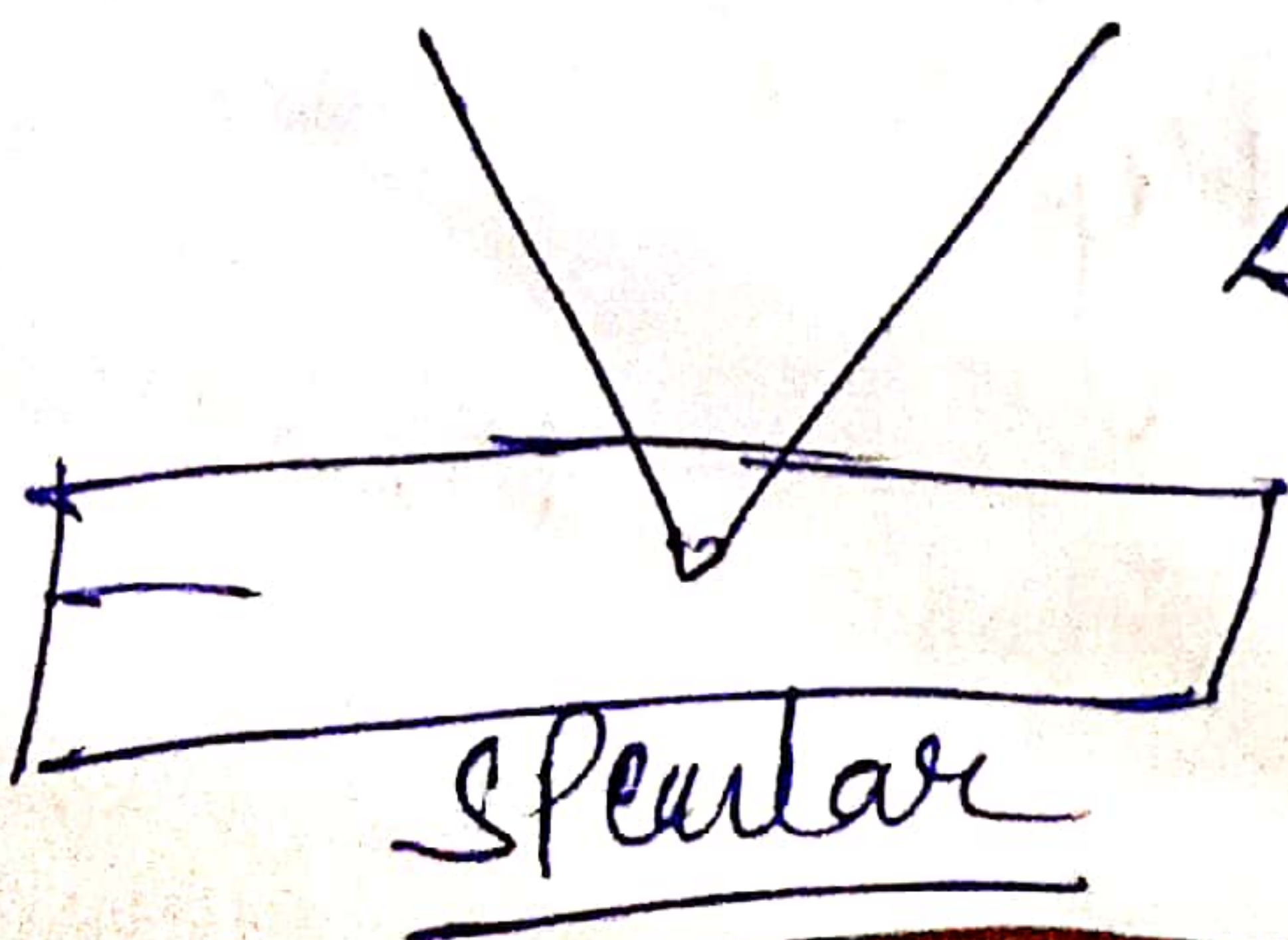
✓ 1540 m/s in soft tissues — ②

✓ 3000 m/s in Bone — ③

Ultrasonography
Reflection

Specular Reflection

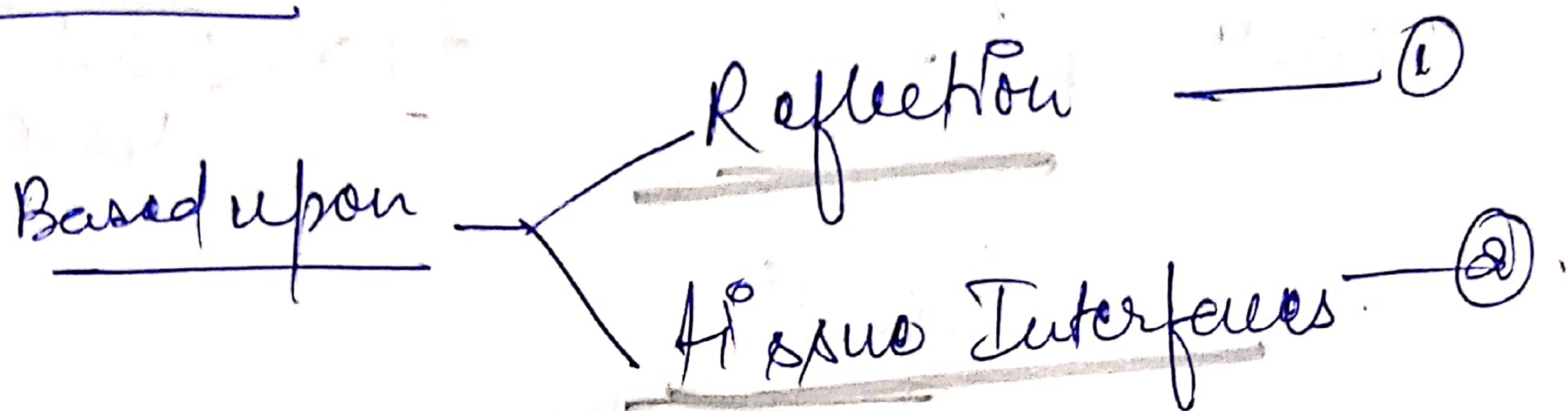
Diffuse Reflection



Factors —

- Reflected ————— ①
- Reflected ————— ②
- Scattered ————— ③
- propagates ————— ④

Dependences —

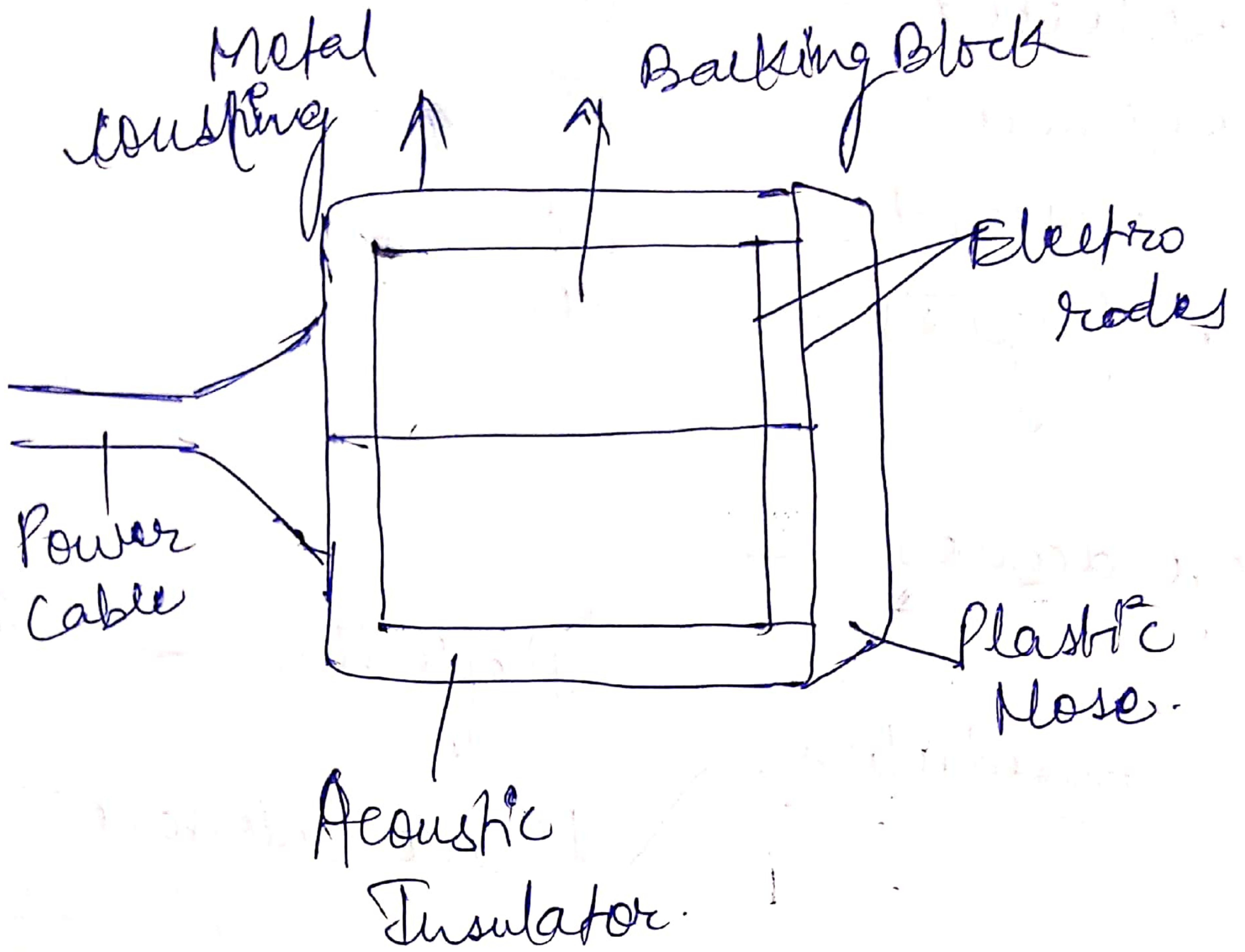


Agelix used to minimize
the presence of air b/w the
transducer and skin

Modes of operation —

- A Mode ————— ①
- M Mode ————— ②
- B Mode ————— ③
- Doppler ultrasound ————— ④
- Echocardiography ————— ⑤

Diagram



Transducer

CAT — CT scan —

◦ CT-scanning ◦

CT-scan directly correlates with the computed tomography

Involves —

- X-Radiation — ①
- thin film — ②
- slices of patient — ③
- Image capture — ④
- High resolution — ⑤
- electronically Edited — ⑥

uses — Investigate difficult areas — ①

eg — lungs, mediastinum
Brain, spinal cord — ②

- Abdominal pathologies — ③
- Pre-treatment planning — ④

- Plan surgery
- guide Needles during Biopsy

MRI - (Magnetic Resonance Imaging)

- MRI involves - Powerful Magnetic field to body.
- causes protons of all Hydrogen nuclei
- Resonate
- emits Radio signals.
- Recorded electronically

- Views - Transverse plane - (1)
- Longitudinal plane - (2)
- Oblique plane - (3)

- uses - examine Brain - shoulder
- spinal cord - Ankle
- knee
- HPP