

2.3. Demonstration (Comparison and classification with modern instruments)

Unit 2. Yantra & Śastra — Topic 3. Demonstration: Comparison and Classification with Modern Instruments

1) Orientation: what "comparison & classification" means in OT practice

Classical **Yantra** (blunt/mechanical devices) and **Śastra** (sharp instruments) were defined to remove, expose, drain, probe, and repair tissues with precision. Modern theatres use families of tools that do the **same core jobs** with refined metallurgy and ergonomics. Your goal is to **map each classical category and karma (action)** to **modern instrument families**, so that a question like "compare Saṃdaṃśa with modern forceps" or "classify Yantra/Śastra with examples" can be answered **from memory** and **applied to cases**.

```
परिभाषा—उद्देश: (Yantra):
"तत्र, मनःशरीराबाधकराणि श्रल्यानि ; तेषामाहरणोपायो यन्त्राणि ॥" — Suśruta Saṃhitā, Sūtrasthāna 7/4
Shalyas afflict the psycho-physical self; Yantras are the non-cutting means to remove them.
वर्गीकरण-यन्त्र (6 समूह):
"तानि षट्प्रकाराणि ; तद्यथा— स्वस्तिकयन्त्राणि, सन्दंशयन्त्राणि, तालयन्त्राणि, नाडीयन्त्राणि, अलाकायन्त्राणि, उपयन्त्राणि चेति ॥" — Su. Su.
"तत्र चतुर्विंशतिः स्वस्तिकयन्त्राणि, द्वे सन्दंशयन्त्रे, द्वे एव तालयन्त्रे, विंशतिर्नाङ्यः, अष्टाविंशतिः शलाकाः, पञ्चविंशतिरुपयन्त्राणि ॥" — Su.
Su. 7/6
उदाहरण—सन्दंश (लम्बाई-उपयोग):
''सनिग्रहोऽनिग्रहश्च सन्दंशौ षोडशाङ्गुलौ भवतः, तौ त्वङ्–मांस–िशरा–स्नायु–गत–शल्योद्धरणार्थम् उपदिश्येते ॥" — Su. Su. 7/8
यन्त्रकर्माणि (24 क्रियाएँ):
''यन्त्रकर्माणि
                                        निर्घातनपुरणबन्धनव्युहनवर्तनचालनविवर्तनविवरणपीडनमार्गविशोधनविकर्षणाहरणाञ्छनोन्नमन-
विनमनभञ्जनोन्मथनाचुषणैषणदारणर्जुकरणप्रक्षालनप्रधमनप्रमार्जनानि चतुर्विंशतिः ॥" — Su. Su. 7/17
यन्त्रदोषाः (12)ः
"... अतिस्थूलम्, असारम्, अतिदीर्घम्, अतिह्नस्वम्, अग्राहि, विषमग्राहि, वकं, शिथिलम्, अत्युन्नतम्, मृदुकीलं, मृदुसुषं, मृदुपाशम् ..." — Su.
Su. 7/19
शस्त्र-अष्टविध कर्म-अध्याय आरम्भ :
```

These verses **anchor** your comparisons: what the tool family is, how many classical types exist, which actions they perform, and how to judge quality.

2) Side-by-side classification: classical families → modern instrument

[©] Ayurvite Wellness Pvt Ltd. All rights reserved. This PDF is for personal use only. Unauthorized reproduction, distribution, or commercial use is strictly prohibited.



sets

A) Yantra (non-sharp) → modern families

Classical group (Su. 7/5-6)	Core function (pick from Su. 7/17)	Signature classical example	Modern instrument families (examples)
Saṃdaṃśa (2)	Āharaṇa, Vikarṣaṇa, Pīḍana	Forceps ~16 aṅgula (Su. 7/8)	Toothed/atraumatic tissue forceps, hemostats, Allis/Babcock, towel clips
Śalākā (28)	Eşaṇā, Ŗjūkaraṇa, Vivaraṇa	Probes/rods	Probes (sinus/lacrimal), directors, urethral/anal dilators, specula
Nāḍī (20)	Cūṣaṇa, Prakṣālana, Mārga- viśodhana	Tubes/cannulae	Suction tips (Yankauer/Frazier), drains (Penrose, Romovac), catheters (Foley, Ryle's)
Tāla (2)	Pīḍana, Vivartana/Vivaraṇa	Pressing/retraction aids	Basic retractors (Langenbeck/Senn), skin hooks, compressive devices
Svastika (24)	Bandhana, Ŗjūkaraņa	Cross-bar splinting	Splints (Thomas/Kramer), braces, traction frames
Upa-yantra (25)	Pūraņa, Pramārjana etc.	Field accessories	OT lights, drapes, trays, tourniquet, pads, sandbags, instrument trolleys

B) Sastra (sharp) → modern families

Suśruta's **20 Śastras** (Su. Sū. 8) map naturally to today's **cutting/dissecting, puncturing, bone, extraction, and suturing** sets.

Classical Śastra (sense)	Core Śastra-karma*	Modern family (examples)
Maṇḍalāgra, Vṛddhipatra, Arddhadhāra, Utpalapatra, Kuśapatra, Vetasapatraka	Chedana, Bhedana, Lekhana	Scalpels (No. 10/11/15), micro-knives, beaver blades
Karapatra, Antarmukha	Chedana (bone), Lekhana	Bone saws (oscillating, Gigli), serrated knives
Trikūrchaka, Ārā, Vrīhīmukha	Vyādhana (puncture/aspiration) Trocar-cannula systems, awls
Vaḍiśa	Āharaṇa (extraction)	Hooks (skin, tenaculum), fish-hook style extractors
Danta-śaṅku	Āharaṇa (dental)	Dental elevators, forceps
Śūci	Sīvana	Surgical needles (round-bodied, 3-edged, semicircular)
Eşaņī	Eșaņā	Probe/director

^{*}Aṣṭavidha Śastra-karmāṇi context: *Chedana, Bhedana, Lekhana, Vyādhana, Eṣaṇā, Āharaṇa, Sravana/Visrāvaṇa, Sīvana* (Su. Sū. 25).

3) Action-based (karma-based) demonstration: 24 Yantra-karmāṇi → what you pick today

Quote the verse, then select the tool family that accomplishes each action safely in a modern OT.

"यन्त्रकर्माणि तु— ... (24 names) ... चतुर्विंशति: ॥" — Su. Su. 7/17

Karma word (gloss)	What you actually do	Modern pick (examples)
Nirghātana (tapping/loosening)	Mobilise impacted body	Probe handle, light mallet
Pūraņa (packing/filling)	Pack cavity/achieve hemostasis	Ribbon gauze, packers

[©] Ayurvite Wellness Pvt Ltd. All rights reserved. This PDF is for personal use only. Unauthorized reproduction, distribution, or commercial use is strictly prohibited.

Modern pick (examples)



WHERE CLASSICAL WISDOM MEETS INTELLIGENT LEARNING

What you actually do

• • • • • • • • • • • • • • • • • • • •	, ,	
Bandhana (binding)	Pressure/support/immobilise	Crepe, elastic wraps, tourniquet*
Vyūhana (reposition)	Reduce/set displaced part	Splints, traction frames
Vartana (rolling)	Coaxial rotation to extract	Fine forceps + probe
Chālana (mobilising)	Free adhesions	Blunt dissector, probe
Vivartana/Vivaraṇa (everting/opening)	Expose field	Skin hooks, retractors
Pīḍana (compression)	Hemostasis/evacuation	Artery forceps, pressure pads
Mārga-viśodhana (tract cleansing)	Clear pus/debris	Irrigation cannula, suction
Vikarṣaṇa & Āharaṇa (traction & extraction)	Remove shalya	Toothed forceps, hooks
Āñchana (smearing/lining)	Lubricate/protect	Applicators with medicated oil/ghee

Anchana (smearing/lining)Lubricate/protectApplicators with medicated oil/ghedUnnamana/Vinamana (elevate/depress)Elevate/depress tissuesElevators, tongue depressor

Bhañjana/Unmathana (break/macerate)

Break hard mass/soften content

Stone forceps, curettes

Aspirate

Yankauer, Frazier

Eṣaṇā (probing) Delineate tract Straight probe, lacrimal probe

Dāraṇa (blunt splitting)Separate planesClosed forceps tipsŖjūkaraṇa (straighten)Align deformity/pathSplints, traction, directorsPrakṣālana (washing)IrrigateSyringe + catheter set

Pradhamana (insufflation) Insufflate/introduce medicament Air bulb/insufflator (contextual)

Pramārjana (mopping) Keep field clear Swabs, mops

Karma word (gloss)

4) Three mini-demonstrations (classical → modern)

Case A: Thorn foreign body in sole

Classical steps: Eṣaṇā (probe) → Vikarṣaṇa/Āharaṇa (forceps extraction) → Mārga-viśodhana & Prakṣālana → Bandhana.

Modern picks: Straight probe \rightarrow toothed Adson forceps (or mosquito for grip) \rightarrow saline irrigation with 10–20 mL syringe + cannula; swab and dry \rightarrow pressure dressing/crepe.

Verse anchors: Su. 7/4 (purpose), Su. 7/17 (actions), Su. 7/8 (Samdamsa).

Case B: Acute abscess drainage

Classical: Vivaraṇa/Vivartana (expose) → Cūṣaṇa (suction) → Nāḍī placement for drainage → Pūraṇa/Bandhana.

Modern: Skin hooks/small retractor → suction tip → Romovac/penrose drain → ribbon-gauze packing and pressure

bandage.

Anchor: Su. 7/5-6 (Nāḍī class; Upa-yantra), Su. 7/17 (Cūṣaṇa, Prakṣālana).

Case C: Sinus tract delineation

Classical: Eṣaṇā (probing) → Rjūkaraṇa (align) → Mārga-viśodhana/Prakṣālana → plan definitive step.

Modern: Malleable probe/director \rightarrow gentle straightening \rightarrow saline irrigation + suction \rightarrow decide on excision vs seton.

Anchor: Su. 7/17 (Eṣaṇā, Rjūkaraṇa, Mārga-viśodhana).

5) Quality & safety: translating doṣa into QC checks

"... द्वादश यन्त्रदोषा: ..." — Su. 7/19

^{*}Tourniquet classed under **Upa-yantra** (Su. 7/5-6).

[©] Ayurvite Wellness Pvt Ltd. All rights reserved. This PDF is for personal use only Unauthorized reproduction, distribution, or commercial use is strictly prohibited.



Modern equivalents:

- Atisthūlam / Ati-dīrgham / Ati-hrasvam / Vakram: reject mis-sized/mis-shaped tools; keep size sets (e.g., dilators).
- Asāram / Śithilam / Mṛdukīlam / Mṛdupāśam: hinge/catch weakness → retire; do logbook-based maintenance.
- Agrāhi / Viṣamagrāhi / Mṛdumukham: jaw misalignment/blunt tip → calibrate/replace; prevents slippage, crush, false passage.
- Karkaśa surfaces (implied): enforce smooth, corrosion-free finish; ultrasonic cleaning for lumens (Nāḍī).

For Śastra, Su. Sū. 8 warns against blunt, jagged, uneven, too thick/thin/long/short, unduly curved blades—modern response is edge-task matching, pre-use inspection, sterile packaging integrity, and timely blade change.

6) Anuśastra → modern analogues (when knife is not ideal)

Suśruta (Su. Sū. 8) names **substitutes**: bamboo skin, crystal, glass, **leech (jalaukā)**, **fire (agni)**, **alkali (kṣāra)**, nails, leaves, hair, fingers.

Modern parallels:

- **Leech therapy** (microsurgery congestion) ↔ *jalaukā*.
- Electrocautery/diathermy, lasers ↔ agni-karma.
- Chemical cautery (silver nitrate, phenol) ↔ kṣāra-karma.
- Guarded blades, plastic cannulae, blunt dissecting with fingers ↔ nails/leaves/fingers contexts.

 Use these to justify choice of energy/chemical methods in viva while staying faithful to classical doctrine.

7) Edge-task rules (Śastra) you must be able to say out loud (Su. Sū. 8)

Bhedana edge ≈ thin like muşura husk; Lekhana = ½ of that; Vyādhana/Visrāvaņa = hair-fine; Chedana = ½ of hair-fine.

Use this to explain why you picked a No.11 (fine, stab) vs No.10/15 (curved skin incision).

8) Viva-friendly master table: modern OT families back-mapped to Suśruta

Modern family	Examples	Classical anchor
Cutting & dissecting	Scalpels, micro-knives	Śastra: Maṇḍalāgra, Vṛddhipatra (Su. 8); Chedana/Bhedana/Lekhana (Su. 25)
Grasping & holding	Toothed/atraumatic forceps, clamps	Yantra: Saṃdaṃśa (Su. 7/8), Āharaṇa/Pīḍana (Su. 7/17)
Retracting & exposing	Skin hooks, Langenbeck	Yantra: Tāla, Vivaraṇa/Vivartana (Su. 7/17)
Probing & dilating	Probes, dilators, specula	Yantra: Śalākā (Su. 7/5-6), Eṣaṇā (Su. 7/17)
Suction & drainage	Frazier/Yankauer, drains	Yantra: Nāḍī (Su. 7/5-6), Cūṣaṇa/Prakṣālana (Su. 7/17)
Hemostasis/pressure	Artery forceps, tourniquet	Yantra : Pīḍana, Bandhana (Su. 7/17); Upa-yantra counted (Su. 7/6)
Suturing	Needles, needle-holders	Śastra: Śūci; Sīvana (Su. 25)
Bone work	Saws, osteotomes	Śastra: Karapatra, Kuṭhārikā (Su. 8)
Energy/chemical	Diathermy, laser, AgNO₃	Anuśastra idea (Su. 8); Agni/Kṣāra chapters (Su. 11-13)

[©] Ayurvite Wellness Pvt Ltd. All rights reserved. This PDF is for personal use only Unauthorized reproduction, distribution, or commercial use is strictly prohibited.



9) Memory anchors (counts & pairs)

- Yantra groups (6) with counts 24/2/2/20/28/25 → (Svastika/Saṃdaṃśa/Tāla/Nāḍī/Śalākā/Upa).
- Yantra-karmāṇi (24): learn 8 high-frequency verbs for viva—Eṣaṇā, Āharaṇa, Vikarṣaṇa, Cūṣaṇa, Prakṣālana, Pīḍana, Bandhana, Vivaraṇa—and state that the rest follow the same logic (Su. 7/17).
- Śastra (20): remember scalpel set (6), puncture set (3), bone set (2), extraction (2), suture (1), probe (1)—then fill the names.

10) Quick self-check (say it in 40 seconds)

"Yantra are non-sharp devices for śalyāharaṇa (Su. 7/4), classified into six groups with fixed counts (Su. 7/5-6). Their 24 actions (Su. 7/17) map to modern probing, grasping, retraction, suction, irrigation, packing, splinting. Śastra (Su. 8; Su. 25) give us cutting, puncturing, extraction, suturing sets. I prevent errors by eliminating Yantra-doṣa (Su. 7/19) and rejecting defective edges (Su. 8). In a case, I quote the action word and pick the modern family that performs it."

Assessment

A. MCQs (single best answer)

1. Which verse formally enumerates the six Yantra groups?

a) Su. 7/4 b) **Su. 7/5** c) Su. 7/8 d) Su. 25/1

Answer:

2. The modern counterpart of Nādī-yantra is primarily:

a) Bone saw b) **Drains/catheters/suction** c) Needle holder d) Skin hook

Answer: b

3. **Eṣaṇā** in Su. 7/17 most closely maps to:

a) Incision b) **Probing** c) Cautery d) Stapling

Answer: b

4. **Samdamśa** (Su. 7/8) should be compared with:

a) Electrocautery b) **Tissue forceps/hemostats** c) Retractors d) Dilators

Answer: b

5. **Vivaraṇa/Vivartana** actions are best achieved today by:

a) Scalpels b) **Skin hooks/retractors** c) Trocar d) Tourniquet

Answer: b

6. A Yantra-doșa likely to cause slippage while holding is:

a) Agrāhi/Viṣamagrāhi b) Ati-dīrgha c) Mṛdukīla d) Atyunnata

Answer: a

7. **Trikūrchaka** maps to which modern family?

a) Retractors b) Trocar-cannula (puncture/aspiration) c) Saws d) Needle drivers

Answer: b

8. **Bandhana** (Su. 7/17) is demonstrated today mainly by:

a) Scalpel blades b) Crepe bandage/tourniquet (Upa-yantra) c) Probes d) Drains

Answer: b

9. Karapatra belongs to which modern family?

a) Bone saws b) Catheters c) Needle sets d) Energy devices

Answer: a

10. The action-tool pair that is incorrect is:

a) Cūṣaṇa—suction tip b) Āharaṇa—hooks/forceps c) **Eṣaṇā—bone saw** d) Prakṣālana—irrigation set

[©] Ayurvite Wellness Pvt Ltd. All rights reserved. This PDF is for personal use only Unauthorized reproduction, distribution, or commercial use is strictly prohibited.





Answer: c

B. Short Answer Questions (3-5 lines each)

- 1. Classify Yantra (Su. 7/5-6) and give two modern examples under each group.
- 2. List **six** Yantra-karmāṇi (Su. 7/17) with a matching modern device for each.
- 3. Compare Samdamśa with toothed vs atraumatic forceps—indications and risks.
- 4. Write **four Yantra-doṣa** (Su. 7/19) and their modern QC prevention.
- 5. Enumerate five modern instrument families and back-map them to Sastra or Yantra anchors.

C. Long Answer Questions

- Demonstrate the correspondence between classical Yantra groups and modern OT families with at least three case vignettes (foreign-body extraction, abscess drainage, sinus probing). Cite Su. 7/4, 7/5-6, 7/17, 7/8, 7/19 where relevant.
- 2. Present a comparative classification of Śastra (20) and Yantra (6 groups) with their signature actions and modern exemplars. Explain edge-task rules of Śastra (Su. 8) and show how they guide scalpel/needle selection today.

Final takeaway

The cleanest demonstration answers always name the classical family, quote the action word from Su. 7/17 or the list verse (Su. 7/5-6; Su. 8), and then name the modern family that performs the same function. This shows that you can work the theatre and quote the text—the combination examiners reward.

[©] Ayurvite Wellness Pvt Ltd. All rights reserved. This PDF is for personal use only Unauthorized reproduction, distribution, or commercial use is strictly prohibited.