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A Practical Guide to

Surgical Instruments

X-rays and Operative Interventions



Ajay Kumar Agrawal
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Foreword
MLB Bhatt

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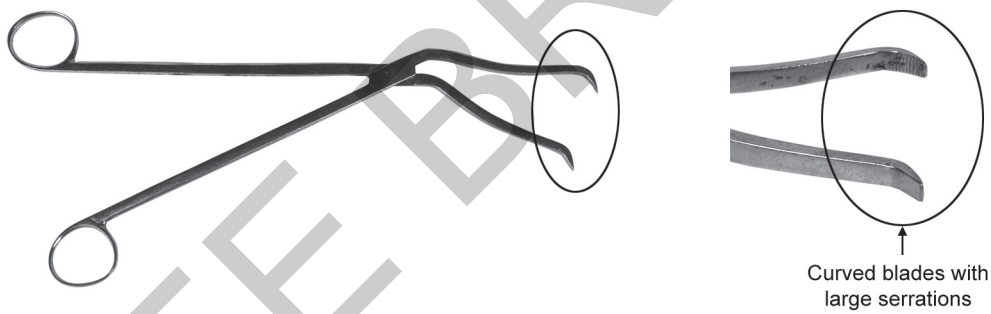
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CHAPTER

2

INSTRUMENTS USED AT START OF SURGERY

CHEATLE'S FORCEP



Salient Features

- Curved blades with large serrations
- **Without** lock.
- Usually dipped in antiseptic solutions like cidex/savlon in operation theater.

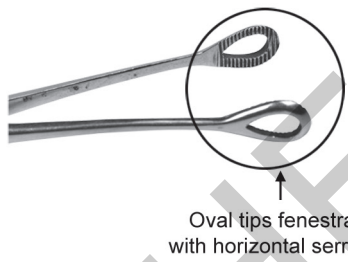
Uses

- Pick sterilized and autoclaved articles like instruments, drapes
- Transfer sterilized articles from one tray to another.

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RAMPLEY'S SPONGE HOLDING FORCEPS





Salient Features

- Tip of the blades are oval, fenestrated and with horizontal serrations on its inner aspect
- Long shaft and blades provided to prevent instrument from touching the unsterile field
- **Catch lock** for firm grip of swab/sponge.

Key Points

- To paint an operative field, first savlon (cetrimide solution) followed by spirit and 2-3 coats of povidone-iodine is used
- For abdominal surgeries, area from mid-chest to mid-thigh needs to be exposed and painted.

Uses

- To clean the operative area
- For swabbing/packing cavities
- To hold soft hollow organs like gallbladder fundus in cholecystectomy
- Can hold cervix in a pregnant patient
- Can be used in place of ovum forceps
- Can be used in place of pile holding forceps during hemorrhoidectomy
- Can be used as a tongue holding forceps.

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TOWEL CLIPS

MAYO'S/DOYEN'S TOWEL CLIP



- Small curved sharp blades which meet or cross each other
- Pincer like instrument (instrument opens up on pressing the shaft)
- Blade tips – sharply pointed for firm grasping.

BACKHAUS TOWEL (CORNER) CLIP

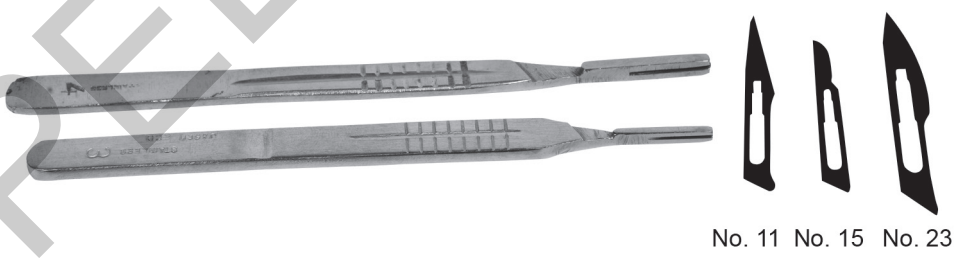


- Same as Doyen's towel clip but without a pincer like action
- Has shafts, finger bows and catch lock
- Curved sharp ends approximate but do not cross each other.

Uses

- To fix the drape properly to expose the operative site only
- To fix the suction tubes, diathermy cables, camera cables to the drape
- To hold the ribs while elevating them in a **stove-in-chest injury**
- Substitute for tongue holding forceps, umbilical cord holding forceps
- To give external traction in fracture of small long bones.

BARD PARKER KNIFE HANDLE



Common types of blades

Salient Features

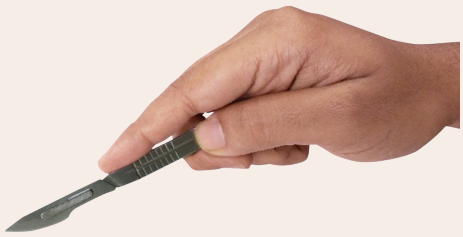
- Also called as "Surgeon's knife"
- Shaft with grooves or serrations for better grip
- Slot for attaching scalpel blade
- Most common sizes – 3, 4
  - (Blade No. 11, 15 for BP Handle No. 3)
  - (Blade No. 22, 23, 24 for BP Handle No. 4).

Uses

- To give skin incisions in surgeries
- To do sharp dissection to raise skin flaps in surgeries like MRM, thyroidectomy, incisional hernia, etc.

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Key Points



Dinner knife position



Pen position



Stab position



Fiddle bow position

- **Dinner knife position:** Used to avoid tailing at the end of incision
- **Pen position:** For fine dissection
- **Stab position:** To give a stab incision in drainage of abscess
- **Fiddle bow position:** Gentle incision over skin.

KIDNEY TRAY



Salient Features

- Has a kidney shaped structure.

Uses

- To store saline to wet the mops
- To wash blood tinged mops intraoperatively
- To collect stones from surgeries like cholelithiasis, cystolithotomy, etc.
- To mix warm and cold saline to wash peritoneal cavity
- To collect fluid from hydrocele surgery.

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X-rays and Operative Interventions

Salient Features

- Comprehensive, condensed and point-wise information
- Highlighted important procedures, salient features, contraindications, advantages, disadvantages, key points
- Mnemonics for quick recall
- More than 150 diagrams and illustrations for better understanding
- Ready source of information about surgical instruments, X-rays and operative steps taught at MBBS level
- Primarily intended for MBBS students and will be quick revision for postgraduate students.



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