به نام خدایی که در این نزدیکی است

بیهوشی در بیماران سرپایی و پانکچر

دکتر علیرضا چمنی

متخصص بیهوشی

عمل پانـــکچر

یا تخمک کشی

Ovum pick-up

Table 1 Benefits of ambulatory surgery

- Patient preference, especially children and elderly
- Lack of dependence on the availability of hospital beds
- Greater flexibility in scheduling operations
- Low morbidity and mortality
- Lower incidence of infection
- Lower incidence of respiratory complications
- Higher volume of patients (greater efficiency)
- Shorter surgical waiting lists
- Lower overall procedural costs
- Less preoperative testing and postoperative medication

Ambulatory surgery remains very popular with patients with infrequent rates of adverse events and complications.

One important component of success in ambulatory surgery and anesthesia is minimal postoperative nausea and vomiting.

Table 2 Common factors associated with nausea, vomiting, and retching during the perioperative period

Patient-Related Factors

Age, gender, preexisting diseases (e.g., diabetes), history of motion sickness or postoperative nausea and vomiting, smoking history, and level of anxiety, as well as intercurrent illness (e.g., viral infection, pancreatic disease)

Anesthesia-related factors

Premedication, opioid analgesics, induction and maintenance anesthetics, reversal (antagonist) drugs, gastric distention, inadequate hydration

Surgery-related factors

Operative procedure, length of surgery, blood in the gastrointestinal tract, forcing oral intake, opioid analgesics, premature ambulation (postural hypotension), and pain

Table 3 Operative procedures suitable for ambulatory surgery

Specialty	Types of Procedures
Dental	Extraction, restoration, facial fractures
Dermatology	Excision of skin lesions
General	Biopsy, endoscopy, excision of masses, hemorrhoidectomy, herniorrhaphy, laparoscopic procedures, varicose vein surgery
Gynecology	Cone biopsy, dilatation and curettage, Hysteroscopy, laparoscopy, polypectomy, tubal ligation, vaginal hysterectomy
Ophthalmology	Cataract extraction, chalazion excision, strabismus repair, tonometry
Orthopedic	Anterior cruciate repair, arthroscopy, carpal tunnel release, closed reduction, manipulation under anesthesia
Otolaryngology	Adenoidectomy, laryngoscopy, mastoidectomy, myringotomy, polypectomy, rhinoplasty, tonsillectomy, tympanoplasty
Pain clinic	Chemical sympathectomy, epidural injection, nerve blocks
Plastic surgery	Basal cell cancer excision, cleft lip repair, liposuction, mammoplasty, otoplasty, scar revision, septorhinoplasty, skin graft
Urology	Bladder surgery, circumcision, cystoscopy, lithotripsy, orchiectomy, prostate biopsy, vasovasostomy

Table 4 Laboratory test recommendations for outpatients scheduled to undergo ambulatory surgery procedures under general anesthesia

Age range	Men	women
<40	None	Pregnancy test*
40-49	Electrocardiogram	Hematocrit level, pregnancy test*
50-64	Electrocardiogram	Hemoglobin or hematocrit level, electrocardiogram
65-74	Hemoglobin or hematocrit level, electrocardiogram, serum urea nitrogen, glucose	Hemoglobin or hematocrit level, electrocardiogram serum urea nitrogen ,glucose
>75	Hemoglobin or hematocrit level, electrocardiogram, serum urea nitrogen, glucose chest radiograph	Hemoglobin or hematocrit level, electrocardiogram serum urea nitrogen, glucose chest radiograph

Sedative techniques can facilitate a wide variety of procedures performed in the hospital, office, or remote settings. However, sedation is no safer than general anesthesia and ***requires the same standards*** of personnel, monitoring, and perioperative care as for patients undergoing general or regional anesthesia.

Table 5 Use of anxiolytic-sedative drugs for outpatient premedication

	Dosage range	onset (min)	key point
Benzodiazepines			
Midazolam	7.5-15 mg PO	15-30	large first-pass effect
	5-7 mg IM	15-30	water soluble, nonirritating
	1-2 mg IV	1.5-3	rapid onset, excellent amnesia
Diazepam	5-10 mg PO	45-90	Long-acting metabolites
Temazepam	15-30 mg PO	15-40	Comparable anxiolysis to midazolam
Triazolam	0.125-0.25 mg PO	15-30	Prominent sedation
Lorazepam	1-2 mg PO	45-90	Prolonged amnestic effect
α_2-Adrenergic Agonists			
Clonidine	0.1-0.3 mg PO	45-60	Prolonged sedative effect
Dexmedetomidine	50-70 μg IM	20-60	Bradycardia and hypotension
	50 μg IV	5-30	reduced anesthetic/analgesic requirements

Table 6 Classification of opioid compounds

Naturally occurring

- Morphine
- Codeine
- Papaverine
- Thebaine

Semisynthetic

- Heroin
- Dihydromorphone/morphinone
- Thebaine derivatives (e.g., etorphine, buprenorphine)

Synthetic

- Morphinan series (e.g., levorphanol, butorphanol)
- Diphenylpropylamine series (e.g., methadone)
- Benzomorphan series (e.g., pentazocine)
- phenylpiperidine series (e.g., meperidine, fentanyl, sufentanil, alfentanil, remifentanil)

Table 7 Factors Increasing the Magnitude or Duration of Opioid-Induced Respiratory Depression

High dose
Sleep
Old age
Central nervous system depressant
    Inhaled anesthetics, alcohol, barbiturates
    benzodiazepines
Renal insufficiency
Hyperventilation, hypocapnia
Respiratory acidosis
Decreased clearance
    Reduction of hepatic blood flow
Secondary peaks in plasma opioid levels
    Reuptake of opioids from muscle, lung, fat, and intestine

Table ^ Comparison of currently available intravenous anesthetics for use during ambulatory anesthesia

	Dose (mg/kg)	Onset of Action	Recovery Profile	Side Effects
Thiopental	**3-6**	Rapid	Intermediate	Drowsiness (“hangover”)
Methohexital	**1.5-3**	Rapid	Rapid	Pain, excitatory activity
Etomidate	**0.15-0.3**	Rapid	Intermediate	Pain, myoclonus, emesis
Ketamine	**0.75-1.5**	Immediate	Intermediate	Psychomimetic reaction, cardiovascular stimulation
Midazolam	**0.1-0.2**	Slow	Slow	Drowsiness, amnesia
Propofol	**1.5-2.5**	Rapid	Rapid	Pain on injection, cardiovascular depression

Table ٩ Complications of sedation in infertility treatment procedure

Apnea

- overdose of anesthetic drugs
- old age
- lung diseases
- hypo metabolic diseases (hypothyroidism)

Treatment

- Ventilation by face mask with 100% O_2
- If no response or no ventilation with mask: Intubation

Aspiration

common in patients with:

- Achalasia
- Obstruction
- incomplete NPO

Treatment: intubation and suction the trachea

Laryngospasm

Diagnosis of laryngospasm

Identification and removal of the stimulus
(secretion, blood, nociceptive stimulus)

Chin lift and jaw thrust
Oropharyngeal airway
CPAP + FiO2 100%

Assess air entry
Bag movement?

NO

Complete Laryngospasm

Call for help
Positive pressure ventilation with face mask

No improvement

IV access

IV suxamethonium 0.5 to 2 $mg.kg^{-1}$
after IV atropine 0.02 $mg.kg^{-1}$
or IV propofol 1 $mg.kg^{-1}$

No IV access

IM (1.5-4 $mg.kg^{-1}$) or intraosseous
(0.5-1 $mg.kg^{-1}$) suxamethonium

Positive pressure ventilation with
FiO2 100%
Followed by tracheal intubation

No improvement

Cardiopulmonary resuscitation

Improvement

Surgery or PACU

YES

Partial laryngospasm

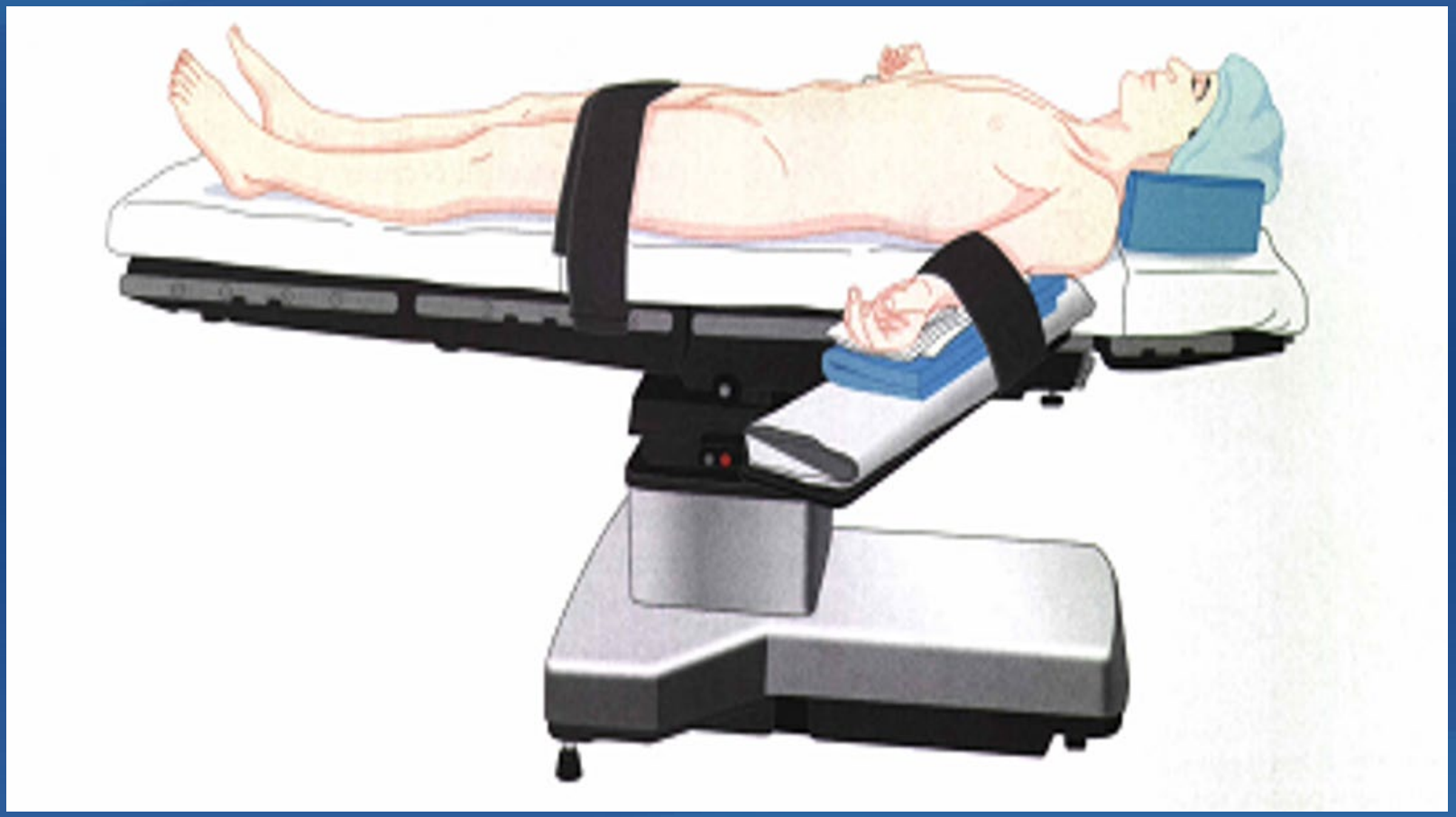
Deepen anesthesia with small
doses of propofol or inhaled agent

Reassess air entry with
CPAP

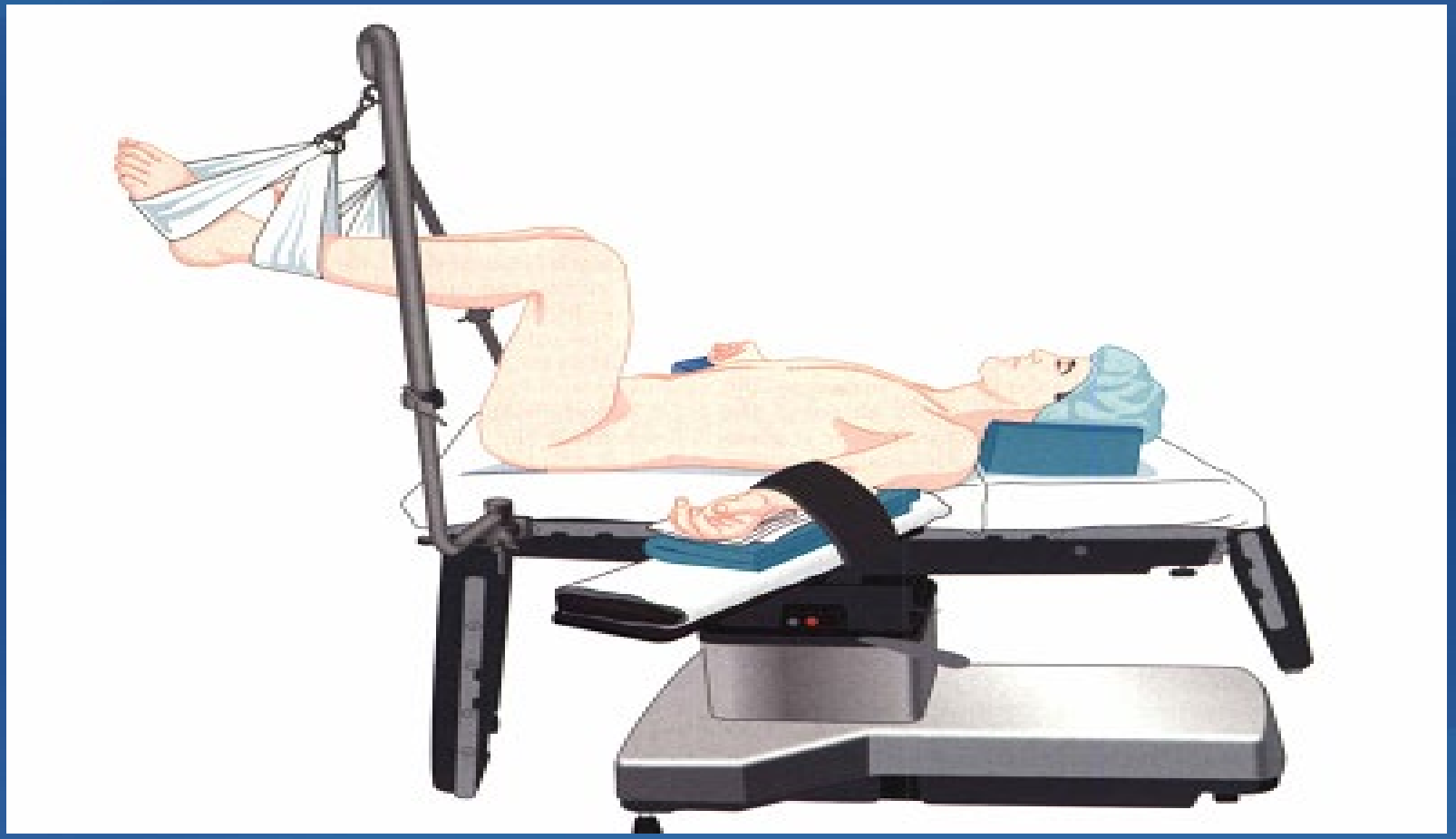
Improvement

Surgery or PACU

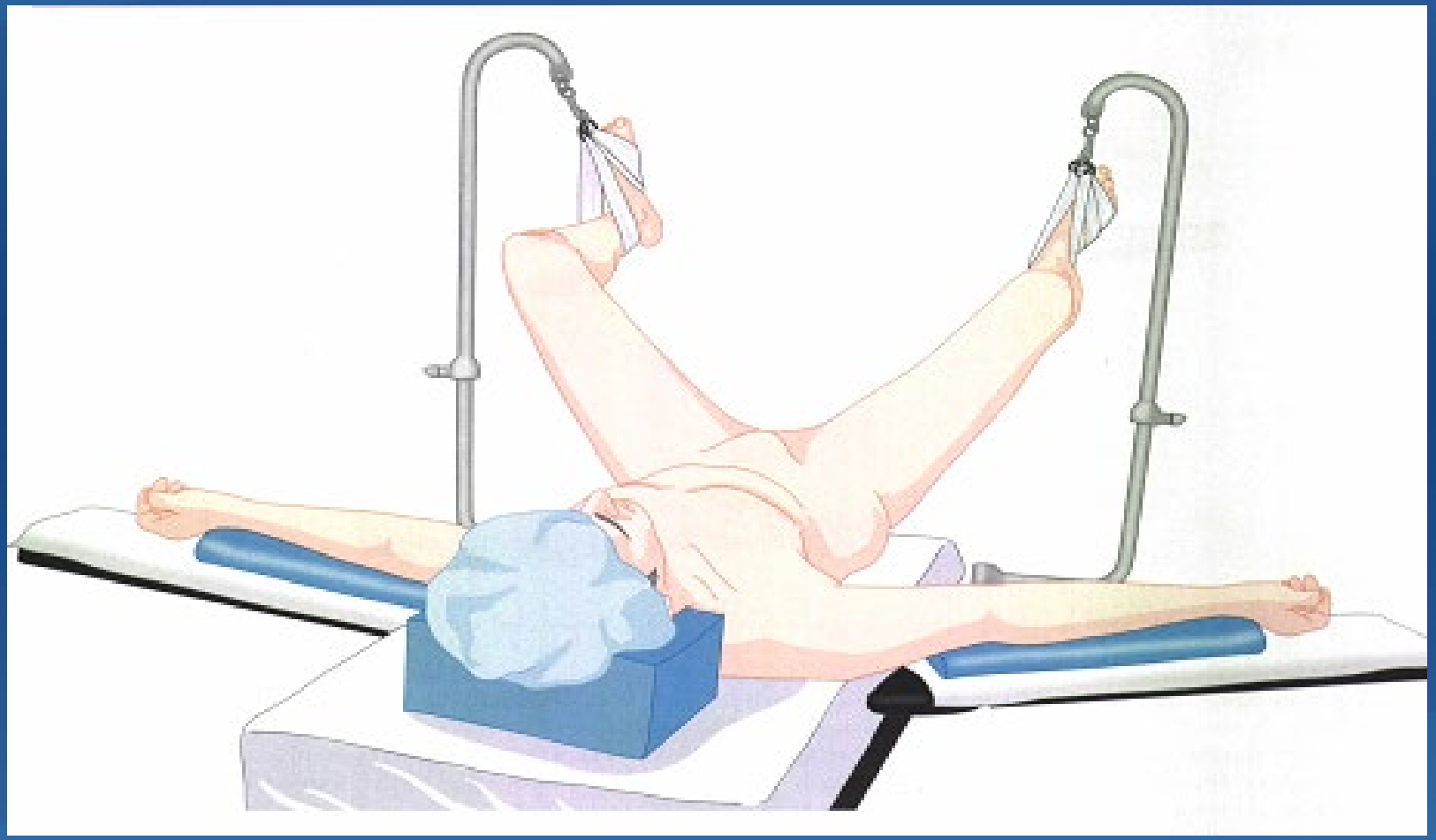
Patient positioning



Patient positioning



Patient positioning



Patient positioning

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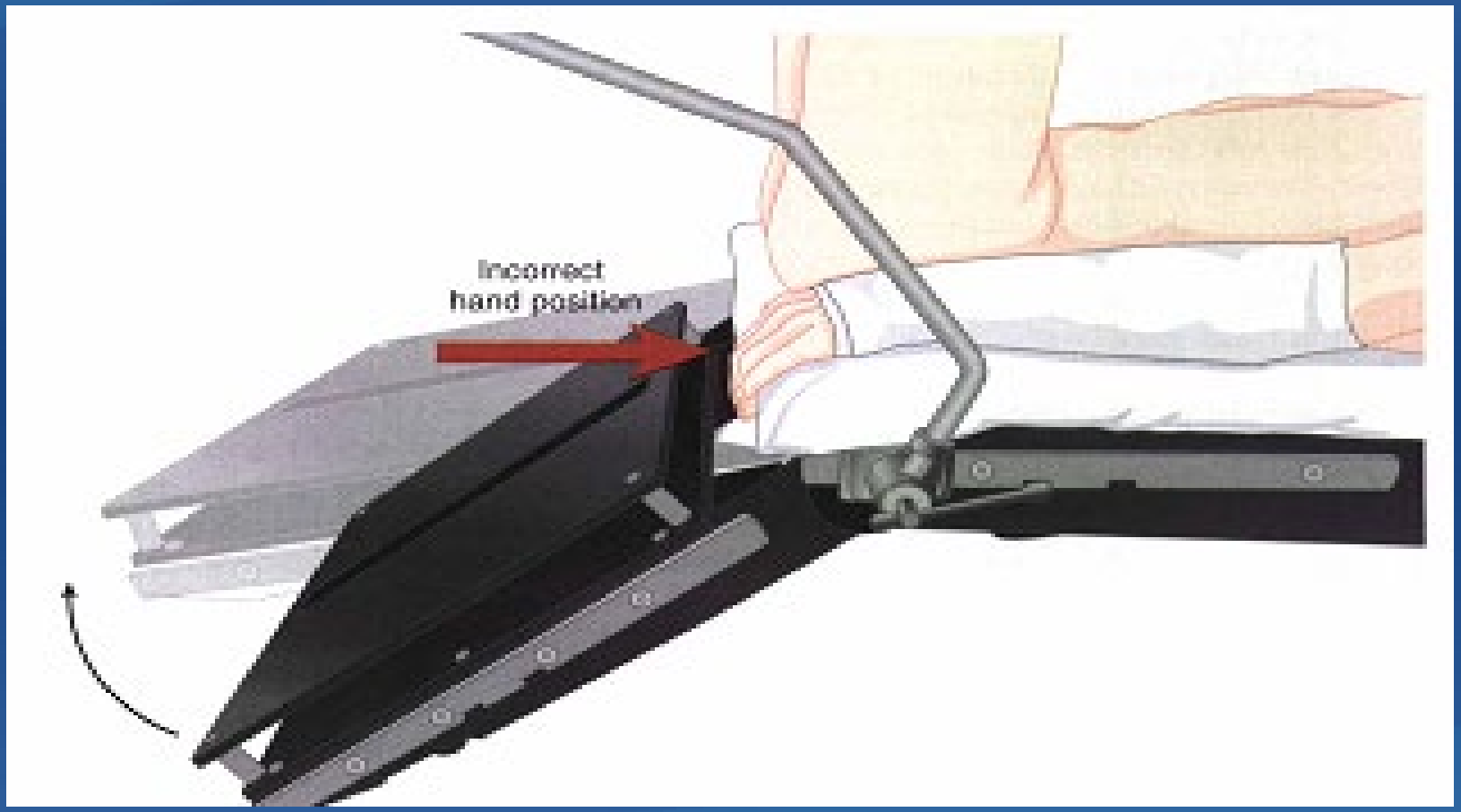
Ovum pick-up

Patient positioning



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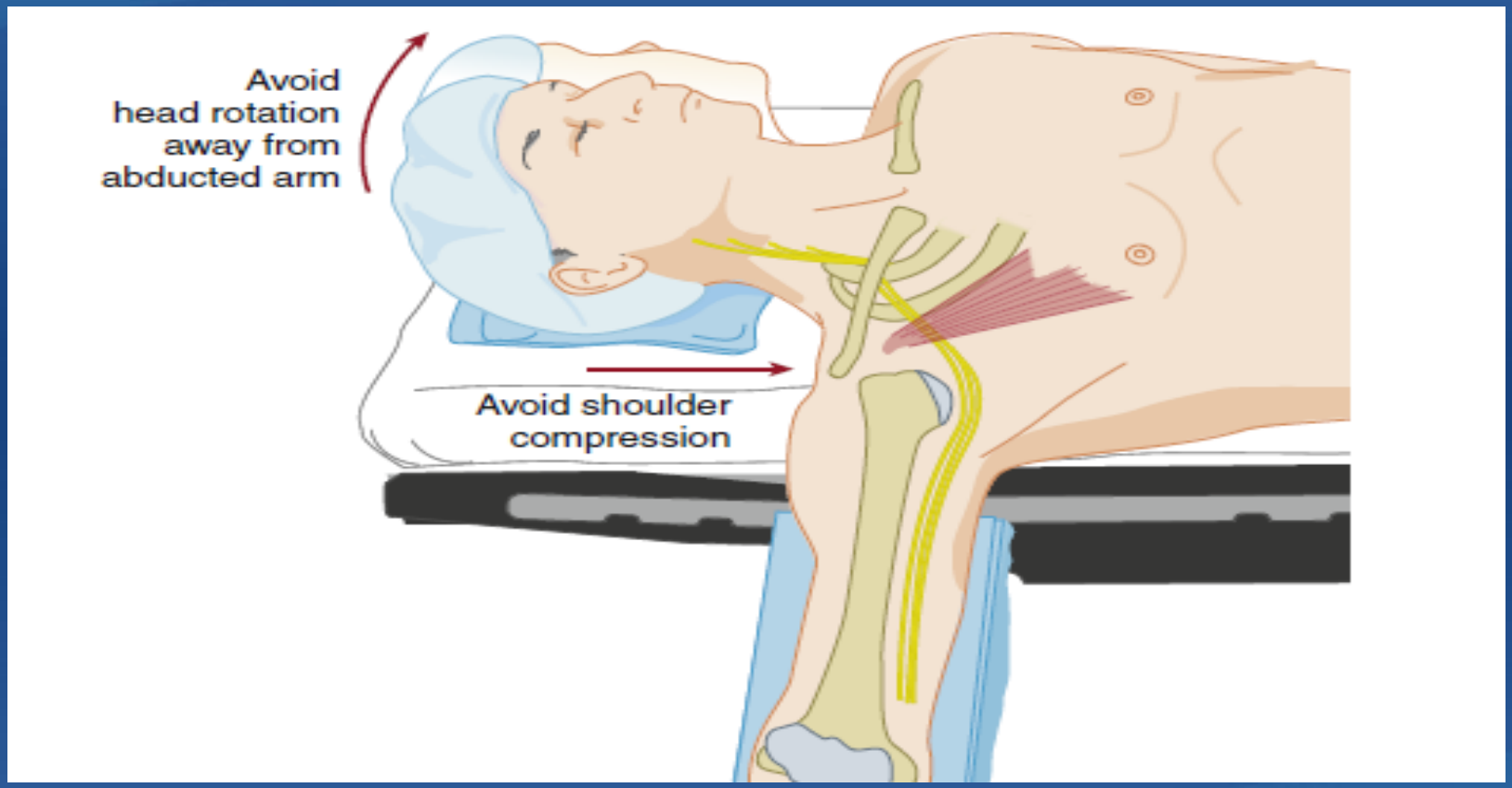

Table ١٠ Criteria for facility discharge at the Brigham and women's Hospital, Boston, Massachusetts

Alert and oriented to time and place

Stable vital signs

Pain controlled by oral analgesia

Nausea or emesis mild, if present

No unexpected bleeding from operative site

Able to walk without dizziness

Has been given discharge instructions and prescriptions

Accepts readiness for discharge

Adult present to accompany patient home

Courtesy B. K. Phillip.


از حسن توجه شما سپاسگزارم


با آرزوی تندرستی
برای همگی شما
گرانقدران