

HYGIENIC CONDITIONS IN SURGICAL PROCESSES IN CHILDREN

Soyiboxunova Xilola Muminovna

Andijan State Medican Institute , Uzbekistan

Annotation: This article provides information about hygienic conditions after various surgical processes . for us , the hygienic condition in the operation should be in the first place, the cause of infection transmission is very high.

Key words: Hygienic , operation, gastroenteric track .

Probing of the top parts of a gastroenteric tract

The oesophagus, stomach, duodenum and underlaying parts of small intestine are drained with the help of rubber or plastic probes. There are thick and thin gastric probes which are soft plastic tubes with various diameters. On an external surface of these tubes marks on distance 40, 50 and 60 sm from its end are usually rendered. For duodenum probing the thin probe with metal olive is used. The duodenal probe also has 3 marks on distance 55, 70 and 90 sm from the end. Probing is carried out by sister or doctor in operation theatre, wards or procedurals in position of the patient on back or on the right side. The patient is covered with an oil-cloth apron. The probe is greased with vaseline (vaseline oil).

The medical worker carrying out procedure enters the probe in patient oral cavity. When the probe end will reach the root of tongue, to the patient it is suggested to do swallowing movements. Simultaneously probe advances further. In result tube will penetrate at first into the gullet, and then in the stomach. Thin probe can be entered through the bottom nasal duct. In this case the probe end passes through epipharynx, oropharynx and next - to oesophagus.

The purpose of applying a probe can be both single evacuation of a stomach contents (stomach washing) and prolonged evacuation. For first aim the thick probe which is entered through a mouth is more often is used. For prolonged evacuation the thin probe entered through a nose is used. It can be left in a stomach for removal of contents for some days. Its external end is fixed by a plaster on the patient's face. Through a glass adapter the probe is joined with a rubber or plastic tube which end falls to the graduated vessel with a small amount of an antiseptic. The vessel should be below level of a bed.

Marks on tube surface show distance from teeth to probe end. For a drainage of a gullet (at the person of average height) the probe is entered on depth of 15-20 sm from a forward teeth. At leading in depth of 40-42 sm (up to the first mark) the probe arrive at cardial part of a stomach. If the probe has gone down on depth about 50 sm (up to the second mark) then its end is at the body of a stomach. At depth of about 60 sm (up to the third mark) the probe reaches the pylorus. If probe hit in the stomach appear gastric contents.

For a drainage of duodenum the duodenal probe is entered at first on 50-60 sm (up to the first mark) that the end of a probe appeared in the lowermost part of the stomach. The sister removes stomach contents by syringe. To pass through the pylorus to duodenum the probe should be on depth about 70 sm from teeth (up to the second mark).

For a drainage of small intestine it is used special perforated plastic tube about 1,5-2 m long. Such probe type can be entered only during laparotomy.

Enemas and flatus tube

Enema is medical procedure at which through rectum various liquids with the medical or diagnostic purposes are entered.

Medical enemas are applied for colon content evacuation, washing, medicinal influence on it and on organism as a whole. Accordingly enemas refer to cleansing, siphon, medicinal, diagnostic, saline, laxative.

Introducing of a liquid at performance is made with the help of simple devices. Those can be either the pear-shaped rubber cylinder (balloon) or a special vessel (named an irrigator) with joined rubber tube in length of 1,5 m supplied with the crane (or a clip, forceps) and a tip (glass, plastic, rubber) on the tube end.

Contraindications to enemas are the gaping of anus, rectal prolaps, acute diseases of anal area, acute colon bleeding, severe common condition of the patient demanding full rest.

Cleansing enemas it is given at constipations, before operations and radiological researches of abdominal organs. For an enema usual water of room temperature is used. Water in volume from 0,5 up to 1,5 л is poured in the irrigator, tube is filled (air removal) then the crane is closed (or tube is pressed by a clip). Bed is covered with an oilcloth. The patient should lay on the left side, with bended in hip and knee joints legs. The tip is greased with vaseline. The tip is entered in anus. First it directs up and forward (in relation to a vertical axis of a body) and after it will promote on 3-4 sm, - up and behind. Depth of the tip penetration should be about 10-12 sm. After that the crane is opened for start-up of a liquid.

The siphon enema is applied for deep colon washing and as medical procedure at some kinds of intestinal obstruction. One can use water or antiseptic solutions and lytic substances (sodium benzoate, soda, potassium permanganate, etc.). It is better use warm water (25-35°C).

Patient position and equipment are same as cleansing enema but it is not used rigid tip and tube must be thick (not less 1 sm in internal diameter). The filled irrigator is lifted up on height of 1-1,5 m (one can hang on a support). The tip is entered in rectum on 25-30 sm from anus. Water will penetrate into rectum. When the water level will reach to the irrigator bottom, it lower down below bed level. The water passes together with content in the irrigator. The crane is closed, dirty water is removing, is poured clean water and irrigator is lifted on support. Such cycles should be about 5-10.

Laxative enemas are used for colon stimulation at constipations. To laxative enema are applied vegetable oil in quantity about 100 ml, and also pure glycerin (5-20 ml). Before using oil is warmed up preliminarily till 38-40 °. Commonly it is used a pear-shaped balloon. Stool usually appears in 10-12 hours.

Medicinal enemas are applied for local and common influences. Local drugs are used for reduction of rectal mucous membrane inflammation. Medicinal enemas for the common influence are done with the purpose of administration of water, medicines, salts, nutrients. Before procedure the cleansing enema is given. Medicines for local influence enter in the rectum in small volume (15-100 ml) with the help of rubber balloon or a syringe through catheter. Medicinal enemas for the

common influence are usually done by drop way. An irrigator connected to drop system, is filled in and one begin irrigation slowly (40-80 drops in one minute). After medicinal enema patient should lay not less than 1 hour.

Before diagnostic enema it is necessary to prepare colon. On the eve the patient should get laxative, and for one hour before research - cleansing enema. Diagnostic enema is applied for contrast colon investigation. As the contrast remedy barium sulfate is used (200-300 g in 500 ml of water). Irrigator is filled with contrast in volume 1.5-2 liters. The soft tube is entered in rectum on depth of 12-15 sm.

At accumulation of gases in intestines it is applied artificial flatus removal. With this purpose in rectum on depth of 15-20 sm the thick rubber tube greased with vaseline is entered. Its external end should be on 5-6 sm outside from anus. Flatus tube can be left at some hours.

Medical aid at terminal states

Critical conditions between life and death are called as terminal states. They are preagonal condition, agonal condition (agony) and clinical death.

The preagonal condition appears on a background of a heavy hypoxia (oxygen insufficiency) of internal organs and is characterized by gradual depression of consciousness, progressing frustration of vital functions (breath and blood circulation).

Symptoms of preagonal state are:

- confused, clouded consciousness;
- falling of arterial pressure (it is not detected);
- tachycardia with thread-like pulse;
- shallow and infrequent breathing (hypopnoea and bradipnoea);
- pale skin and acrocyanosis (cyanosis of finger, lips, auricles of ear)
- some reflexes are kept (eye reflexes).

Expressiveness and duration of the preagonal period can be various. At sudden cardiac arrest (for example, myocardial infarction) the preagonal period is almost absent. At gradual dying on a background of many chronic diseases it can proceed for several hours. The preagonal period comes to an end of a terminal pause (the short-term termination of breath), proceeding from 5-10 sec up to 3-4 min. Then the agonal period (agony) begins.

The agony is characterized by:

- absence of consciousness;
- an areflexia;
- pulse is hardly determined only on carotids;
- bradycardia;

- breathing not only shallow and infrequent but and arrhythmic (Biot's respiration or Cheyne-Stocks respiration);

The agonal period continues from several minutes (for example, at acute cardiac arrest) till several hours and more (on slow dying) then there clinical death comes.

The clinical death is characterized by:

- unconsciousness;
- absence of breathing;
- absence of cardiac activity;
- wide pupils without light reaction;
- pale skin with acrocyanosis.

After the respiratory and cardiac arrest cells of human body do not die at once. Cells of brain cortex can be alive for 5-6 minutes. Subcortical nerve centers are more hypoxia-resistant. Other cells of body can stay alive for some hours. Duration of clinical death depends on duration of a preagonal state and an agony: the longer they are, the deeper and more unreversible clinical death is. The clinical death passes into biological death. It is an unreversible state when biological processes in an organism completely stop. So clinical death continues not more than 5-6 min till we can restore/reload function of brain cells.

At early stages all kinds of death (clinical and biological) do not differ from each other (there are the same symptoms - apnoea, stop of blood circulation and coma). Because of reanimation should be done in all cases of sudden death and then in the course of revival one can determine the efficiency of actions and the prognosis for the patient. This rule is not applied to cases with clear external attributes of biological death (livores mortis, rigor mortis). One must not do reanimation in cases of terminal stadium of severe death diseases (cancer; heart insufficiency, renal failure).

The diagnosis of a full stop of breathing is made by visually (absence of respiratory excursions). It is impossible to waste time applying a mirror or a piece of metal to a mouth and a nose. Pulse is to be necessary taken on carotid or femoral arteries only.

Carrying out reanimation it is necessary: 1) to restore patency of airways, 2) to begin artificial respiration, 3) to start cardiac massage as soon as possible.

Patency of airways. The patient should be laid on a back on horizontal rigid surface. Doctor throws back a head of the patient, putting one hand under his neck, and another having on a forehead. It provides an easy approach to a throat and a trachea preventing falling back of a tongue. It is necessary (by means of a cotton napkin (or a handkerchief)) to clean top floors of airways. It is better to use suction apparatus if it is near. It is good to use special air tubes (Safar's tube, S-shape tube). With the purpose of introduction of an air tubes the mouth of the patient should be opened, and a tube advance to a root of tongue by rotational movements.

Artificial respiration. Now the effective expiratory types of artificial respiration are (from mouth to mouth and from mouth to nose). They are based on rhythmical inflation of air in respiratory ways of the patient. Having made a deep breath, doctor presses himself to patient mouth and blows air with

effort. To prevent outflow of air a nose of the patient is closed with the cheek or a hand. At height of an artificial breath the forcing of air stops, there is a passive exhalation. Intervals between separate respiratory cycles should make not less than 5 sec (12 cycles per 1 minutes).

On breathing through a nose a mouth of the patient is closed, doctor does inhalations through nose.

This job is very hard for doctor. Therefore if it is possible it's better to use special hand respirators (Ambou's bag) which improves a physiological & hygienic basis of artificial ventilation of lungs.

Cardiac massage. The main symptom of cardiac arrest - absence of pulse on a carotid (femoral) artery. The compression of a cardiac muscle between vertebral column and sternum results in transfer of small blood volumes from the left ventricle in greater circulation, and from right - in lesser circulation. Patient must lie on hard surface. Doctor puts one palm on another and makes pressure upon a breast in a point located on 2 fingers (3-4 cm) higher than a xiphoid. Depth of chest deflection must be 4-5 cm, frequency not less than 60 compressions per 1 minute. Criterion of correct massage - precisely determined artificial pulse wave on a carotid (femoral) artery. If revival is carried out by one person after two forcings of air 15 compressions are made. If there are two persons a ratio ventilation - massage makes 1 : 5. After recovery of spontaneous heart activity massage must be stopped, but artificial ventilation should be continued till restoration of spontaneous breath.

Efficiency of reanimation actions is controlled not less than once per one minute. Except for occurrence of pulse on carotids there should be narrowing pupils, reduction of pallor and cyanosis if reanimation is effective.

If it is inefficient (absence of pulse, wide pupils with loss of their reaction to light, absence of breath) reanimation actions are stopped in 25-30 minutes after the beginning. If blood circulation is restored, artificial ventilation of lungs must be proceeded

The most often complication of the closed massage of heart is ribs (rarely sternum) fractures. They are especially difficult for avoiding at elderly patients whose thorax loses elasticity and becomes rigid. There are damages of lungs, hearts, ruptures of a liver, a spleen, a stomach less often.

References:

1. Weiser TG, Regenbogen SE, Thompson KD, Haynes AB, Lipsitz SR, Berry WR, Gawande AA. An estimation of the global volume of surgery: a modelling strategy based on available data. *Lancet*. 2008 Jul 12;372(9633):139-44.
2. Weiser TG, Haynes AB, Molina G, Lipsitz SR, Esquivel MM, Uribe-Leitz T, Fu R, Azad T, Chao TE, Berry WR, Gawande AA. Size and distribution of the global volume of surgery in 2012. *Bull World Health Organ*. 2016 Mar 1;94(3):201.
3. Bali R, Sharma P, Nagrath S, Gupta P. Microbial isolations from maxillofacial operation theatre and its correlation to fumigation in a teaching hospital in India. *Journal of maxillofacial and oral surgery*. 2014 Jun 1;13(2):128-32.
4. de Lissovoy G, Fraeman K, Hutchins V, Murphy D, Song D, Vaughn BB. Surgical site infection: incidence and impact on hospital utilization and treatment costs. *Am J Infect Control*. 2009 Jun 1;37(5):387-97.

5. Block SS. Definition of terms. Disinfection, sterilization, and preservation. Philadelphia: Lippincott Williams & Wilkins. 2001:19–28.
6. Bratzler DW, Houck PM, Workgroup SI. Antimicrobial prophylaxis for surgery: an advisory statement from the National Surgical Infection Prevention Project. *Am J Surg.* 2005 Apr 1;189(4):395–404.