Mini Review

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Anesthesia department Interim guidelines in managing airway and surgeries regaring COVID-19 hepatic patients in national liver institute, Menoufia university, Egypt

Abstract

Anesthesiologists, intensivists, anesthesia nursing/operating room staff the first and may be the only category dealing with patients airway, secretions for this anesthesia department took the responsibility to train and protect all team members with the lines of infection control and tailoring internal guidelines from international ones to suit the facilities and the fund in National Liver Institute (NLI), Menoufia, Egypt. And the unique category of patients we are serving.

Keywords: perioperative anesthesia management, COVID-19, hepatic patient surgeries

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Objectives

Why covid is under scope.

Guidelines (interim) to protect the anesthesia team and co- workers in health who are specializes to work with hepatic patients (with other infections and problems).

First epidemic was in 1960 in Spain, 2002-SARS (severe acute respiratory syndrome) outbreak, H1N1pandemic in 2009, in the middle east its version was first discovered in Jordan 2012 and that kind was called; middle east respiratory syndrome that affects patients ranged from 1 to 99 years old. In 2019 SARS corona virus 2 (COVID-19) Since that time and every time the world effort was and still directed to know the source of the virus, how it spreads, life span, and how to prevent. In the way to achieve this and by the time till having the temporary vaccine, lots of patients dies. The only thing that we can start and end with is prophylaxis.

Why COVID -19?

In UK although the fatality of COVID-19 is least characteristic between high consequence infectious diseases (HCID), the virus has been categorized one of them. May be because of highly contagious form from humantohuman transmission by droplet and aerosol and high upper respiratory tract viral accumulation in infected persons in comparison to viral load of symptomatic patients.

National liver institute guidelines

These are adopted from worldwide guidelines and tailored according to institution fund with co-operation of infection control team, disaster managing team, anesthesia department and the supervision of institutional administration.

- Restrict the number of health care workers dealing with COVID patients and use physical barriers between officers and clients.
- No visits allowed to isolation areas of post -surgery and critical care only telecommunication.
- N95 masks are with extended use till shift end and up to 1 week unless leak-proof seal is compromised. Goggles and face shields also for extended but without being contaminated by hands.
- Regulating distribution of personal protective equipment by previous plan for the next day number of workers and cases.

Cases selected for surgery

Only emergency cases (trauma; rupture spleen, liver tears, emergency upper endoscopy for hematemesis, foreign bodies, emergency endoscopic retrograde cholangiopancreatography (ERCP), and emergency colonoscopy), and time sensitive cases (liver, gall bladder and pancreatic tumors, Kassi).

Their clinical examination starting from ordinary history and including history of fever, dry cough, loss of taste or smell (respiratory tract infection symptoms) or contact with positive cases travelling to areas with the disease/ in last two week.

For perioperative assessment and airway examination; There is no specific tool but there will be some rules

No airway examination but using clinical judgment by, ratio of neck circumference NC to thyromental distance TMD NC/TMD, thyromental height TMHT, neck movement assessment, protruded mandible, asking about snoring, and observing difficult ventilation.

For major cancer cases preparation, phone number is mandatory for contact.

Covid positive or suspected

These maneuversare adopted from centers faced hundreds of covid cases in china, US, Toronto, KSA... and approved by the infection control committee and administration in NLI.

Suspected cases: by history of clinical symptoms or contact history (in last 14 days) or travel to country with the disease; will have (serum ferritin-C reactive protein – differential leukocytic count- chest X-ray), CT chest is routine before surgery for major operations, and are to be postponed for 24 hours till having the (polymerase chain reaction) PCR for covid results unless lifesaving procedure; trauma for example.

Considering that chronic hepatic patients and previous cases of transplant have low immunity because of chronicity or immunosuppressantdrugs (liable for catching COVID) and some on corticosteroids may have no fever if infected.

Confirmed cases: with positive PCR whether symptomatic or not; will have the surgery with full precautions taken (but in different isolation hospital equipped for surgery of COVID patients).

Protection for anesthesia nursing staff/operating room

A prepared plan by the case and the least number of anesthesia/ nursing staff needed.

Better one/two cases per day specially in major cases like resection of tumors and be prepared for upcoming unexpected emergency cases or lifesaving liver trauma surgeries).

Cases suspected to be COVID or symptomatic: to wear surgical mask, if positive to wear N95.

Specified theaters for COVID patients and prepared drugs and wrapping anesthesia with plastic cover (negative pressure operating room).

Hand hygiene.

Wearing personal protective equipment PPE; Disposable N-95 masks (needs fitting test), goggles, footwear, water-proof gowns and gloves (consider double glove technique)

Aerosol producing procedures**;** intubation, extubation, suction, NIV (noninvasive ventilation), and chest physiotherapy and nebulization, even colonoscopy and upper endoscopy without intubation .

Induction of anesthesia

-crush truly available.

-Two trained Anesthetists.

-better raising head up during intubation.

-Rapid sequence or modified rapid sequence induction and if preoxygenation needed two hand technique for mask sealing (in hypoxic patients Po_2/Fio_2 less than 150 or saturation less than 90%.

-Using video laryngeoscope for intubation or if not available standard laryngoscope with disposable blade. In difficult cases shift to laryngeal mask (2nd generation), (avoid fibreoptic).

- start ventilation after inflation of cuff and low flow (which is standard in NLI), And after intubation PPE can be doffed with hand wash.

- use closed suction and avoid disconnection and if necessary anesthesia machine is on standby, clamping the tube and wear fullPPE.

- Disposable blade or tools need decontamination /disinfection are in double red plastic bags (well -sealed).

Extubation; the patient with full PPE and smoothly without cough and give antiemetic sufficiently before extubation.

Transfer with surgical mask for cases or N95 for positive cases, and face mask 4l in cases in need for supplementation.

-Humidified filters are used; between the face mask and inspiratory limb /or face mask and reservoir bag.

In intensive care: critical cases are in (neutral pressure rooms). Avoid CPAP/BIPAB face shield, goggles, gowm and gloves with chest percussion in COVID patients.[1-9]

In conclusion

Early following international guidelines from expert centers and committee recommendations will help decrease infection spread,and protecting the white coated individuals is a protection for all,and what is called now (the new normal) which means keep the rules of infection control and quarantine the base and update accordingly, should be the usual.

External fund

Nil.

Conflicts of interest

No conflicts.

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