Palliative care on ICU

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1 INTRODUCTION

Population in a developed countries are ageing rapidly, live much longer comparing to their ancestors and as a result they face many chronic illnesses before they die. Public healthcares spend each year more and more funds for geriatric departments and other chronic centers. Living longer also means that patients suffer longer while having diseases which causes them pain. Many diseases are untreatable and doctors can reduce only symptoms. According to WHO, around 56,8 million people are in need of palliative care around the world (Palliative care. World Health Organization [online]. 2020 [cit. 2022-12-10]. Dostupné z: https://www.who.int/news-room/fact-sheets/detail/palliative-care). As a developed country we face questions like how to behave with old and chronic patients, what to focus on and on the filed of ethcical medicine how to respectfully let these patients pass away. All these questions are answered by palliative care. But palliative care is not only object of the medicine, but also is important from the point od view of the econonomist, sociologist and also government and healthcare insurrances are analysing this field really closelly. Longterm treatment uncurable diseases is aimed on symptoms but treating patient on ICU and deciding how far can treatment go is a different problem beacuse modern devices like extracorporeal membrane oxygenation can prolog a life a lot.

2 PALLIATIVE CARE

2.1 Recent development

Modern medicine give us many opportunities to lead a good life much longer than it used to be a decades and centuries ago. Since the industrial times we have researched many medicines against almost each illness and the research continues really rapidlly. Many diseases were discoreved and each time they were beaten or at least supressed. Capacities of human brains are not unlimited but with a combination which contains computers and artificial intelligence we have pushed our wisdom even futher. Operation techniques in modern hospitals are advancing every year with a goal to give patients as harmfull procedures during hospitalization as possible. Robots assist during the interventions on operation rooms and sometimes show much better performance than skillfull surgeon with a years of practical skills. Modern technologies are developing quickly but facing many obstacles like not enough money to support research, human suspiciousness against new and unexplored things or bureaucratic terms when you want to test technologies on animals and as well as on humans. Not only hardware produces technological revolution but also software. Using the artifical intelligence in the industry worldwidelly spreads with every prons and cons you can imagine. New knowledge, experiences and approachess bring us futher into the future where medicine should not be assosiated with pain, stress and another worries during the hospitalization or when pacient are in a common contact with the healthcare system. 21st century has brought us many new inventions to make us lifes better and it will depend on many things whether we accept this historical chance or not and how we deal with it.

2.2 Depeloped countries vs. poor countries

While in western countries we use to enjoy life and let the ill or disabled live in chronic centers, poor countries do not have as good acces to quality healthcare so many patients are dependent on their families. According to WHO, many countries do not have a palliative care in their national policies and systems.

2.3 Cardiology

Cardiology as a field of medicine focuses on cardiovascular system of the human body and its associated parts as lungs and haematology. Main diagnoses are heart attacks and septic

inflammations of heart structural layers such as pericarditis and endocarditis, conduction illnesses like atrioventricular blocks and malign arrhytmias, coagulation states like trombembolizations in heart, lungs or deep vein thrombosis. Many patients suffer chronical ilnesses like diabetes mellitus, obesity, respiratory difficulties and others which worsens acute situations we as healthcare proffesionals face during the threatment on intensive care unit.

With advanced technologies inducing new techniques is widelly recomended but everything depends on financial capacities each healthcare system. Best devices and drugs are also the most expensive. On the other hand when we use expensive things more often than before they become less expensive as economical theories tell us.

2.4 Negative consent

Each patient wants the best therapy. Each hospital wants to give best therapy with minimum financial costs. Insurance companies and government focus on money and prefer prevention. Every participant in healthcare want the best option based on its interests. But what if someone refuses the best affordable option? That is a problem of negative consent with a threatment. Each patients have to accept threatment before interventions like operations, receiving of blood transfusions or inducing haemodynamic catheters for monitorising vital functions. If patient refuses help it is his right with all consequentions at risk. This decision is rarelly used but each time has to be respected. Patient mental condition has to be clear without affects of drugs or actual dezorientation caused by worsened health condition. If patient is unable to give a consent with a treatment because of qualitative or quantitave problems with consciousness and needs emergency therapy then consent with a therapy is confirmed by a local court. By this system action the threatment is main goal.

2.5 Insurance

In the Europe, healthcare systems are fund by private insurance companies or government budgets. Each citizen or visitor of the country must have insurance. Actual or chronic therapy is paid by insurance companies. Since 90´chronic therapy is developing fastly also in the Eastern Europe and each year this therapy takes more and more money as a result of demographic situation.

2.6 Euthanasia

Other problem arrives when the health condition cannot be improved beacuse patient suffers the terminal illness. Cancer, untreatable chronic heart failture and unreversible brain death after cardiopulmonary resuscitation stand and obstackle between the doctors and patient. Main diagnose cannot be treated and at the end only symptoms like pain, fever and fluid balance are solved. Euthanasia is illegal in the Czech republic so patients are banned from this decision. In the Europe only few countries like Switzerland or Netherland allow euthanasia as a patient decision how to solve his insolvable situation.

2.7 Progress in palliative care

Palliative care is developing in Western countries approximatelly for 100 years. First attemts to treat chronic patients were in hands of catholic nuns and other charities in hospics developing in the Great Britain and then the other Western countries followed. First hospital palliative care teams were established in Montreal and London. Due to totalition rule in the Eastern Europe palliative care was not developing comparing to the West. After political changes in 90´ things have begun to change. Also in the Asia this topic lead to surface of serious public debates and palliative care developer rapidlly. After 2000 palliative care was globally discussed, many international conferensies begin to take place each year and a lot of foundations were created to support this field of medicine financially. Demograpfic situation is quite clear. Global population is increasing. The most pupulated country, China, will face ageing population because of politic decisions in past and lack of young people will not help this situation in the future. Western countries are having same problem. On the other hand Africa has the biggest amount of young population and their main medical problem are infectious diseases like HIV or hepatitis.

2.8 ICU

Many patients admitted to ICU departments die due to acute illness. Also overal deaths take place on ICU. A lot of chronical symptoms tend to worse and acute pain, respiratory problems and neurological disability need to be treated on ICU. Only a few patients with terminal ilness die at home. Even if they want to die at home, families which take care of them often cannot watch how their related are suffering so they rather call ambulance. There are also differencies between different types of ICU if we talk about dying on ICU. For example surgical one treat a lot of young and fit patients who suffered some kind of trauma

incident and prognosis depends mainly on succesfull treatment of the primary diagnoses. Succesfully treated pacients have good outcome. On the other hand, internal cardiology department focus on acute and sometimes easilly treated conditions like heart attack and acute oclusions of cardiovascular system which has acute onset of symptoms, but many patients are much older and whole body is weakened for decades because of atherosclerosis, heart failure, lack of mobility, obesity and dislipidemia. Average patients age on these departments is higher comparing to surgery ones. So the prognosis in a few hours and days after admission cannot be predicted and its likely individual for each patient.

Doctors and nurses on ICU are trained to take care about livethreatening conditions, mainly to control bleeding and pain and they focus to stabilise vital functions as a respiratory and haemodynamic instabilities. Each onset of pain is calmed with strong painkillers like opioids. Situations like cardiopulmonary resuscitation occurs often and are assosiated with artificial ventilation, devices like extracorporeal circuits and external pacemakers are used and massive antibiotics and drugs usage help patients to survive.

2.8.1 Chronic care on ICU

After patient stabilisation the team on ICU has a time to decide what to do next, how far the treatment can go and also communication with family is involved in continous decisions.

Main questions including decisions whether to treat patient and how are:

1.What are clinically reasonable choices?

2. What are pros and cons of the treatment choices?
3. What does the family think?
4. How will the decion impact the patient live?
5. What role should the family play during decision?

This discussions should respect patient and also family. Hospital staff tends to depersonalise from patient and aim on clinical important things while family has a different point of view and sometimes does not understand basic patophysiological principles assosiated with intensive care medicine. When discussion goes wrong way it leads to conflicts between staff and family with no benefit for the patient. Many healthcare proffesionals have a tendencies to aside family opinions which hurt both sides. Burn out syndrome is a result to a psychological a physical exhaustion of many doctors and nurses.

Common ICU treatment should be aimed on main symptoms assosiated with hospitalization like pain, dyspnoea, bleeding, thrombembolisation, agitation and delirium. While unconsciousness patients attached to artificial ventilation are sedated and good sedation

control prevents any pain consciouss patients pain control is worse controlled cause many painfull interventions and procedures like inducing catheters, wound care, suctioning and taking biological materials occurs. But even if patient is unconscious, grimaces, muscle tension, hypertension and tachycardia can tell us about patient dyscomfort. Richmond Agitation-sedation Scale is comonnly used on ICU to evaluate patient´s sedation and relaxation. Anxiety and agitation are common when hypoxemia, hypotension, pain, hypoglycemia and withdrawal from alcohol and drugs happens. Before giving sedation drugs patient comfort should be optimalized, painkillers should be given, staff should help patient to orientate in situation a calmly and repeatedly educate him while reduce disturbing intervention on a minimum level. Respiratory dyscomfort is usual while hospitalisation. Acute respiratory ilnesses like pneumonias and asthmatic spasms or craniocerebral trauma unjuries involves syptoms as tachypnoea and hypoxia and oxygen delivery should be administered or even tracheal intubation with artificial ventilation should be performed. Secondary painfull interventions or wound control are really stressfull situations an can cause oxygen dysbalancies and painkiller therapy and oxygen support should be at hand.

Treatment on ICU should be done while we think on patient benefit.

3 CONCLUSION

Palliative care is more important these days than it used to be in the past. Population on the Earth is increasing. More people spend more time in retirement and quality of life and ability of selfcare is decreasing each year in retirement so number of people who need proffesional care in last days of live is increasing. A lot of disseases like cancer and heart failture developes and hit people while ageing. In a poor countries chronic care takes place in families. In developed countries chronic care is located in chronic centers and hospitals. Quality of life is increasing and development of medicine give us chance to live longer. On the other hand, living longer bring many disadvantages like suffering from chronic ilnesses longer time in the last days of life.

Based on demographic situation and development of humanity, palliative care will have major role in each healthcare systém around the world.

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