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Basic newborn resuscitation. Guideline appraisal of WHO document

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A short summary of the guideline

The practical guideline "Basic newborn resuscitation: a practical guide" was published by World Health Organization in 1998. The indications and principles of newborn resuscitation are reviewed here. The main and basic idea of this guideline is to give recommendations to all health care providers who are involved in the delivery of newborns. Newborn resuscitation skills are essential for all birth attendants.

This guide focuses on management of baby with birth asphyxia. Birth asphyxia occurs when a baby doesn't receive enough oxygen before, during or just after birth. Prompt treatment is important to minimize the damage effects of decreased oxygen to the baby and to prevent permanent brain damage. It has been estimated that birth asphyxia accounts for 19 % of newborn deaths, suggesting that the outcome might be improved through implementation of simple and safe resuscitative techniques.

Resuscitation of newborn presents a different set of challenges than resuscitation of the adult or even the older infant or child. The transition from dependence on placental gas exchange in a liquid-filled intrauterine environment to spontaneous breathing of air presents dramatic physiologic challenges to the infant within the first minutes to hours after birth. Approximately 5% to 10% of newborns require some assistance to begin breathing at birth. Approximately 1% require extensive resuscitative measures.

This practical guide very clearly carried out the steps of basic resuscitation (A- airway, B-breathing, C-circulation) with concentration mainly on the method of resuscitation. It is applicable even in conditions with lack of equipment or where one birth attendant present at the birth. According to this guideline the initial steps of basic resuscitation are: thermal management, positioning, suctioning and tactile stimulation. Critical for the success of resuscitation are anticipation, adequate preparation, timely recognition and quick and correct action.[1] Advanced resuscitation includes: endotracheal intubation, oxygen, chest compressions and drugs.[2,3] Care after successful resuscitation includes put newborn skin-to-skin with mother, encourage breast-feeding within one hour of birth and observe suckling.

The document covers some ethical questions like when to start or to stop resuscitation.[4] Answers of these questions are left to the person caring for the newborn and depend on conditions of health organization needed for adequate care of malformed or very preterm newborns. Sometimes, decision-making is based on concept "cost-effectiveness" to critical-care.[5] Thanks to the modern technology, very preterm infants, malformed newborns and newborns with very low birth weight have more chance for surviving.[6] Care of infants like these is an exclusive domain of specialized units in hospitals. But, even there it is still hard to make a decision.[7] My opinion is that in situations like these parents must be included.

This guideline is based on the consensus of assembled international experts and studies. Implementation of this guideline contributes in decreasing perinatal deaths which are over 6.3 million every year according to WHO estimates.[8] Also, it is a basis for developing national standards and protocols for improving health care during pregnancy, delivery and after birth.

Republic of Macedonia is low-income country successful in reducing perinatal mortality rate through the period of last ten years according to data from State Statistics. But, compared to other European countries, it still remains high. Reduction of perinatal mortality rate is result of government efforts through past period and training and education of neonatologists abroad

(Royal Prince Hospital, Australia, 2001). Our general hospitals which provide secondary level of newborn care don't have units for intensive care. Newborns from risk pregnancy are transported in-utero to tertiary level of health care (University Clinic for Gynecology and Obstetrics) or short after births to Unit for Intensive Care at University Children's Hospital.

As our hospitals became Baby Friendly Hospitals with rooming-in, we applied all suggestions by this guideline for newborn care after birth or after resuscitation.

Literature search

Print, electronic documents (journal articles, studies, case reports) and other resources related to the topic of this WHO document were searched for the purpose of the assignment. The Cochrane Database of Systematic Reviews, PubMed, Medline were searched with focus on clinical guidelines for newborn resuscitation over the last 10 years. I took very useful information from www.neonatology.org and www.obgyn.net.

I listed some books and articles for further reading in the sociology and ethics of neonatology. I found out the same dilemmas and through the years the sociology and ethics of neonatal care became more complex because our ability to rescue incredibly small infants has continued to improve.

Guideline appraisal

Scope and purpose

The purpose of this guideline is very clear: to carry out indications and methods of newborn resuscitation. Also, this guideline covers some ethical dilemmas about when to start or to stop with resuscitation.

Stakeholder involvement

This guideline was developed by World Health Organization – Division of Reproductive Health. It does not contain any information about the type of experts who were included in its developing.

This guideline is intended for practitioners responsible for resuscitating newborns. It applies primarily to newborns undergoing transition from intrauterine to extrauterine life. The recommendations are also applicable to newborns who have completed perinatal transition and require resuscitation during the first few weeks to months following birth. Practitioners who resuscitate infants at birth or at any time during the initial hospital admission should consider following this guideline.

Guideline development

This guideline is based on survey at 127 institutions in 16 developing and developed countries. It provides a list of references that have been used in the process of its development.

Applicability

Health organizations in my country provide health care in three levels: primary, secondary and tertiary. This guideline is applied by health care providers in general hospitals with obstetrics departments and delivery room and in University Hospital for Gynecology and Obstetrics. Principles of this guideline are applicable even when one birth attendant is present at the birth and in conditions with minimum of needed equipment. Macedonian Association for Perinatal Medicine supplies health providers involved in delivery and newborn care with updated information through meetings, workshops and its website (www.mapm.org.mk).

Conclusion

Although this guideline has been written more than ten years ago, it is a useful tool for all birth attendants in providing health care of newborn. Continuing medical education is essential for improving health care.[9] With only one aim, to rescue as much newborn as we can, we must go further more in our efforts for improving our knowledge and practical skills.[10,11] Ethical dilemmas are left for practitioners, but even in situation like threat or not, we must know that every human being deserve a chance for life.[12,13]

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