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Development Of The Naval Medicine In Bulgaria

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Abstract. Twenty years ago, when the post of ship physician was almost mandatory, ship doctors (especially in merchant navy and fishing vessels) were often considered unnecessary. To ensure health and treatment on board, every seaman needs to know the first aid basics. Well-equipped, competent medical staff will effectively cure most injuries on board and thus reduce the number of expensive and inconvenient helicopter evacuations, ship detours and port links. Marine medicine training has been launched for five years now and is unique to university education in Bulgaria.

Key words: maritime medical assistance, marine medicine.

Introduction

Cinema, literature and the media have long created the image of a ship doctor - a middle-aged professional with steel nerves, a cool head, a fearless heart. This is a person who does not suffer from sea sickness himself and always has the right treatment for crew members, possesses excellent medical care skills at sea, and he can do everything except, perhaps, abdominal operations in the ship's tight medical center.

Since the time of the great geographic discovery among crew members, the ship doctor was considered a respectable person and his presence in long sea trips was almost imperative. Nowadays, due to a number of circumstances, the situation is slightly different from the 16th-17th centuries.

In an attempt to reduce the staff costs of the company, the positions of ship physicians started to reduce. Firstly, this affected the medical staff (paramedics, nurses), then came the doctors' turn.

Twenty years ago, when such a post was almost mandatory, ship doctors (especially in merchant navy and fishing vessels) were often considered unnecessary. The reason is simple: sailors are extremely strong physically, weathered, they undergo medical examination for work, try to deal with most medical problems alone, many seafarers have certificates for first-aid or medical assistance on board. As practice shows, in such situations the ship physician, in the opinion of the companies, turned out to be almost useless.

Today, in most merchant ships, fishing vessels, and in some cases the offshore fleet, the duties of the ship physician are delegated to one of the senior officers of the ship. The training and medical qualifications of seafarers (especially officers) are much higher today than 10-15 years ago [1].

Exposition

Sanitary-hygienic conditions and health protection of the seafarers of the ship are regulated by the Ship Organization Chart of the Navy of the Republic of Bulgaria, chapter IX - Sanitary, hygiene and anti-epidemic provision of the ship and protection of the health of the servicemen.

Art. 552 regulates the need for regular medical checkups - "Medical examinations are carried out to monitor the health and physical development of the ship's personnel and to promptly identify persons in need of health support and treatment. (2) The medical examination is carried out by the head of the medical service of the compound (shore base) or under his direction by the ship's physician. "

In Bulgaria, a number of training courses are organized for ship officers and other persons providing first aid to seafarers aboard the ship. The trainings are in accordance with international requirements and conventions for this practice. On passing the written and practical final test, the Maritime Administration issues a certificate "Proficiency in Medical First Aid". Successful graduates increase and consolidate their knowledge and skills to provide first aid in an accident or illness on board until the arrival of qualified medical assistance.

To ensure health and treatment on board, every seaman needs to know the basics of first aid technique. Well-equipped, competent medical staff will effectively cure most injuries on board and thus reduce the number of expensive and inconvenient helicopter evacuations, change of the ship's course, sending the ship from one port to another and getting off the ship due to medical reasons.

Regardless of the first aid training, the crew cannot cope with many other slowly ongoing, but life-threatening conditions and diseases accompanied by dehydration and requiring parenteral rehydration of the body. A comprehensive survey of shipwreck survivors during World War II showed that the maximum time without water recorded by the survivors was eleven days.

Causes of dehydration may be many and varied: vomiting or diarrhea; increased body temperature; increased sweating due to high ambient temperatures (either in the work area or both); chronic or acute blood loss; taking medications that cause frequent urination; medications increasing gastrointestinal motility; diabetic ketoacidosis; hyperventilation; burns; insufficient fluid intake.

All these prerequisites are existent at sailors on maritime navigation.

Insufficient intake of liquids may also occur in some depressive states and mental disorders associated with isolation and prolonged voyages, especially in beginner seafarers, with no experience in this way of life and detachment from family and relatives [4].

Today the area of Bulgaria is 110 000 sq.km, the state borders have a total length of 2245 km, of which 1186 km are land, 686 km - river - 30.55%, and 378 km at sea - 16.83%. This defines it as one of the countries with developed river and sea tourism, river and sea transport, naval fleet. In recent years, the number of people who have been practicing scuba diving for recreation has also grown. During diving or staying under water, a person is subjected to the varied effects of the surrounding aquatic environment that cause different pathophysiological reactions and damage to the diver's body. In this regard, individuals related to this field must

possess not only specific skills but also theoretical knowledge of the dangers arising from their work under water and increased pressure. With the development of diving tourism, the specialized marine medical aid is becoming more and more demanding [5].

In Bulgaria, there is no separate specialty for medical doctors. During last years, out of necessity for the position Ship doctor have been appointed specialists in Disaster Medicine, Anesthesiology and Resuscitation, Surgery, General Medicine.

The biggest city on the sea border is Varna which has University of Medicine and Higher Naval School. The only one in Bulgaria military-naval hospital in the city possesses the first (but not the only one) in Bulgaria hyperbaric camera.

Marine medicine training is unique to higher education in Bulgaria. It is held only at the University of Medicine in Varna, as a free elective discipline amounting to 30 teaching hours for students in 4th and 5th year specialty medicine. A Marine Science Research Sector has been established at DAEIMM (Department of Anesthesiology, Emergency, Intensive and Marine Medicine). Marine medicine is a specific interdisciplinary medical field that is studied to varying degrees and forms mainly in developed marine countries.

In Bulgaria, it covers the following branches: Hyperbaric Oxygenation; Underwater, including diving medicine; Marine Medical Expertise; Marine Toxicology; Marine Telemedicine, Water Rescue. Together with the University of Medicine in Varna (MU), the Bulgarian Red Cross, the Military Medical Academy (Naval Hospital) and the Higher Naval School (HNS) also participate in the program. Students have the opportunity to visit working marine and sea-related institutions and establishments, to familiarize themselves in theory and in practice with maritime health and medical issues. Practical sailing is also taking place on board of the rescue boat of the Bulgarian Red Cross "Mitropolit Simeon" within the territorial waters of Varna Bay and the adjacent lake [6].

From 2017 for the first time in Bulgaria "Prof. Dr. Paraskev Stoyanov" University of Medicine in Varna (MU - Varna), Higher Naval School" N. (HNS) and Military Medical Academy - Sofia (MMA) offer the possibility of education in the specialty "Military Nurse" ("Nurse" with Bachelor's degree and military specialty "Medicine" with fourth degree of professional qualification). Military nurses have largely the same responsibilities as traditional nurses. However, they not only learn basic nursing skills, but their education also includes how to work with military patients.

The training is conducted together by University of Medicine in Varna, Military Medical Academy and Higher Naval School only in regular day form. Upon completion of the full 4 year course, students receive a bachelor's degree from the University of Medicine in Varna. To obtain a military specialty "Medicine" with a fourth degree of professional qualification, it is also necessary to complete a course at the HNS Professional Senior College [7].

Students of the specialty "Military Nurse" receive a diploma from the University of Medicine - Varna, recognized in the European Union, and the graduates are to be provided with conditions for work and development in excellent technological bases and contacts with leading specialists.

The training at the University of Medicine in Varna is carried out according to a curriculum and programs, meeting the unified state requirements and the European standards for the

specialty. Students study the theoretical and practical foundations of nursing care, medical-biological, clinical and humanitarian disciplines: medical psychology, ethics, sociology, health legislation, etc. Graduates of the specialty acquire the Bachelor's degree and can practice in the conditions of hospital and outpatient care - either alone or in a team. They find a successful realization in the country and abroad.

During their military training, students will learn how to manage a boat and a yacht, will have the opportunity to manage virtual ships of the most modern simulators in Europe and to interact with students from all over the world. The competent training of the graduates enables them to improve their qualifications not only in Bulgaria but also in all NATO member states.

For the first time in the country are printed textbooks, which bring together the medical aspects of the contact between human and marine environment, on board and shore-based medicine, water rescue, diving medicine, marine toxicology and pharmacology.

The editions do not duplicate clinical diseases and problems studied in other disciplines, but examine marine environment specific drowning, barotrauma, hypothermia, sea sickness, decompression sickness, sea poisoning, and specific treatments such as hyperbaric oxygenation and pharmacological provision for marine medicine.

Focus is on the topics of medicine on sea platforms and cruises. National and international norms are presented, regulating the organization of medical assistance on board the marine facility, on shore, the order and method of assistance in accidents, organization of prevention, expertise and control and last but not least - the way and the requirements for the training of marine medical professionals and the medical training of marine non-medical professionals.

The topics in the textbook are presented in an easy-to-read way so that they can be understood by students who are not familiar with marine terminology. Most of the images - photographs and graphics are original [8].

Conclusions

With our good professional training and high spirit, our military medics earned the authority of serious partners in carrying out operations in different missions. In this way the Military Medical Academy promotes not only the international authority of the Bulgarian Army and the state, but also with its accumulated experience, guarantees the security of the population.

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