

Research on Cultivation of Ability and Quality of Commander for Aviation Lifesaving on the Sea

Han Qingtian

Naval Aviation University, Yantai, China

hbluesky@163.com

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Abstract: The paper analyzed the capability and quality requirements of aviation lifesaving commanders. They should be familiar with distress personnel and search and rescue mission, joint search and rescue force, international cooperation mechanism, and have the ability to coordinate decision-making, and understand search and rescue equipment and medical rescue knowledge. The paper put forward the training countermeasures, and proposed to improve the training system and establish the concept of joint search and rescue. Finally the importance of medical first aid knowledge, decision-making ability and learning ability were emphasized.

1. Introduction

China has a vast territory, a long coastline and a heavy task of rescuing lives and property at sea. With the need of actual combat training and transformation and development of the army, more and more military operations are carried out at sea. Maritime life-saving and search-and-rescue are related to the improvement of the combat effectiveness of the army, the safety of life and property and social stability. Maritime aviation life-saving, especially helicopter rescue, has gradually emerged and become increasingly powerful. Relevant literatures have analyzed the problems existing in the training of our naval helicopter rescue force, especially the lifeguard, and put forward the corresponding training mode. Based on the analysis of the demand for the competence and quality of maritime aviation search and rescue commanders, this paper studies and puts forward the training countermeasures.

2. Requirement Analysis of Ability and Quality of Commanders for Aviation Search and Rescue on the Sea

2.1. Familiarity with persons in distress and search and rescue missions

As a search and rescue commander, it is necessary to fully understand the relevant information of the search and rescue mission. Firstly, the characteristics of relevant sea areas, including meteorological and hydrological conditions, airspace aircraft, sea vessels, air traffic control, fishery activities and other related situations. Secondly, the situation of military pilots in distress, including aviation life-saving ability, life-saving skills training, protection equipment, possible damage situation. Thirdly, that should be conserved of specific search and rescue missions, business situation, including the number of people in distress, time, place, etc.

2.2. Understanding the joint military-civilian search and rescue forces at sea

In order to carry out the maritime aviation search and rescue mission, it is necessary to make full use of the civil and military search and rescue forces, coordinate and cooperate, strengthen regional cooperation, and achieve the best rescue effect. In the existing maritime search and rescue system, in addition to the search and rescue forces of the army, there are four search and rescue cooperation zones in North China, Central China, South China and the Yangtze River. The management mode of four-level dangerous situation and three-level response is adopted in maritime search and rescue, and three-level response procedures are formulated at the national, provincial and municipal levels,

as well as maritime agencies at all levels and their professional rescue bureaus and salvage bureaus. The rescue fleet shall be responsible for the supervision of maritime traffic safety in coastal waters and inland navigation waters, emergency rescue of ships and air accidents, and salvage of sunken ships and sunken objects in air accidents. Regularly organize large-scale sea search and rescue exercises, strengthen the training and drilling of non-professional rescue forces participating in search and rescue operations, and vigorously improve the skills of professional search and rescue personnel. Search and rescue commanders should fully understand the distribution, characteristics and operation mechanism of the military and civilian search and rescue forces, so as to fully mobilize all aspects of the forces and achieve the best results of search and rescue.

2.3. Familiarity with international cooperation mechanism for maritime rescue

The salvage of life and property at sea has been paid more and more attention by various countries and regions. Search and salvage techniques at sea have been continuously improved, and international cooperation has been increasingly improved. As a party to relevant international conventions, in the process of implementing the convention, the level of maritime search and rescue has been improved, maritime search and rescue agencies have been gradually improved, and search and rescue procedures have been gradually established. Search and rescue personnel must be familiar with and abide by relevant systems and agreements, while paying attention to confidentiality and safeguarding national interests. The first is the Handbook on International Aviation and Search and Rescue jointly launched by the International Maritime Organization (IMO) and ICAO. The second is the Handbook on Search and Rescue of the International Maritime Organization, which assists governments in implementing the provisions of international conventions on maritime search and rescue and the obligation of high seas search and rescue. and the third is the International Search and Rescue Service. The satellite COSPAS-SARSAT system planning agreement provides long-term warning and location determination services for search and rescue work.

2.4. Ability to coordinate and make decisions in search and rescue organizations

Search and rescue organization and command are a work with strong timeliness, comprehensiveness and dynamics, which requires commanders to have strong organizational, coordination and decision-making capabilities. In terms of timeliness, once the maritime rescue department receives distress alarm, it should take action immediately. According to the location of distress, meteorological conditions, sea conditions, personnel in distress, aircraft conditions and other conditions, it should evaluate and classify the dangerous situation according to the relevant standards. According to the evaluation conclusion, it is necessary to take corresponding countermeasures and actions quickly reactivated. From the dynamic point of view, with the development of the situation, the incident is constantly assessed, re-classified and the search and rescue operations adjusted. Air rescue forces should give priority to the use of air rescue forces, striving for the first time to arrive, ships near the incident area should rush quickly, while vessels in other areas or in port should continue to follow up. In a comprehensive way, after a maritime accident, it is necessary to dispatch the search and rescue resources as much as possible, coordinate the arrival of ships and aircraft nearest to the incident sea area immediately according to the incident level and action plan, and organize the follow-up rescue force in time according to the situation, so as to have an opportunity decision and decision-making ability.

2.5. Skilfully use of search and rescue equipment technology

Navy pilots often fly in the sea, and the probability of forced landing at sea is more than that on land, while the difficulty of surviving at sea is much greater than that on land. After forced landing, depending on survival and rescue equipment can maintain life, carry out self-rescue or rescue, waiting for rescue. In addition, helicopter pilots also need special rescue equipment to search for and rescue the crashed crew. Search and rescue commanders need to be familiar with survival and rescue equipment in order to ensure that naval pilots can safely escape from aircraft crashes, prolong their survival time and be easily searched and rescued. The first is personal protective

equipment for pilots, which can understand the types, models and performance characteristics of various kinds of personnel protective equipment to facilitate rescue. the second is the comprehensive use of search equipment, various infrared, radar and optical search equipment. and the third is rescue equipment, such as winch, hanging basket, hanging chair, stretcher, etc., which are applicable to different rescue fields respectively. Fifth, the application of search and rescue information system and software, which enables all operations from alarm reception to termination of search and rescue to be supported by the information software, so that search and rescue operations can be carried out in an orderly manner.

2.6. Familiar with the principles and equipment of medical treatment and rescue

In order to better accomplish the task of maritime aviation lifesaving, it is necessary to be familiar with medical rescue related knowledge. In terms of rescue principle, according to the analysis of rescue situation and on the basis of synthesizing expert opinions, the rescue principle of search and rescue medical treatment is determined. For example, the tasks of first aid and emergency treatment can be accomplished according to the principle of classified treatment of war wounds. The needs of first aid and maintenance of the lives of the people in distress should be highlighted, and the quick rescue and quick rescue should be embodied. In terms of medical equipment and technology, it is necessary to understand the service requirements, medical rescue technology and medical equipment, drug equipment and other aspects, such as the use of air first aid kits for lifeguards to descend from helicopter ladders to the ground to rescue injured pilots. Airborne emergency medical kit is used to load medical devices and medicines. Emergency ventilator is placed on helicopter alone and can be used at any time according to need. In the aspect of medical equipment matching, we should be familiar with the general and standardized status of medical equipment, such as portable universal medical equipment, which can undertake search and rescue duties in many ways. The service is common on the helicopter.

3. Research on Training Strategies of Commanders for Aviation Search and Rescue on the Sea

At present, the professional level of maritime aviation search and rescue equipment and lifesaving personnel is relatively high. The commanders of aviation search and rescue must also meet the needs of ability and quality, and be competent for posts. Therefore, it is necessary to strengthen the training and research of search and rescue commanders. At present, the training of maritime aviation search and rescue command personnel is not perfect. It is suggested that personnel training and personnel training should be strengthened from the following aspects.

3.1. Improving the training system for search and rescue commanders

At present, the training of maritime search and rescue personnel, especially commanders, is still in its infancy. It is necessary to give full play to military and civilian advantages, establish personnel training system, and improve the professional quality and ability of post personnel. In terms of training objectives, we should take the promotion of command ability of search and rescue organizations as a lead, give full play to the advantages of military and local search and rescue teaching resources, make use of the advantages of local life rescue practice experience, and strive to improve the ability of search and rescue commanders to plan, organize, command, coordinate and control. In terms of training content, we should strengthen search and rescue organizations and referencing. The standardization, standardization and procedural of the process should be systematically sorted out and summarized so as to make the training content conform to the reality of search and rescue and the teaching implementation more pertinent. In the implementation of teaching, the on-site case teaching should be increased appropriately, and the on-site simulation, on-site drilling and even on-site command of search and rescue at sea should be encouraged to test and promote. In terms of training mode, under the framework of civil-military integration, we should strengthen the planning of talent growth system, analyze the dual-use characteristics of search and rescue technology and command ability, and realize the military-civil integration talent training

system.

3.2. Establish the concept of united search and rescue

Search and rescue personnel must firmly establish the concept of joint and integrated search and rescue. First, we should be familiar with the composition and organizational structure of our search and rescue forces, fully mobilize the resources potential of forward rescue, on-board rescue, transshipment and evacuation, and rear medical treatment, master the search and rescue procedures of various emergencies at sea, and regularly conduct technical exchanges, analyze cases, and put forward deficiencies and improvement measures. Second, we should master them. Military and civilian search and rescue resources, giving full play to their respective strengths and strengths, taking advantages of each other, sharing resources, especially all kinds of rescue and rescue resources and support forces within the mission sea area and airspace, can reasonably allocate resources in response to emergencies and emergencies, and achieve the best results. third, to be familiar with international rescue rules, for the distant Relevant laws, regulations and systems concerning maritime rescue and high-seas rescue, especially air rescue near the border areas, should be well known so as to implement rescue reasonably and legally. Fourthly, more participants in joint maritime search and rescue exercises and drills should be involved so as to enable search and rescue commanders to have an intuitive understanding of joint search and rescue through salutes and feelings and be able to use them. The theoretical knowledge solves the specific problems of search and rescue, and improves the post competence.

3.3. Focus on strengthening medical knowledge of life-saving equipment

Qualified professional trainers are needed to strengthen the training and training of life-saving equipment and medical first aid knowledge. First, be familiar with the quantity of medical equipment of search and rescue helicopter, including first aid kit, first aid ventilator, first aid medical box, etc., as well as dressing, fixation, ventilation, cardiac resuscitation, diagnosis, treatment and other medical care supplies and first aid equipment, first aid medical equipment and first aid medicines. Medical first aid methods and environmental requirements for different losses, such as on-site, on-board, on-board, on-board, on-board, on-board, ground and hospital conditions, can be used to carry out medical rescue projects, medical staffing, equipment and drug needs, etc. Third, be familiar with dispatch able medical units, institutions and their rescue capabilities, and be able to Aimed at equipping the necessary medical equipment and medical personnel in the field, transportation and evacuation process, such as air first aid kit, air first aid medical box and first aid ventilator, etc. to optimize the supporting programs.

3.4. Focus on fostering the ability of organizational coordination and decision-making

Search and rescue commanders must have the ability of search and rescue management and command, such as the formulation of search and rescue plan, the organization of search and rescue operations, on-site rear command, the coordination of search and rescue resources, and the control of search and rescue process. They can organize and coordinate search and rescue activities and make timely decisions. Firstly, the courses of management, command and information are offered to enable the trainees to have the foundation of management ability and command quality, especially the ability to use information technology equipment and the application of software such as artificial intelligence and assistant decision-making under the condition of information. secondly, case teaching and case teaching are widely carried out to familiarize the trainees with search and rescue finger. The third is to use sand table deduction to deduce on the sand table according to the logical sequence of the exercise, so that commanders and coordinators can familiarize themselves with the procedures and check the problems in emergency response plans and procedures.

3.5. Improve learning ability and optimize knowledge structure

Under the condition of modern high-tech war, the commander of aviation search and rescue must be the important task of military personnel to meet the needs of modern war, and must have a comprehensive and open knowledge structure. In the information age, the speed of knowledge

updating is accelerating, and the knowledge of aviation search and rescue is constantly enriched and improved. As a commander of aviation search and rescue, we should keep up with the development and progress of technology, constantly improve the learning ability, and adapt to the needs of learning talents. Firstly, through business learning, we can continuously improve the level of professional knowledge and ability, and find out the contradictions in search and rescue command work in time to deal with and solve them, so as to improve the work level and efficiency. Secondly, through vocational education platform, we can enrich vocational and technical content and optimize the knowledge structure of search and rescue command. And thirdly, through mutual cooperation. Networking platform keeps track of technological frontiers and knowledge dynamics, and applies it to the aviation search and rescue command work to improve the level of work and life-saving command ability.

4. Conclusion

Under the increasingly heavy task of maritime aviation life-saving, it is necessary to strengthen the understanding of the importance of training aviation life-saving commanders. Through the construction of training system, optimization of training content, innovation of training mode and improvement of training system, smooth personnel training channels should be formed to improve the overall quality of life-saving commanders. Search and rescue mission completion provides talent support.

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