DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY
SPECIAL FORCES COMMAND (AIRBORNE)
2929 DESERT STORM DRIVE (STOP A)
FORT BRAGG, NORTH CAROLINA 28310-9110

REPLY TO
ATTENTION OF:

AOSO-MD

01 July 2014

MEMORANDUM FOR RECORD

SUBJECT: Policy Letter: Long QT Syndrome

1. Long QT Syndrome (LQTS) is a conduction disorder of the heart that can potentially cause a fast and chaotic heartbeat. This rhythm disturbance can subsequently cause loss of consciousness, seizure, and when the disturbance is prolonged, occasionally death. Many individuals with this condition typically lead a normal life and often are unaware that they have this condition; however, others may have rhythm disturbance recurrences that result in any of the various clinical manifestations. In particular, LQTS individuals under significant physical or emotional stress are at high risk for developing potentially severe clinical manifestations.

2. LQTS is typically identified by EKG. The corrected QT interval (QTc) is measured on the standard EKG and compared against the normal range: a normal QTc for males is less than 430msec; 430-450msec is considered borderline; greater than 450msec is considered definitely prolonged and puts an individual at significant risk for pathologic events.

3. Given the exceptionally rigorous nature of underwater special operations (the combination of both hypoxia and tachycardia that is not induced in any other special operations training), Diving Medical Officers (DMO) place increased emphasis on LQTS; the DMOs from both Naval Special Warfare and Special Forces Underwater Operations diligently screen training candidates for LQTS. Consensus opinion is that QTc of 430msec or higher is disqualifying for underwater operations. Although a specific QTc is not identified in Navy medical regulations or AR 40-501, Chpt 2-18, section c(3) history of ventricular conduction disorders or c(4) history of conduction disturbances (which are referenced in the standards for medical fitness for Special Forces marine diving in Chpt 5-9) provide the regulatory basis for such a standard. As such, 1st SWTG(A) will adhere to and enforce this consensus standard for any Soldiers attending the Combat Diver Qualification Course.

4. Any individual with a QTc of 430msec or higher is considered medically disqualified, but may request a waiver for this condition. Any waiver request must be submitted through the proper channels, as with other routine waiver requests, and at a minimum include EKG, echocardiogram, and full cardiology workup with specialist comment on suitability for the rigors of underwater special operations.

5. This policy is effective as of date of signature. The point of contact is the undersigned who can be contacted at (910) 432-0863 or ricardo.c.ong.mil@mail.mil.

RICARDO C. ONG
COL, MC
Command Surgeon

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01 July 2014

MEMORANDUM FOR Cardiology Consultants

SUBJECT: Cardiology Consultation for Soldier attending the Combat Diver Qualification Course.

1. The physical examination for students attending the Special Forces Combat Diver Qualification Course (CDQC) requires an EKG to evaluate baseline cardiac status. Any abnormalities will require cardiology consultation to help determine whether the individual in question is suitable for the rigors of Special Forces Underwater Operations. These abnormalities include, but are not limited to, dysrhythmias, ST abnormalities, interval abnormalities indicating nodal blockage, and suggestion of hypertrophy; in particular, Diving Medical Officers (DMO) place increased emphasis on LQTS. Consensus opinion is that QTc of 430msec or higher is disqualifying for underwater operations, so a detailed cardiology evaluation is required to consider for possible waiver.

2. In evaluating an individual for CDQC, we ask the cardiologist to understand that the rigors of Special Forces Underwater Operations will physically and mentally push an individual beyond any semblance of normal boundaries; students will frequently be both hypoxic and tachycardic, placing them at increased risk for untoward cardiac events if clinically predisposed. Over six-weeks of training, there are typically 2-4 events daily that will push the boundaries of human endurance. In addition to enhanced physical training every morning, exceptionally stressful training events that are a significant part of training include breath-holding, swimming with weight belts, and open-water distance swims up to 3K. Some classes have as high as two-thirds drop-out rate, even among already qualified, highly physically fit Special Forces Soldiers.

3. In consideration of the rigors of CDQC, we request that the cardiology evaluation for QTc >= 430msec (or any other identified cardiac abnormality), include EKG, Echocardiogram, and GXT. Additionally, it is imperative that the cardiologist provide a clear, measured, and specific assessment and recommendation regarding the risk of potential cardiac events for the prospective student, considering that the student will be both hypoxic and tachycardic from extreme physical stress. We will not reflexively deny waivers for QTc>=430msec, but rather, we will consider the measured assessment of the cardiologist for risk of untoward cardiac events for each individual student.

4. The point of contact is the undersigned who can be contacted at (910) 432-0863 or ricardo.c.ong.mil@mail.mil.

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MEMORANDUM FOR RECORD

SUBJECT: Policy Letter: CDQC candidates with Patent Foramen Ovale

1. The foramen ovale (FO) is an opening in the fetal heart that allows oxygenated blood to pass from the right to the left side of the fetal heart, thus oxygenating the fetus in the absence of respiratory activity while in the uterus. The FO normally closes at birth with onset of respiratory activity and eventually fuses. A Patent Foramen Ovale (PFO) describes a congenital anomaly of the heart where the FO has not closed correctly. This condition is present in one-quarter to one-third of the population and is generally considered a risk for Decompression Sickness (DCS) in divers, where nitrogen gas bubbles form in the blood causing a variety of different pathologic conditions. It can be benign as joint pain or as severe as paralysis and stroke. The increased risk of PFO derives from the theoretical possibility of nitrogen gas bubbles traveling from the right-side to the left-side of the heart where it can access the arterial system and then travel throughout the body with pathologic consequences.

2. Although PFO is not specifically identified in Navy medical regulations or AR 40-501, Chpt 2-18 of AR 40-501, section (h) history of congenital anomalies of the heart (which are referenced in the standards for medical fitness for Special Forces Marine Diving in Chpt 5-9) provide the regulatory basis for medically disqualifying from CDQC any Soldier found to have a PFO. This policy letter provides guidance for waiver consideration of Soldiers with a PFO who would like to attend CDQC.

3. The USN currently considers waivers for PFOs that measure 9mm or less, since consensus opinion among NAVSPECWAR DMOs is that smaller PFOs (9mm or less) pose minimal risk. However, since PFO size is not necessarily a reliable measurement of clinical risk, we will use shunt-size as the basis for waiver consideration. No screening for PFO will be required, but if a PFO is known or found incidentally on a trans-thoracic echo (TTE), a bubble-study TTE with Valsalva will be required. Results will be considered as follows:

a. Strong consideration for waiver: a small shunt of 5 or fewer bubbles crossing right to left observed solely after the release phase of valsalva (this represents a small number of bubbles crossing only during valsalva phase and is considered low risk).
b. Further evaluation required: a small shunt of 5 or fewer bubbles crossing right to left observed at rest (higher risk than crossing during valsalva only); a moderate shunt (>5 bubbles) or equivocal initial TTE requires cardiology consultation, trans-esophageal echo (TEE) with bubble study, and specific comment from cardiologist as to risk for DCS and fitness for duty as a combat diver.
c. Strong recommendation against waiver: a large shunt (complete opacification of left atrium with bubbles) is observed.
d. Percutaneous Closure of PFO: increased risk of DCS persists after PFO repair. We do not recommend PFO repair since waiver approval remains unlikely and the risks of the procedure far outweigh the potential benefits.

4. Additionally, any individual with a previous diagnosis of DCS and a known PFO is considered at higher risk for recurrent DCS. Waivers will be considered on an individual basis, but approval is unlikely. Any waiver request must be submitted through the proper channels, as with other routine waiver requests, and include all results of the cardiology evaluation (EKG, echocardiogram with bubble study) with specialist comment on suitability for the rigors of underwater special operations.

5. This policy is effective as of date of signature. The point of contact is the undersigned who can be contacted at (910) 432-0863 or ricardo.c.ong.mil@mail.mil.

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