

Military Service and Neurology

Askerlik Hizmeti ve Nöroloji

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Abstract

Determination of the health qualifications of personnel, students and their candidates, who are members of the Turkish Armed Forces, The General Command of Gendarmerie and The Coast Guard Command has been transferred to the Ministry of Health hospitals. 162 hospitals affiliated to the Ministry of Health were authorized to report in this context. The magnitude of this uncertain patient volume, and most importantly, the lack of awareness of the legislation has made the job particularly challenging for neurology specialists. The most common features of neurologic diseases, in order to minimize the problems faced by our colleagues after the transfer of military health services and health board processes to the Ministry of Health, which has been carried out for about a century in a military system, are presented with report samples.

Keywords: Military service, health qualification, health board report

Öz

Türk Silahlı Kuvvetleri, Jandarma Genel Komutanlığı ve Sahil Güvenlik Komutanlığı mensubu olan personel, öğrenciler ve bunların adaylarının sağlık yeteneklerini tespit etmek, Sağlık Bakanlığı hastanelerine devredilmiştir. Sağlık Bakanlığına bağlı 162 hastane, bu kapsamda rapor vermeye yetkilendirilmiştir. Öngörülemeyen bu hasta hacminin büyüklüğü ve en önemlisi de mevzuatın bilinmemesi nedeniyle nöroloji uzmanları belirgin zorluk çekmektedirler. Yaklaşık bir asıra dayanan süredir askeri sistem içerisinde yürütülen askeri sağlık hizmetleri ve sağlık kurulu işlemlerinin Sağlık Bakanlığı'na devrinden sonra meslektaşlarımızın karşılaşılabileceği sıkıntıları en aza indirmek amacıyla; nörolojik hastalıklar ile ilişkili özelliklerinden en sık görülenleri, rapor örnekleriyle sunularak bu derleme kaleme alınmıştır.

Anahtar Kelimeler: Askerlik hizmeti, sağlık yeteneği, sağlık kurulu raporu

Introduction

Determining health qualifications in compliance with the duties of the staff who are members of the Turkish Armed Forces (TAF), the Gendarmerie General Command (GGC) and the Coast Guard Command (CGC), and of the students and the candidates for them and performing the health processes in peace and war are organized by the "Regulation on Health Qualifications" of the TAF, GGC and CGC" (RHQ) (1). The health processes which are performed to the staff who are members of the TAF, GGC and CGC and their families and student, military and civil candidates

and citizens obliged for military service and the procedures and principles of all kinds of health processes to be performed to the staff, their families and candidates who are mentioned above in public and private health service providers in Turkey and abroad are determined in the "Directive on Health Examination" (DHE) (2).

While the procedures carried out within the scope of this regulation and the directive have been applied by different stages of military health services for many years; with the "Decision on the principles and procedures concerning the transfer of Military Medical Academy and military hospitals" No. 2016/9109

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published in the Official Gazette (No. 29804 on August 17, 2016) according to the 107th clause of the “Decree Law No. 669 on Taking Some Measures in The Context of The State of Emergency And Establishing the National Defense University and Amending Certain Laws”; responsibility is left to the hospitals within the Ministry of Health after the transfer to the Ministry of Health of training hospitals, dispensaries and similar health units belonging to the Gülhane Military Academy of Medicine which is in the structure of TAF Health Command and health units belonging to the GGC (3).

Over the years, especially under the title of “epilepsy”, working principles and expectations of military health system were tried to be shared with civil neurology specialists with meetings, seminars, Congress and articles (4-6). After the transfer of the TAF health system to the Ministry of Health, these activities continued to meet the demands of civil neurology specialists in the early period (7). With the transfer of the system, 162 hospitals affiliated to the Ministry of Health are authorized to prepare reports in this context (8). Due to the size of this unpredictable patient volume and most importantly to the lack of knowing about legislation, neurology specialists are having significant difficulties.

One of the main reasons for this difficulty is the fact that the processes of military health services are thought to be limited to make decision whether the obligors for military service can do military service or not. However, if sampling is made within the military health system then it will be understood that the regulation is also used to determine whether a captain of infantry can command the union or can not, in which aircraft class an upper lieutenant combat jet pilot will continue to function after recovery of illness, whether health features of an electronic class petty officer first sergeant who is in charge of a submarine allow him to continue his duty or do not or whether a gendarmie master sergeant can get commando training or can not and the health boards of authorized hospitals have to make these decisions.

The given health board report will effect a staff's life, will determine or change the class of his duty or even lead to retirement, so this issue should be approached with diligence. In addition, the most important issue that should be known is that every physician is responsible for the report of the health board in person against the legislator. At the same time, as a member of the health board, every physician is also responsible for the accuracy of the content of the report stated in the health board written by a branch that is not related to him / her and for the compliance of the decision with the legislation as an individual.

In order to minimize the difficulties that our colleagues may face after the transfer of military health services and medical board operations to the Ministry of Health, carried out within military system for nearly a century, based on the experience and knowledge gained for many years, the most common features of the reports prepared in the health board for neurologic disorders have been presented with examples in this article.

GENERAL INFORMATION

When we look at the RHQ in general, the first part defines the main purpose and scope. The second part states the characteristics of the health examination of the obliged persons and how and in which health organization the decisions including “not suitable

for military service”, “delay of referral”, “abandonment to the next year” will be taken. According to this, persons who are suitable for military service are defined as those who have no disease or defect in terms of health qualifications and those who enter the “A” clause of the list of diseases and defects. Persons who are not eligible for military service are defined as those who enter the “B and D” clauses of the list of diseases and defects. The “C” clause involves persons in the recovery or treatment states of the diseases and deficits listed in the “A”, “B” and “D” clauses who will not perform military service for a period of time until the final decision is made. The classification of the obliged persons according to their health qualifications such as artillery soldiers or torpedo launching soldiers or whether they can work abroad or not are also included in this section. The health qualifications of the candidate expert sergeants/corporals, contracted sergeants/corporals and soldiers who are employed and to be employed professionally in TAF, GGC and CGC outside the scope of compulsory service are discussed in the third part, the expert gendarmies in the fourth part, the military students in the fifth part and the officers and the petty officers are discussed in the sixth part. In the seventh part, special conditions of Naval Forces and Coastal Security, in the eighth part Air Force and flying personnels are discussed. In the ninth part, the features of trained personnel from external sources, in the tenth part special conditions in which weapons cannot be carried out, in the eleventh part, health qualifications of the civil personnels and in the twelfth part clauses related to report preparing procedures are discussed. As it can be seen, RHQ does not only cover the sanitary procedures of compulsory obligors, but also covers the sanitary procedures of all personnel and candidates under the umbrella of the TAF, GGC and CGC.

The second main section of the regulation includes explanations on the use of the classification or branch designation charts. The meanings of (+), (-), and (x) marks in each rank and class are described and this section also describes how to use the charts. The (+) mark indicates that generals/admirals, officers or petty officers will serve in that class or branch. The (-) mark indicates that generals/admirals can not be factual continental commanders, but they can perform the duties of staff related to management, administrative and other services, and that officers and petty officers can not perform the duties in their classes or branches. The (x) mark indicates that the generals/admirals, officers and petty officers shall perform their duties in appropriate positions of their classes or branches except in the continental commandship. The appropriate positions are indicated in the directives prepared by the Force Commands, GGC and CGC. Examples of this issue are given on the relevant pages of the regulation and not mentioned here.

The third section contains a list of the diseases. The items involving neurologic diseases are as follows:

Item 10: Central nervous system (CNS) or its covers and vascular structures,

Item 11: Peripheral nervous system,

Item 12: Epilepsy, electroencephalographic (EEG) abnormalities and non-epileptic paroxysmal disorders,

Item 13: Autonomic nervous system,

Item 18: Sleep disorders (clauses only related to sleep disorders only: A/S-3 and D/S-3),

Item 47: When evaluated in terms of sleep medicine, (according to the centers, sleep medicine can be performed by neurologists,

psychiatrists, chest diseases specialists or otorhinolaryngologists) – this item describes sleep apnea related conditions (clauses only related to sleep apnea: A/S-1, B/S-1 and D/S-2).

In the fourth main section, there are charts showing classes and branches in which personnels of Land Forces, Naval Forces, Air Forces, GGC and CGC can be assigned according to their diseases. Finally, there is a chart for candidate examination.

REPORT AND DECISION SAMPLES ACCORDING TO THE DISEASES:

ITEM 10:

- A. 1. Disorders causing mild dysfunction or sequelae (Arnold-chiari malformation, hydrocephalus and all intracranial arachnoid cysts without neurologic or psychiatric findings) of the central nervous system or its covers (dura, arachnoid and similar) and vascular structures (except vascular pathologies and tumors) are evaluated under this item.
- B. 1. Disorders causing moderate dysfunction or sequelae of the central nervous system, its covers and vascular structures, treated or untreated arteriovenous malformations, cavernous hemangioma, aneurysm and benign tumors of the central nervous system [all intracranial arachnoid cysts, Evan's rate (ratio of distance between frontal horns to maximum biparietal diameter) of more than 30%, hydrocephalus with neurologic or psychiatric findings, and hydrocephalus treated with shunt surgery, syringomyelia which is shown radiologically with or without neurological deficits, benign tumors of the skull bones that push the central nervous system] are evaluated under this item.
- C. Treatment or recovery states of the diseases indicated in the clauses A, B and D.
- D. Disorders causing severe dysfunction or sequelae of the central nervous system, its covers and vascular structures; arteriovenous malformations, aneurysms, and tumors of the central nervous system treated with surgery or other treatment methods resulting in moderate or severe sequelae; malignant pathologies causing or not causing sequelae, hydrocephalus, syringomyelia and arachnoid cysts causing permanent neurological deficits which are radiologically demonstrated and supported by electrophysiological tests are evaluated under this item.

One of the important conditions that should be emphasized when dealing with this item is that the brain tumors, hydrocephalus and arachnoid cysts which are decided by neurosurgeons and peripheral facial paralysis which can also be decided by otorhinolaryngologists are evaluated under this item.

The most common disorders of CNS within the scope of item 10 in young adults in military service age are sequelae of cerebral palsy (CP), multiple sclerosis (MS), essential tremor and cerebral vascular diseases (ischemic stroke, vasculitis, hemorrhages). Other CNS disorders, such as Parkinson's disease (PH) and dementia, are relatively less common in this group of age, but also are considered among other diseases within the scope of this item.

Multiple sclerosis especially effects young adults between the ages of 20-40 years. It is a disorder of CNS and its prevalence is increasing every day. It is the most common cause of disability in young adults after trauma (9, 10). Given the regional prevalence

studies conducted in our country, it is estimated that there are approximately 50,000 MS patients in Turkey (11-13).

Although MS effects women twice as much as men, MS patients in military age are frequently admitted to neurologists for military service decisions. Since many of the neurological diseases are long-term monitored diseases, drug reports giving information about the disease and medical history, epicrises, examinations, status reports prepared by the following physicians are important in the decision-making stage. Decision-making within the scope of item 10 and clause A of the RHQ may require patience compared to other items. We will talk about examples in the process of making an "A" decision in a patient with a diagnosis of demyelinating disorder. The followings are the scenarios in which the same patient can take A, B, or D decision after taken C decision 2 times (Figure 1) in consecutive years.

After taken two "C" decisions, If there is no progression in complaints, clinical and radiological findings, then the patient will take "A" decision (Figure 2); but if the patient has another attack, then the diagnosis will be MS and the patient will take "B" decision (Figure 3). It is important to note that "C" decision is primarily preferred when it is not possible to diagnose and/or when it is necessary to evaluate the distribution in time in order to clarify the diagnosis. And if a change in clinical course in a short period of time is predicted after the first examination; it is supposed that after the first examination of the patient it is possible to change course (as seen in the sample case, this patient has a variable course and can take "A, B or D" decisions), "C" decision can be decided to observe for a certain period of time and postpone the final decision. It is important to note that in cases of sequelae lesions or in cases where there will be minor changes which will not change the decision in time, "B" or "D" should be decided rather than "C" decision.

NEUROLOGY REPORT (DATE/NUMBER)

THIS IS THE FIRST PROCESS OF THE POLLING SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER

COMPLAINTS: HEADACHE

ANAMNESIS AND EXAMINATION: CRANIAL MR IMAGING OF 20-YEAR-OLD MALE PATIENT WHO WAS SUFFERING FROM HEADACHE WHICH SPREADS FROM NECK TO FOREHEAD, LASTS 4-5 HOURS, OCCURS 2 DAYS IN A WEEK AND WORSENS WITH FATIGUE AND STRESS, SHOWED LESIONS REPORTED AS DEMYELINATING. CONTROL IMAGING WAS RECOMMENDED. THERE WAS NO HISTORY OF ATTACK AND NEUROLOGIC EXAMINATION WAS IN NORMAL LIMITS. RADIOLOGICALLY ISOLATED SYNDROME WAS CONSIDERED AND FOLLOW-UP IN NEUROLOGY POLYCLINIC WAS RECOMMENDED. IT IS DECIDED TO DELAY MILITARY SERVICE FOR 1 YEAR TO MONITOR THE COURSE OF THE DISEASE.

LABORATORY FINDINGS

CRANIAL MRI (DATE/NUMBER): COMPATIBLE WITH DEMYELINATING DISEASE

DIAGNOSIS: RADIOLOGICALLY ISOLATED SYNDROME

DECISION: C/10, ABANDONMENT TO THE NEXT YEAR

Figure 1. An example of C/10 report

NEUROLOGY REPORT (DATE/NUMBER)
 THIS IS THE THIRD PROCESS OF THE POLLING SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER. FIRST PROCESS: SULTAN ABDULHAMID HAN TRAINING AND RESEARCH HOSPITAL (DATE/NUMBER) C/10 DELAY FOR ONE YEAR. SECOND PROCESS: HAYDARPASA NUMUNE TRAINING AND RESEARCH HOSPITAL (DATE/NUMBER) C/10 DELAY FOR ONE YEAR

COMPLAINTS: NO ACTIVE COMPLAINTS

ANAMNESIS AND EXAMINATION: 22-YEAR-OLD MALE WHO WAS FOLLOWED-UP IN NEUROLOGY POLYCLINIC FOR 2 YEARS BECAUSE OF HAVING DEMYELINATING LESIONS IN CRANIAL MRI PERFORMED 2 YEARS AGO DID NOT DEVELOP NEW LESIONS OR COMPLAINTS IN FOLLOW-UP. LAST NEUROLOGIC EXAMINATION WAS NORMAL. RADIOLOGICALLY ISOLATED SYNDROME IS STILL CONSIDERED AS DIAGNOSIS.

LABORATORY FINDINGS

CRANIAL MRI (DATE/NUMBER): COMPATIBLE WITH DEMYELINATING DISEASE

CRANIAL MRI (DATE/NUMBER): SIMILAR FINDINGS WITH PREVIOUS IMAGING. COMPATIBLE WITH DEMYELINATING DISEASE

CRANIAL MRI (DATE/NUMBER): SIMILAR FINDINGS WITH PREVIOUS IMAGING. COMPATIBLE WITH DEMYELINATING DISEASE

DIAGNOSIS: RADIOLOGICALLY ISOLATED SYNDROME

DECISION: A/10 S-1, SUITABLE FOR MILITARY SERVICE

Figure 2. An example of A/10 S-1 report

Following two “C” decisions, if the disease shifts to progressive phase and this patient develops irreversible sequela due to aggressive course of the disease although the patient gets adequate treatment, then this patient will take a “D” decision (Figure 4).

There is still no significant decrease in the incidence of cerebral palsy and the incidence is reported to be 2.5 in 1000 live births (14). Many of these patients are referred to neurology polyclinics for the decision of military service. “C” decision should not be given in patients with cerebral palsy because the current situation is a sequela, there is no recovery period, and a “C” decision will not change the military decision. A patient with very mild sequela will take “A”, a patient with moderate sequela will take “B” and a patient with cognitive impairment and/or severe motor findings will take “D” decision.

It is important to note that it will be correct to decide either “B” or “D” based on the nature of the disease in a patient who has been diagnosed with juvenile Parkinson's disease. Although both decisions mean “not suitable for military service”, those who have taken a decision “B” are reevaluated in case of mobilization and are recruited in back service and those who have taken a decision “D” are not called for duty.

Young patients with stroke can take “A”, “B”, “C” or “D” decisions due to their present neurologic status similar to patients with other central nervous system disorders.

NEUROLOGY REPORT (DATE/NUMBER)
 THIS IS THE THIRD PROCESS OF THE POLLING SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER. FIRST PROCESS: SULTAN ABDULHAMID HAN TRAINING AND RESEARCH HOSPITAL (DATE/NUMBER) C/10 DELAY FOR ONE YEAR. SECOND PROCESS: HAYDARPASA NUMUNE TRAINING AND RESEARCH HOSPITAL (DATE/NUMBER) C/10 DELAY FOR ONE YEAR

COMPLAINTS: BLURRED VISION, WEAKNESS AND NUMBNESS IN RIGHT SIDE OF THE BODY

ANAMNESIS AND EXAMINATION: 22-YEAR-OLD MALE WHO WAS FOLLOWED-UP IN NEUROLOGY POLYCLINIC BECAUSE OF HAVING DEMYELINATING LESIONS IN CRANIAL MRI PERFORMED 2 YEARS AGO WAS ADMITTED WITH BLURRED VISION 4 MONTHS AGO AND WAS DIAGNOSED AS HAVING OPTIC NEURITIS AND WAS GIVEN STEROID TREATMENT. ONE MONTH AGO, THE PATIENT WAS ADMITTED WITH WEAKNESS AND NUMBNESS IN RIGHT SIDE OF THE BODY AND WAS INITIATED INTERFERON TREATMENT FOLLOWING STEROID TREATMENT AND WAS DIAGNOSED AS HAVING MULTIPLE SCLEROSIS. LAST NEUROLOGIC EXAMINATION SHOWED INCREASED DEEP TENDON REFLEXES AND UNRESPONSIVE PLANTAR REFLEX IN THE RIGHT SIDE.

LABORATORY FINDINGS

CRANIAL MRI (DATE/NUMBER): COMPATIBLE WITH DEMYELINATING DISEASE

CRANIAL MRI (DATE/NUMBER): SIMILAR FINDINGS WITH PREVIOUS IMAGING. COMPATIBLE WITH DEMYELINATING DISEASE

CRANIAL MRI (DATE/NUMBER): THE NUMBER OF LESIONS WERE INCREASED COMPARED WITH PREVIOUS IMAGING AND A FEW ACTIVE LESIONS WERE SEEN.

DIAGNOSIS: DEMYELINATING DISEASE

DECISION: B/10 S-1, NOT SUITABLE FOR MILITARY SERVICE

Figure 3. An example of B/10 S-1 report

Tremor is also evaluated within the item 10. For the patients with a new diagnosis of essential tremor and who has not received any treatment, “C” decision can be given and the patient can be reevaluated later in the polling. For a tremor that does not impair functionality, “A” decision can be given in the first examination. For patients having uncontrolled tremor despite using drugs, “B” decision is given and for patients operated or treated with “deep brain stimulation”, “D” decision is given.

In summary, for the decision to be made within the scope of item 10, neurologic examination is of great importance as in every field of neurology practice. Findings in neurologic examination mainly lead us to decide whether a person can bear arms or can not. In a newly diagnosed case, to diagnose the nature of the disease, a decision to exempt military service can be made at most three times, and cases with findings in neurologic examination and deformities can be exempted from military service from the first examination. Final decision should be made at most three years after the first admission. The issue to be considered is a final decision should be

NEUROLOGY REPORT (DATE/NUMBER)
 THIS IS THE THIRD PROCESS OF THE POLLING SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER. FIRST PROCESS: SULTAN ABDULHAMID HAN TRAINING AND RESEARCH HOSPITAL (DATE/NUMBER) C/10 DELAY FOR ONE YEAR. SECOND PROCESS: HAYDARPASA NUMUNE TRAINING AND RESEARCH HOSPITAL (DATE/NUMBER) C/10 DELAY FOR ONE YEAR

COMPLAINTS: CLUMSINESS IN HANDS AND DIFFICULTY IN WALKING

ANAMNESIS AND EXAMINATION: 22-YEAR-OLD MALE WHO WAS FOLLOWED-UP IN NEUROLOGY POLYCLINIC BECAUSE OF HAVING DEMYELINATING LESIONS IN CRANIAL MRI PERFORMED 2 YEARS AGO WAS ADMITTED WITH BLURRED VISION 4 MONTHS AGO AND WAS DIAGNOSED AS HAVING OPTIC NEURITIS AND WAS GIVEN STEROID TREATMENT. ONE MONTH AGO, THE PATIENT WAS ADMITTED WITH WEAKNESS AND NUMBNESS IN RIGHT SIDE OF THE BODY AND WAS INITIATED INTERFERON TREATMENT FOLLOWING STEROID TREATMENT AND WAS DIAGNOSED AS HAVING MULTIPLE SCLEROSIS. BUT THE PATIENT'S DISABILITY HAS INCREASED AND SECOND STEP TREATMENT WAS INITIATED. IN LAST EXAMINATION THE PATIENT WAS PARAPARETIC AND COULD WALK WITH WALKER. DEEP TENDON REFLEXES WERE GLOBALLY INCREASED AND PLANTAR REFLEXES WERE BILATERALLY POSITIVE. HE WAS USING AN URINARY CATHETER.

LABORATORY FINDINGS

CRANIAL MRI (DATE/NUMBER): COMPATIBLE WITH DEMYELINATING DISEASE

CRANIAL MRI (DATE/NUMBER): SIMILAR FINDINGS WITH PREVIOUS IMAGING. COMPATIBLE WITH DEMYELINATING DISEASE

CRANIAL MRI (DATE/NUMBER): THE NUMBER OF LESIONS WERE INCREASED COMPARED WITH PREVIOUS IMAGING AND NUMEROUS ACTIVE LESIONS WERE SEEN. ALSO CORTICAL ATROPHY WAS DETECTED.

DIAGNOSIS: DEMYELINATING DISEASE

DECISION: D/10 S-1, NOT SUITABLE FOR MILITARY SERVICE

Figure 4. An example of D/10 S-1 report

made not after a maximum of three health board procedures, but a maximum of three years. The decision of the patient who does not admit for a period of two years despite the decision of exemption from military service for one year, should be made at the end of the third year and the extension of the decision of exemption for one more year is not possible. In the health board report prepared after repeated procedures; the dates, decisions and items on which the decisions are based, of the previous health board report should be stated. In the health board report prepared by a neurologist, the findings of the examination should be submitted in detail because, the decision can be made based on the findings of examination.

Patients with inborn brachial plexopathies, hereditary or acquired polyneuropathies, mononeuropathies especially

compression neuropathies which are listed under slice 1 of item 11 and patients with myopathies, muscular dystrophies or inflammatory muscle diseases such as polymyositis and dermatomyositis which are listed under slice 2 of item 11 are oftenly sent to neurologists to make decision for military service.

ITEM 11

A) 1. Sequelae or mild dysfunction of the peripheral nervous system (lesions causing compression in spinal cord or roots or narrowing in foramens are not considered within this scope and are considered according to the 63th item of this list.)

2. Mild dysfunctions or sequelae due to muscle diseases related with the nervous system.

B) 1. Partial lesions of peripheral nervous system causing dysfunction (lesions causing compression in spinal cord or roots or narrowing in foramens are not considered within this scope and are considered according to the 63th item of this list.)

2. Partial lesions due to muscular diseases related with the nervous system causing dysfunction

C) Treatment and recovery periods of the diseases and disorders stated in (A), (B) and (D) clauses of this item

D) 1. Untreatable total lesions of the peripheral nervous system (lesions causing compression in spinal cord or roots or narrowing in foramens are not considered within this scope and are considered according to the 63th item of this list.)

2. Untreatable total lesions due to muscular diseases related with the nervous system.

Polyneuropathy is a clinical picture that is caused by the widespread impairment of peripheral nerves due to the pathophysiology (15). Patients with hereditary polyneuropathy, a history of Guillain Barre syndrome (GBS), and polyneuropathy due to drugs such as chemotherapy agents are oftenly sent to neurologists to make decision for military service. Hereditary neuropathies constitute one of the most common groups of polyneuropathy in the young adults and it takes a long time before diagnosis in these patients due to slow disease progression (16,17). There may even be undiagnosed military candidates in the decision-making process. The most common group of hereditary polyneuropathy is Charcot-Marie-Tooth's disease and its prevalence is 40/100000. Polyneuropathy with liability to pressure palsy are also evaluated in the hereditary group with autosomal dominant inheritance (18). In this group of age, other types of polyneuropathy, such as diabetic polyneuropathy, may also be encountered for the military decision. In clinical practice, "A" decision is not given very often for polyneuropathy. According to the severity of findings in neurologic examination and electromyographic (EMG) findings, patients are generally exempted from military service by making "B" or "D" decisions. "C" decision can be made in a patient with recent GBS and then a final decision can be made based on the sequela. The decision about neuropathies developed secondary to a trauma or compression is often given by neurosurgeons or physical medicine specialists, although it is not medically and by regulations forbidden to neurologists. But it's better for neurosurgeons to decide about traumatic nerve injuries. unless the neurologist is the only appropriate physician in a hospital to make such a decision. Root compression is considered within the 63th item by neurosurgeons or physical medicine specialists.

"A" decision can be given to military candidates with an

“examination- treatment result” paper and there is no obligation for candidates to be brought to the health board. If there is a controversy or other medical branches are interested in decision, then the decision is made by the health board.

Myopathy is a muscular disease in which muscle fibers fail to function due to various reasons (18). It can be hereditary or acquired. Metabolic myopathies are a group of inherited metabolic muscle diseases caused by genetic enzymatic defects. Acquired myopathies may be caused by drugs, infections, or autoimmune events. Polymyositis and dermatomyositis peak between 40-50 years of age. Although it is more common in women, military candidates with such history can admit at the decision stage (19, 20). Although rare; Duchenne, Becker and myotonic dystrophies are involved in this group. Muscular diseases are evaluated in the second slice of (A), (B) and (D) clauses of the item 11 (Figure 5, 6, 7, 8).

Military candidates are admitted to neurology polyclinics as polling or referred soldiers. For obligors who are subject to polling, “abandonment to the next year” decision is made and for obligors who are subject to referral, “delay of referral” decision is made. “C” decision will be appropriate for this patient because, treatment process is going on and we need time to evaluate the prognosis of the disease.

In the same way, patients with motor neuron diseases, Becker-Duschenne and myotonic dystrophies often take “D” decision.

ITEM 12

- A. 1.** Mild paroxysmal diseases of the nervous system other than epilepsies (patients with headaches without complications are considered healthy).
- 2.** Patients with normal clinical and laboratory findings but exhibit significant findings (focal or generalized spikes, sharp waves, complexes, focal or generalized slow activity) in electroencephalograms (EEG) (Patients without history of blackout who have non-specific EEG abnormalities are considered healthy).
- 3.** Paroxysmal blackouts without specific EEG findings, not diagnosed with definite epilepsy by anamnesis and clinical findings.
- 4.** Epileptic patients who have no specific EEG or imaging findings, but whose seizures are considered as rare due to anamnesis or medical documentation.
- B. 1.** All epileptic seizures which are seen by a neurologist or are considered as epileptic seizures by a neurologist due to video recordings during a period of hospitalization in the clinic.
- 2.** (Modification 22/09/2017 - 2017/10844) Patients whose anamnesis is compatible with epilepsy and who declare to be diagnosed and treated as having epilepsy, patients with an approved report from official health organizations that provide a definitive opinion to the neurologist that they are diagnosed, followed-up and treated as having epilepsy. DESCRIPTION: The content of the report and the health care provider should be indicated in the health board report.
- 3.** Patients with an anamnesis compatible with epilepsy and with a specific finding in EEG (multiple spike wave, often occurring lateralized or generalized spikes, sharp-slow wave complexes)

NEUROLOGY REPORT (DATE/NUMBER)

THIS IS THE FIRST PROCESS OF THE POLLING SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.

COMPLAINTS: NUMBNESS IN THE FIRST THREE FINGERS OF RIGHT HAND

ANAMNESIS AND EXAMINATION: 22-YEAR-OLD MALE WAS SUFFERING FROM PROGRESSIVE NUMBNESS IN THE FIRST THREE FINGERS OF RIGHT HAND FOR 2 YEARS WHICH WORSENS IN NIGHTS AND IMPROVES WITH SHAKING THE HAND. IT WAS LEARNED THAT THE PATIENT WAS DIAGNOSED AS HAVING CARPAL TUNNEL SYNDROME AND WAS OPERATED BY NEUROSURGERY AND HIS COMPLAINTS WERE IMPROVED. IN THE PATIENT'S EXAMINATION, OPERATION-RELATED INCISION SCAR AT THE LEVEL OF THE RIGHT WRIST WAS OBSERVED AND NEUROLOGIC EXAMINATION WAS NORMAL.

LABORATORY FINDINGS

EMG (DATE/NUMBER): PREOPERATIVE EMG SHOWED SEVERE IMPAIRMENT OF SENSORIAL AND MOTOR FIBERS IN THE RIGHT HAND SUGGESTING CARPAL TUNNEL SYNDROME.

DIAGNOSIS: CARPAL TUNNEL SYNDROME (COMPRESSION NEUROPATHY OF THE MEDIAN NERVE)

DECISION: A/11 S-1, SUITABLE FOR MILITARY SERVICE

Figure 5. An example of A/11 S-1 report

NEUROLOGY REPORT (DATE/NUMBER)

THIS IS THE FIRST PROCESS OF THE POLLING SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.

COMPLAINTS: WEAKNESS IN FEET AND LEGS

ANAMNESIS AND EXAMINATION: A 22-YEAR-OLD MALE PATIENT TOLD THAT HE DID NOT HAVE A SIGNIFICANT COMPLAINT UNTIL HIS ADOLESCENCE, AND THEN HE DEVELOPED A PROGRESSIVE WEAKNESS AND DIMPLING IN HIS FEET, AND IN ADDITION “GLOVES AND SOCKS” TYPE NUMBNESS IN HIS HANDS AND FEET. HE WAS ADMITTED TO A NEUROLOGIST. EXAMINATION, EMG AND GENETIC INVESTIGATIONS SUGGESTED THE DIAGNOSIS OF CHARCOT-MARIE –TOOTH DISEASE. ALSO IT WAS LEARNED THAT WEAKNESS IN HANDS WERE ADDED IN TIME. NEUROLOGIC EXAMINATION SHOWED ATROPHY IN DISTAL PARTS OF LOWER EXTREMITIES, “GLOVES AND SOCKS” TYPE HYPOESTHESIA, GLOBALLY HYPOACTIVE DEEP TENDON REFLEXES AND BILATERAL PES CAVUS.

LABORATORY FINDINGS

EMG (DATE/NUMBER): AXONAL TYPE SENSORIMOTOR POLYNEUROPATHY

DIAGNOSIS: POLYNEUROPATHY

DECISION: B/11 S-1, NOT SUITABLE FOR MILITARY SERVICE

Figure 6. An example of B/11 S-1 report

NEUROLOGY REPORT (DATE/NUMBER)
 THIS IS THE FIRST PROCESS OF THE POLLING SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.
COMPLAINTS: FATIGUE, PAIN IN HANDS AND FEET, MOVEMENT RESTRICTION
ANAMNESIS AND EXAMINATION: 22-YEAR-OLD MALE PATIENT DEVELOPED MOVEMENT RESTRICTION AND PAIN IN HANDS AND FEET WHILE CLIMBING STAIRS AND THEN DOING DAILY LIFE ACTIVITIES 2 MONTHS AGO. HE DEVELOPED DYSPHAGIA ONE MONTH AGO. HE WAS HOSPITALIZED BY A NEUROLOGIST AND POLYMYOSITIS WAS CONSIDERED AS THE DIAGNOSIS AFTER INVESTIGATIONS WERE PERFORMED. HE INDICATED THAT THE TREATMENT WAS STILL CONTINUING. NEUROLOGIC EXAMINATION SHOWED ATROPHY ESPECIALLY IN PROXIMAL MUSCLES OF LOWER AND UPPER EXTREMITIES.
LABORATORY FINDINGS
 AST 252, ALT 123, LDH 1268, CK 2315 U/L
EMG (DATE/NUMBER): IN THE STUDIED MUSCLES; POLYPHASIC, OFTEN SHORT-TERM AND SMALL-VOLTAGE MOTOR UNIT POTENTIALS AND SPONTANEOUS ACTIVITIES IN THE FORM OF POSITIVE SHARP WAVES, FIBRILLATION POTENTIALS, AND HIGH FREQUENCY POTENTIAL DISCHARGES INDUCED BY NEEDLE MOVEMENT WERE OBTAINED. THESE FINDINGS ARE CONSISTENT WITH A PRIMARY MUSCLE DISEASE AND SUGGEST INFLAMMATORY MUSCLE DISEASE.
 THE PATIENT HAS A CURRENT STATUS REPORT (DATE/NUMBER) SIGNED BY DOCTOR... AND THE CHIEF MEDICAL OFFICER.
DIAGNOSIS: POLYMYOSITIS
DECISION: C/11, DELAY OF REFERRAL

Figure 7: Example of a C/11 report.

- C. Treatment and recovery periods of the diseases and disorders stated in (A), (B) and (D) clauses of this item
- D. 1. Patients with drug-resistant epileptic seizures (Patients with cariazol-induced seizures are not considered as epileptic)

According to the address-based population data of the Turkish Statistical Institute (December 2017), 40.5 million of 80.8 million Turkish citizens are males. The total number of male population in the 20-40 range of age is 12.9 millions (21). Approximately 129,000 of males in the military age are epileptic patients when we consider the prevalence of epilepsy as an average of 10/10.000 in Turkey, based on the population data of 2017 (22-25). On the other hand, the prevalence of psychogenic non-epileptic seizures (PNEN) is approximately 1/3000–1/50000 (26). According to this data, there are approximately 6,500 patients with epilepsy and 650-1300 patients with PNEN who apply to military service every year during the survey period. The number of patients with PNEN can be increased even further considering the possible increase in secondary gain during military service.

Epilepsies and EEG abnormalities are evaluated within the item 12. Obligators who are classified in (A) clause and who will

NEUROLOGY REPORT (DATE/NUMBER)
 THIS IS THE THIRD PROCESS OF THE POLLING SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.
 FIRST PROCESS: SULTAN ABDULHAMID HAN TRAINING AND RESEARCH HOSPITAL (DATE/NUMBER) C/10 DELAY FOR ONE YEAR. SECOND PROCESS: HAYDARPASA NUMUNE TRAINING AND RESEARCH HOSPITAL (DATE/NUMBER) C/10 DELAY FOR ONE YEAR
COMPLAINTS: FATIGUE, PAIN IN HANDS AND FEET, MOVEMENT RESTRICTION
ANAMNESIS AND EXAMINATION: 24-YEAR-OLD MALE DEVELOPED DYSPHAGIA AND MOVEMENT RESTRICTION AND PAIN IN HANDS AND FEET WHILE CLIMBING STAIRS AND THEN DOING DAILY LIFE ACTIVITIES. HE WAS HOSPITALIZED AND POLYMYOSITIS WAS CONSIDERED AS THE DIAGNOSIS AFTER INVESTIGATIONS WERE PERFORMED. HE INDICATED THAT DESPITE HAVING RECEIVED MANY TREATMENTS, HIS COMPLAINTS WORSENE AND HE COULD MOBILIZE WITH A WHEELCHAIR FOR 6-7 MONTHS. NEUROLOGIC EXAMINATION SHOWED SEVERE PARESIS (1-2/5) AND ATROPHY ESPECIALLY IN PROXIMAL MUSCLES OF LOWER AND UPPER EXTREMITIES.
LABORATORY FINDINGS
 AST 92, ALT 78, LDH 488, CK 600 U/L
EMG (DATE/NUMBER): IN THE STUDIED MUSCLES; POLYPHASIC, AND OFTEN SHORT-TERM MOTOR UNIT POTENTIALS WERE OBTAINED. THESE FINDINGS ARE CONSISTENT WITH A PRIMARY MUSCLE DISEASE AND SUGGEST SEQUELA OF AN INFLAMMATORY MUSCLE DISEASE.
 THE PATIENT HAS A CURRENT STATUS REPORT (DATE/NUMBER) SIGNED BY DOCTOR... AND THE CHIEF MEDICAL OFFICER.
DIAGNOSIS: SEQUELA OF POLYMYOSITIS
DECISION: D/11 S-2, NOT SUITABLE FOR MILITARY SERVICE

Figure 8: Example of a D/11 S-2 report.

perform military service can use drugs related to their illness during military service. Having epilepsy does not prevent military service. Each patient is evaluated separately, and the anamnesis, examination, EEG and imaging findings and response to drugs are evaluated to make decision. Neurologists have to determine whether the person who is suffering from blackout is epileptic and if he/she is epileptic, whether he/she is able to perform military service in peace or war. In addition to expressing medical opinion, legal and conscientious responsibility is also undertaken by neurologist when making this decision.

A routine EEG recording is carried out to every obligor who is referred to with blackout. In order to increase the diagnostic power, standard eye opening-closure, hyperventilation and intermittant photic stimulation are performed during routine EEG recording, and in some cases sleep deprivation is performed. Activation methods can induce the development of specific findings in 11% of EEG records (27). Routine EEG is not gold standard in the

separation of PNEN from epileptic seizures, and also anamnesis may not provide reliable information (28). Documents such as prescriptions, medical recordings and reports taken from the centers where patients are being followed-up and video recording of seizures by phones with cameras guide neurologists in authorized hospitals in making decision. Medical documentations that give a definitive diagnosis to the specialist can be used during the procedure according to the RHQ. In order to increase the legal validity of the documents, the patient's identity (with picture, if possible), physician's identity (with stamp and signature) and the diagnosis must be clear. The documents presented by the patients such as follow-up forms without physician's name, prescription copies without physician's stamp and signature, one-line reports only containing diagnosis of epilepsy and drug name, but not containing information about patient's follow-up, seizure observation (if possible), course and duration of the disease may not be accepted as sufficient documents, legally. Neurologists who diagnose and prepare medical report for drugs are legally responsible in document-based processes. For this reason, neurologists should consider these issues in the preparation of documents for male patients in the military and pre-military age, which can be used as legal documents in the future (7). When necessary, patients should be hospitalized in order to monitor the seizures. The average duration of hospitalization varies between 10-30 days. In a study, 75.5% of patients had seizures within the first 10 days (29). Selected cases can be evaluated with video-EEG monitorization, but it should be considered that it is not compulsory to perform the procedure according to the RHQ. If the anamnesis, examination and laboratory findings or the patient's medical documentations are accurate and enough, and a certain decision according to the definitions in the RHQ can be given,

NEUROLOGY REPORT (DATE/NUMBER)

THIS IS THE FIRST PROCESS OF THE POLLING SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.

COMPLAINTS: BLACKOUT

ANAMNESIS AND EXAMINATION: ACCORDING TO THE PATIENT'S ANAMNESIS; THE FIRST BLACKOUT HAPPENED 1.5 YEARS AGO. HE SAID THAT HE FELT A WEIGHT ON HIS BODY BEFORE HE FAINTED, AND THEN HE DIDN'T REMEMBER. HE HEARD FROM THE PEOPLE AROUND HIM THAT HE WAS CLOSING HIS EYES, PUNCHING HIS HANDS AND WAVING HIS HEAD TO THE LEFT AND RIGHT. IT TOOK THREE TO FIVE MINUTES TO PASS OUT, AND HE HAD THESE ATTACKS ONCE A MONTH. HE USED CARBAMAZEPINE 400 MG/D FOR 2 MONTHS 1 YEAR AGO BUT HE STOPPED USING IT BECAUSE HIS COMPLAINTS WERE NOT IMPROVED. THE LAST TIME HE FAINTED WAS A MONTH AGO. NON-EPILEPTIC SEIZURE WAS OBSERVED DURING THE TIME THE PATIENT WAS HOSPITALIZED IN THE CLINIC.

LABORATORY FINDINGS

EEG (DATE/NUMBER): NORMAL

DIAGNOSIS: PAROXYSMAL BLACKOUT

DECISION: A/12 S-3, SUITABLE FOR MILITARY SERVICE

Figure 9. An example of A/12 S-3 report.

then sending these patients to an advanced center for video-EEG monitorization would not be correct. Every neurologist, whether or not he/she has an academic career, has been assessed equally when deciding according to the RHQ. Not making a decision or directing a patient to another center for decision-making brings administrative responsibility.

Sample reports including different decisions will make the subject more understandable (Figure 9).

The patient's anamnesis, EEG findings, and most importantly, seizure characteristics observed during the period of hospitalization are not compatible with epilepsy (Figure 10).

The anamnesis and most importantly, seizure characteristics observed during the patient's hospitalization are compatible with epilepsy. A documentation showing the patient is followed up in a health center and/or with an EEG recording showing epileptiform abnormality are not required and the decision is made only on clinic observation (Figure 11).

The patient's anamnesis is consistent with epilepsy. The documentation of the patient gives precise belief that the patient is followed up with this diagnosis and it is not necessary to see epileptiform abnormality in the routine EEG record and/or to hospitalize in the clinic to observe seizures. NOTE: (a) It is recommended that the original document be added to the report.

NEUROLOGY REPORT (DATE/NUMBER)

THIS IS THE FIRST SANITARY PROCESS OF ... MONTH-SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.

COMPLAINTS: BLACKOUT

ANAMNESIS AND EXAMINATION: ACCORDING TO THE PATIENT'S ANAMNESIS; HE'S BEEN FAINTING SINCE HE WAS A CHILD. HE DID NOT REMEMBER THE MOMENT HE FAINTED. HE HEARD FROM THE PEOPLE AROUND HIM THAT, HE HAD CONTRACTIONS AND TWITCHES ALL OVER HIS BODY, FOAM COMING THROUGH THE MOUTH, BRUISING OF THE FACE, WHEEZING BREATHING. THE BLACKOUTS LASTED 2-3 MINUTES, AND IT TOOK 10-15 MINUTES TO REGAIN HIS CONSCIOUSNESS. AFTER BLACKOUTS HE WAS FEELING TIRED AND HE WAS ASLEEP. HE HAD THESE ATTACKS EVERY DAYS AND HE WAS ADMITTED TO HOSPITAL. HE USED NUMEROUS DRUGS SO FAR AND HE WAS USING CARBAMAZEPINE 400 MG/D RECENTLY. HIS ATTACKS BEGAN TO OCCUR ONCE IN A WEEK. HE HAD URINARY INCONTINENCE AND BLACKOUTS IN SLEEP. THE PATIENT WHO LAST FAINTED A WEEK AGO TOOK HIS LAST DRUG 4 DAYS AGO. AN EPILEPTIC SEIZURE DURING VIDEO EEG MONITORING WAS DETECTED BY DR... IN... AT... O'CLOCK.

LABORATORY FINDINGS

VIDEO EEG (DATE/NUMBER): DURING VIDEO EEG MONITORING, EPILEPTIC SEIZURE WAS OBSERVED AND EEG FINDINGS WERE CONSISTENT WITH ICTAL EEG ACTIVITY.

DIAGNOSIS: EPILEPSY

DECISION: B/12 S-1, NOT SUITABLE FOR MILITARY SERVICE

Figure 10. An example of B/12 S-1 report.

The document must be certified from an official health institution, wet-signed, and approved by the responsible director. (b) If the diagnosis or laboratory results specified in this document are not correct then the physicians who prepared the document are responsible (Figure 12).

The patient's anamnesis is consistent with epilepsy during the period of discontinuation of the medication. Routine EEG record showing epileptiform abnormality and/or hospitalization in the clinic for seizure observation is not required because the patient's document definitely shows that the patient is in the period of discontinuation of the medication. It is not a wrong decision to wait for a period of time, since "A" decision can be made if remission is observed after discontinuation of the drug or "B" decision can be made if relapse occurs after discontinuation of the drug. Note: If the patient is a referred soldier, then "delay of referral", if the patient is a polling soldier, then "abandonment to the next year" will be the decision. The status of soldiers are written in the military branch documents of the soldiers.

ITEM 13

- A. 1. Mild to moderate disorder or dysfunction of the autonomic nervous system.
- B. 1. Reflex sympathetic dystrophy (the decision is made based on the localization and nature of the disease due to 43rd, 58th or 64th items of this list)

NEUROLOGY REPORT (DATE/NUMBER)
 THIS IS THE FIRST SANITARY PROCESS OF ... MONTH-SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.
COMPLAINTS: BLACKOUT
ANAMNESIS AND EXAMINATION: ACCORDING TO THE PATIENT'S ANAMNESIS; HIS FIRST FAINTING WAS SIX YEARS AGO. HE SOMETIMES KNEW THE BLACKOUT WAS COMING, BUT HE DID NOT REMEMBER THE REST. HE HEARD FROM THE PEOPLE AROUND HIM THAT, HIS BODY WAS CONTRACTING AND HE WAS MAKING WEIRD MOVES AND CONVERSATIONS. HE WAS IN CONFUSION FOR 10-15 MINUTES AFTER A BLACKOUT. HE FAINTED 1-2 IN A MONTH ON AVERAGE. HE LAST FAINTED IN... HE WAS USING CARBAMAZEPINE 400 MG/D. THE PATIENT HAD DRUG USAGE REPORT/CURRENT STATUS REPORT WITH ...DATE AND ... NUMBER, SIGNED BY DR..., APPROVED BY CHIEF MEDICAL OFFICER, STATING THAT HE WAS FOLLOWED UP WITH THE DIAGNOSIS OF EPILEPSY AND/OR REGULAR MEASURES OF THE SERUM LEVEL OF THE DRUG PERFORMED BETWEEN ... AND ... (DATE). THESE DOCUMENTS SUGGEST THAT THE PATIENT WAS FOLLOWED UP AND TREATED WITH DIAGNOSIS OF EPILEPSY
LABORATORY FINDINGS
EEG (DATE/NUMBER): NORMAL EEG FINDINGS
DIAGNOSIS: EPILEPSY
DECISION: B/12 S-2, NOT SUITABLE FOR MILITARY SERVICE

Figure 11. An example of B/12 S-2 report.

- C. Treatment and recovery periods of the diseases and disorders stated in (A), (B) and (D) clauses of this item
- D. 1. Severe disorder or dysfunction of the autonomic nervous system.

Decisions about the autonomic nervous system are rarely made in clinical practice. In the case of accompanying CNS disease, 10th item is used for decision. A case of congenital Horner syndrome is shown in Figure 13.

NEUROLOGY REPORT (DATE/NUMBER)
 THIS IS THE FIRST SANITARY PROCESS OF THE POLLINGSOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.
COMPLAINTS: BLACKOUT
ANAMNESIS AND EXAMINATION: ACCORDING TO THE PATIENT'S ANAMNESIS; HE WAS HAVING ABSENCE SEIZURES SINCE HE WAS A CHILD. THESE SEIZURES TOOK 5-10 SECONDS, AND THEN HE WENT ON DOING HIS JOB FROM WHERE HE LEFT IT. HE HEARD FROM THE PEOPLE AROUND HIM THAT HE WAS NOT ANSWERING THE QUESTIONS DURING SEIZURES. AFTER VALPROIC ACID WAS STARTED, SEIZURES WERE CEASED. THE LAST SEIZURE WAS FIVE YEARS AGO. SHE TOOK HER LAST DRUG SIX MONTHS AGO. ACCORDING TO THE REPORT SIGNED BY DR..., THE PATIENT IS IN THE DRUG CUTTING STAGE, MILITARY SERVICE DECISION IS POSTPONED FOR A PERIOD OF ONE YEAR.
LABORATORY FINDINGS
EEG (DATE/NUMBER): NORMAL EEG FINDINGS
DIAGNOSIS: EPILEPSY
DECISION: C/12, ABANDONMENT TO THE NEXT YEAR

Figure 12. An example of C/12 report.

NEUROLOGY REPORT (DATE/NUMBER)
 THIS IS THE FIRST SANITARY PROCESS OF THE SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.
COMPLAINTS: ANHYDROSIS IN THE LEFT SIDE OF THE FACE, BLURRED VISION IN THE LEFT EYE IN NIGHTS
ANAMNESIS AND EXAMINATION: THE PATIENT INDICATED THAT HE WAS SUFFERING FROM ANHYDROSIS IN THE LEFT SIDE OF THE FACE AND BLURRED VISION IN THE LEFT EYE IN NIGHTS SINCE HE WAS A CHILD AND HE WAS DIAGNOSED AS HAVING HORNER'S SYNDROME. IN NEUROLOGIC EXAMINATION; HE HAD PTOSIS AND MYOSIS IN THE LEFT EYE. THE LEFT IRIS WAS GREEN AND THE RIGHT IRIS WAS BROWN
DIAGNOSIS: HORNER'S SYNDROME
DECISION: A/13 S-1, SUITABLE FOR MILITARY SERVICE

Figure 13. An example of A/13 S-1 report

NEUROLOGY REPORT (DATE/NUMBER)

THIS IS THE FIRST SANITARY PROCESS OF THE SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.

COMPLAINTS: UNPREVENTABLE SLEEP ATTACKS DURING DAY, SHORT-TIME MUSCLE WEAKNESS ATTACKS WHEN EXCITED OR LAUGHING

ANAMNESIS AND EXAMINATION: ACCORDING TO THE PATIENT'S ANAMNESIS; SLEEP ATTACKS ESPECIALLY IN SCHOOL COURSES AND MONOTONE CONDITIONS BEGAN WHEN HE WAS 14 YEARS OLD. HE WAS MISSING BUS STOPS WHEN TRAVELLING WITH PUBLIC TRANSPORT. HE DREAMED WHEN HE FELL ASLEEP. HE FELT RESTED AND VIGOROUS AFTER THESE SHORT SLEEP PERIODS. ALTHOUGH THE SLEEP HOURS WERE REGULAR, IT IS UNDERSTOOD THAT THE NIGHT'S SLEEP WAS OFTEN INTERRUPTED, BUT HE WOKE UP RESTED IN MORNINGS. A YEAR AFTER THE INITIATION OF SLEEP COMPLAINTS, ESPECIALLY WHEN HE WAS LAUGHING OR EXCITED, SUDDEN WEAKNESS ATTACKS IN THE LEGS (CATAPLEXY) WHICH CAUSED FALLING ON THE GROUND WERE ADDED. HE DESCRIBED RARE SLEEP PARALYSIS ATTACKS SINCE HE WAS A CHILD. NEUROLOGIC EXAMINATION WAS NORMAL.

LABORATORY FINDINGS

POLYSOMNOGRAPHY PERFORMED IN ... RESEARCH AND TRAINING HOSPITAL (16.05.2006/435): TOTAL RECORDING TIME: 480 MIN, TOTAL SLEEP TIME: 376 MIN, SLEEP LATENCY: 2 MIN, REM LATENCY: 6 MIN, DURATION OF WAKEFULNESS AFTER SLEEP: 67 MIN, THE PERCENTAGE OF SLEEP PERIOD 1: 23, THE PERCENTAGE OF SLEEP PERIOD 2: 35, THE PERCENTAGE OF SLEEP PERIOD 3: 14, THE PERCENTAGE OF REM SLEEP: 17, HYPOPNEA AND APNEA INDEXES: 0.9/HOUR, THE TOTAL LEG MOVEMENTS INDEX: 7/HOUR, PERIODIC LEG MOVEMENTS INDEX: 2/HOUR, OXYGEN DESATURATION INDEX: 0.6, AVERAGE OXYGEN SATURATION: %94, LOWEST OXYGEN SATURATION: %86. IN THE STUDY OF **MULTIPLE SLEEP LATENCY TEST** (17.05.2006/436): 5 STUDIES CONDUCTED WITHIN 2 HOURS OF INTERVAL: AVERAGE SLEEP LATENCY: 5.2 MIN AND SLEEP ONSET REM (SOREM) WAS OBSERVED IN 3 OF 5 STUDIES.

DIAGNOSIS: NARCOLEPSY (WITH CATAPLEXY)

DECISION: D/18 S-3, NOT SUITABLE FOR MILITARY SERVICE

Figure 14. An example of D/18 S-3 report

ITEM 18 (Slices not related with sleep disorders are not described here)

A) 3. Mild sleep disorders. **DESCRIPTION:** Sleep disorders which are not defined in the (D) clause and which are considered not to have a significant effect on the functioning.

C) Treatment and recovery periods of the diseases and disorders stated in (A), (B) and (D) clauses of this item

D) 3. Chronic sleep disorders (narcolepsy, Klein-Levine syndrome, idiopathic central nervous system hypersomnia, chronic hypersomnia, chronic insomnia or parasomnia) **DESCRIPTION:** The patients who are considered to be not functional when

evaluated with clinical observation and polysomnographic records and who also do not benefit from the treatment

Sleep disorders are defined within the 18th item with psychiatric disorders. This item involves psychiatric disorders such as tic disorders and sleep disorders are defined only in the third slices. This is why not all the slices are taken into consideration, but only the part that is related to sleep. Also there are no slices in "B" clause of the item that involves sleep disorders. Either "A" or "D" decisions can be made for sleep disorders.

A large-scale multi-centered prevalence study conducted in Turkey shows that the rates of insomnia, sleep breathing disorders and excessive daytime sleepiness are %10,9, %2,3 and %3,8, respectively in 18-24 years of age group in male patients (30). These findings show that sleep disorders are common in young males and neurologists may encounter patients with sleep disorders in decision-making process for military service.

If the diagnosis of narcolepsy is definite, then "D" decision should be made. In this case, polysomnography and multiple sleep latency test which are included in the diagnostic criteria of the disease should be carried out and the data supporting the diagnosis should be written to the content of the report (Figure 14). Diagnosing a parasomnia is a difficult process. It is necessary to objectively show that the person has a parasomnia by means of methods such as PSG, which is a video recording, and to show that the person's functionality is impaired by documents such as continent questionnaires and that he/she does not benefit from the treatment (Figure 15). In patients without history of treatment before and patients who can not show that they are followed-up and treated with the diagnosis of parasomnia, decision should not be made immediately and should be made after an adequate follow-up. It would be appropriate to make "A" decision in sleep disorders in which the functionality of a patient does not deteriorate significantly.

Obstructive sleep apnea (OSA) is also discussed within item 47 under the title of "chest disorders". For "A" decision, only first slice and for "B" and "D" decisions, only second slice can be chosen.

ITEM 47 (slices not related with sleep apnea patients are not described here)

- A. 1. Patients with sleep apnea having apnea-hypopnea index lower than 15 (15 is not included) following titration of positive airway pressure (PAP).
- B. 2. Patients with sleep apnea having apnea-hypopnea index of 15-30 (30 is not included) following titration of positive airway pressure (PAP).
- C. Treatment and recovery periods of the diseases and disorders stated in (A), (B) and (D) clauses of this item.
- D. 2. Patients with sleep apnea having apnea-hypopnea index of 30 or higher following titration of positive airway pressure (PAP).

It is important to note that apnea-hypopnea index measured after PAP titration is used in decision-making, not the index measured in standard polysomnography. It is relatively easy to make decision on the numeric data (Figure 16). However, accurate PAP titration is of great importance.

NEUROLOGY REPORT (DATE/NUMBER)

THIS IS THE FIRST SANITARY PROCESS OF THE SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.

COMPLAINTS: WAKING UP AT NIGHT, HURTING HIMSELF AND SURROUNDING PEOPLE

ANAMNESIS AND EXAMINATION: ACCORDING TO THE PATIENT'S ANAMNESIS; THE PATIENT'S COMPLAINTS BEGAN AT THE AGE OF 15 YEARS OLD. HE BEGAN TO AWAKEN SUDDENLY FROM SLEEP AT NIGHT, HURT HIMSELF AND SURROUNDING PEOPLE. HIS RELATIVES TRIED TO CALM HIM DOWN, BUT HE DID NOT REMEMBER. THE PATIENT WAS DIAGNOSED AS HAVING PARASOMNI AND THE DRUG TREATMENT WAS STARTED. ALTHOUGH THE PATIENT REGULARLY USED THE DRUGS HE DID NOT BENEFIT FROM THE TREATMENT. IN THE CONTINENTAL SURVEY FORM, IT SAYS THAT HE WOKE UP AT NIGHT, HARMED HIMSELF AND HIS WARD FRIENDS, AND THAT HE HAS BEEN ASSIGNED ANOTHER SOLDIER TO PREVENT HIM FROM GETTING HURT, AND HIS FUNCTIONALITY WAS DETERIORATED.

LABORATORY FINDINGS

POLYSOMNOGRAPHY PERFORMED IN ... RESEARCH AND TRAINING HOSPITAL (16.05.2006/435): TOTAL RECORDING TIME: 480 MIN, TOTAL SLEEP TIME: 376 MIN, SLEEP LATENCY: 2 MIN, REM LATENCY: 6 MIN, DURATION OF WAKEFULNESS AFTER SLEEP: 67 MIN, THE PERCENTAGE OF SLEEP PERIOD 1: 23, THE PERCENTAGE OF SLEEP PERIOD 2: 35, THE PERCENTAGE OF SLEEP PERIOD 3: 14, THE PERCENTAGE OF REM SLEEP: 17, HYPOPNEA AND APNEA INDEXES: 0.9/HOUR, THE TOTAL LEG MOVEMENTS INDEX: 7/HOUR, PERIODIC LEG MOVEMENTS INDEX: 2/HOUR, OXYGEN DESATURATION INDEX: 0.6, AVERAGE OXYGEN SATURATION: %94, LOWEST OXYGEN SATURATION: %86. MOTION ARTIFACTS WERE SEEN IN THE N3 STAGE OF SLEEP DURING THE PATIENT'S RECORDING. SIMULTANEOUS VIDEO RECORDING SHOWED THAT THE PATIENT WAS TRYING TO GET OUT OF BED AND OPEN THE WINDOW AND HE WAS STOPPED BY HIS COMPANION AND SLEEP TECHNICIAN.

DIAGNOSIS: PARASOMNIA

DECISION: D/18 S-3, NOT SUITABLE FOR MILITARY SERVICE

Figure 15. An example of D/18 S-3 report

ADMINISTRATIVE ISSUES TO BE CONSIDERED:

Whatever the diagnosis and decision, utmost care and attention should be given to the documents of the personnel and to some issues during the procedure:

1. All personnel who will admit to the health board apply to the hospital with a letter of referral issued by the relevant authorities. The authority who prepares the letter of referral shall state the purpose of examination of the personnel in the letter. Referral of soldiers and obligors is made with a signed letter containing T.C. identification

NEUROLOGY REPORT (DATE/NUMBER)

THIS IS THE FIRST SANITARY PROCESS OF THE SOLDIER REFERRED BY THE ... PRESIDENCY OF THE MILITARY DEPARTMENT WITH ... DAY AND ... NUMBER, SON OF (FATHER'S NAME), NAMED (NAME/SURNAME), BORN IN (YEAR/BIRTHPLACE) WITH ... T.C. IDENTITY NUMBER.

COMPLAINTS: SLEEPINESS DURING THE DAY, LACK OF CONCENTRATION

ANAMNESIS AND EXAMINATION: IT WAS EXPRESSED BY THE RELATIVES OF THE PATIENT THAT HE HAD CUT HIS BREATH DURING THE NIGHT. HE SAID THAT HE COULD NOT WAKE UP VIGOR IN THE MORNING, THAT HE HAD HEADACHE WHEN HE WOKE UP IN THE MORNING, THAT HIS MOUTH WAS DRY, AND THAT HE SUFFERED FROM FATIGUE DURING THE DAY. NEUROLOGIC EXAMINATION WAS NORMAL.

LABORATORY FINDINGS

POLYSOMNOGRAPHY PERFORMED IN ... RESEARCH AND TRAINING HOSPITAL (16.05.2006/435): TOTAL RECORDING TIME: 480 MIN, TOTAL SLEEP TIME: 376 MIN, SLEEP LATENCY: 2 MIN, REM LATENCY: 6 MIN, DURATION OF WAKEFULNESS AFTER SLEEP: 67 MIN, THE PERCENTAGE OF SLEEP PERIOD 1: 23, THE PERCENTAGE OF SLEEP PERIOD 2: 35, THE PERCENTAGE OF SLEEP PERIOD 3: 14, THE PERCENTAGE OF REM SLEEP: 17, HYPOPNEA AND APNEA INDEXES: 35/HOUR, THE TOTAL LEG MOVEMENTS INDEX: 7/HOUR, PERIODIC LEG MOVEMENTS INDEX: 2/HOUR, OXYGEN DESATURATION INDEX: 0.6, AVERAGE OXYGEN SATURATION: %94, LOWEST OXYGEN SATURATION: %86.

POLYSOMNOGRAPHY PERFORMED IN OUR CLINIC (17.10.2017/214): TOTAL RECORDING TIME: 488 MIN, TOTAL SLEEP TIME: 415 MIN, SLEEP LATENCY: 1 MIN, REM LATENCY: 1 MIN, DURATION OF WAKEFULNESS AFTER SLEEP: 65 MIN, THE PERCENTAGE OF SLEEP PERIOD 1: 21, THE PERCENTAGE OF SLEEP PERIOD 2: 28, THE PERCENTAGE OF SLEEP PERIOD 3: 19, THE PERCENTAGE OF REM SLEEP: 17, HYPOPNEA AND APNEA INDEXES: 34.6/HOUR, THE TOTAL LEG MOVEMENTS INDEX: 7/HOUR, PERIODIC LEG MOVEMENTS INDEX: 2/HOUR, OXYGEN DESATURATION INDEX: 14.6, AVERAGE OXYGEN SATURATION: %94, LOWEST OXYGEN SATURATION: %86.

PAP TITRATION STUDY PERFORMED IN OUR CLINIC (18.10.2017/214): TOTAL RECORDING TIME: 488 MIN, TOTAL SLEEP TIME: 415 MIN, SLEEP LATENCY: 1 MIN, REM LATENCY: 1 MIN, DURATION OF WAKEFULNESS AFTER SLEEP: 65 MIN, THE PERCENTAGE OF SLEEP PERIOD 1: 21, THE PERCENTAGE OF SLEEP PERIOD 2: 28, THE PERCENTAGE OF SLEEP PERIOD 3: 19, THE PERCENTAGE OF REM SLEEP: 17, HYPOPNEA AND APNEA INDEXES: 17/HOUR, THE TOTAL LEG MOVEMENTS INDEX: 7/HOUR, PERIODIC LEG MOVEMENTS INDEX: 2/HOUR, OXYGEN DESATURATION INDEX: 14.6, AVERAGE OXYGEN SATURATION: %94, LOWEST OXYGEN SATURATION: %86.

DIAGNOSIS: OBSTRUCTIVE SLEEP APNEA SYNDROME

DECISION: B/47 S-2, NOT SUITABLE FOR MILITARY SERVICE

Figure 16. An example of B/47 S-2 report

number and photo (sealed/cold stamped and with adhesive acetate). Duplicated photos with photocopy are not used in the processes of the health board. In patient admission, the referral paper must be checked and the decision must be in response to the cause of the referral.

2. The candidate's identity must be carefully assessed. Assessing whether the referred patient is always the same person with the examined (EEG, etc.) patient and the patient evaluated in the health board is very important. It is known that without checking identities, EEG records of epilepsy patients were used in making "not suitable for military service" decisions in normal healthy individuals in the past. Responsibility is always the responsibility of the physician who prepares the health board report, therefore it is necessary to be careful about this issue.
3. The format and the content of the health board report are regulated by rules. See related articles (2,7).
4. The candidate's complaints causing referral to the health board, the anamnesis, disease and family history and examination findings are explained. Finally, laboratory results to support the diagnosis of the disease, if any, surgical information determining the diagnosis and clinical decision are written and the report is finalized and signed by the physician. The results of laboratory findings are written below the health board report with the protocol number, indicating in which laboratory the tests are performed. External reports (drug reports, report of laboratory results, etc.) should be approved by the chief physician or the liable manager of the hospital. The diagnosis and decision of the report are written in accordance with the items, clauses and slices in the list of diseases stated in the RHQ.

Conclusion

In this article, it is aimed to introduce the health board procedures with explanatory samples of the personnel, students and their candidates who are members of TAF, GGC and CGC performed by the neurologists in the centers authorized by the Ministry of Health. In order to make more accurate, quick and reliable decisions about patients with neurologic diseases, the decision mechanisms and procedures are explained to the neurologists to guide them. All these tasks have been transferred to the hospitals affiliated with the Ministry of Health with the decree law No. 669. Our colleagues have always been under an administrative burden that they know but now they are more likely to make mistakes because of lack of practice. The purpose of this article is to inform and guide neurologists and to support them to take care not to face any administrative problems over the years and to share our experience. Of course, every patient should be evaluated individually, but it is aimed to make the subject more understandable with the report samples written on fictitious patients.

In the preparation of administrative reports, such as military service reports, regardless of experience, level of knowledge and laboratory facilities, the assumption that malicious people can use the system out of purpose should always be kept in mind and the necessary measures should be taken.

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Uncorrected proof