Arq Neuropsiquiatr 2000;58(2-A):227-232

CLIENT WITH EPILEPSY IN A WORK BRAZILIAN REHABILITATION CENTER

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ABSTRACT - *Introduction*: People with epilepsy (PWE) may have problems in obtaining or maintaining regular employment because of restrictions related to their handicap, social prejudices and also high rates of unemployment of the population. The main aim of this pilot study was to know the vocational rehabilitation problems involving PWE sent to a vocational rehabilitation center (VRC) in Rio de Janeiro. *Method*: Fifteen PWE were selected unbiased from those seen at the VCR. It was reviewed their records in the search of sociodemographic, health care, employment suitability and work rehabilitation data. *Results*: Only one person was eligible for the training program, four were ineligible, six were temporarily ineligible, and the other four do not necessitate the rehabilitation, but as the majority, the better seizures control. *Conclusions*: The studied sample of selected PWE, but representative of the studied population, do not show any important successful in the vocational rehabilitation carried out at the VRC.

KEY WORDS: epilepsy, work, rehabilitation.

Cliente com epilepsia em um centro de reabilitação profissional brasileiro

RESUMO - *Introdução*: A pessoa com epilepsia (PCE) pode ter problemas para obter ou manter emprego regular por conta de restrições relacionadas à sua deficiência, preconceitos sociais ou altas taxas de desemprego na população. O principal objetivo deste estudo piloto é o reconhecimento dos problemas de reabilitação profissional de PCE enviadas para um Centro de Reabilitação Profissional (CRP) no Rio de Janeiro. *Método*: Quinze PCE foram selecionadas sem viés de um CRP. Foram revistos seus prontuários na procura de dados sociodemográficos, de cuidados de saúde, além de capacidade de emprego segundo a análise de função e infortunística. *Resultados*: Apenas uma pessoa foi elegível para o programa de treinamento, quatro inelegíveis, seis temporariamente inelegíveis, e os outros quatro não necessitam da reabilitação profissional, mas como a maioria, o melhor controle das crises epilépticas. *Conclusões*: A amostra estudada e selecionada de PCE mas representativa da população estudada, não revelou nenhum sucesso importante na reabilitação promovida pela CRP.

PALAVRAS-CHAVE: epilepsia, trabalho, reabilitação.

People with epilepsy (PWE) may have difficulties in finding and keeping competitive regular employment, because of restriction related to their handicap or social prejudices[1-4]. Otherwise, we should consider that there is a becoming increasingly difficult for everyone to keep job, mainly for PWE who have unfortunately higher rates of unemployment than the general population[5]. Consequently, searching for work is a problem for them, and vocational counseling and guidance are important for helping PWE. They may have different characteristics of other employment or rehabilitation agencies clients[1]. The stigma may be not so important as previously considered, in spite of recognition of the real barriers to the employment and educational opportunities of the PWE[6].

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The problem to employment of PWE are complex[2,7]. They can come from the legislation regarding appropriate restrictions, such as to commercial airline pilots, employment seeker unqualified, medical or educational problems, besides social prejudice, for instance.

In Brazil, the work accidents favored the development of vocational training, and in this way other labor problems will be also covered[8-10]. The personal working residual capacity is evaluated and consequently the social competence is benefit. The initial medical and Social Welfare expert evaluation must be added to that of the work capacity. The first alone can result in a social dependent with the burden for the Social Welfare, because of retired pay or disability pension, sometimes awarded without necessity. The PWE are important in this population, because they constitute the fifth commonest group (10 to 20%) among the patients examined in a Finnish work clinic[11] , for instance. The Social Insurance helps the handicapped to be (re) integrated in the society though the vocational rehabilitation. So, this necessity of rehabilitation increases in developing country with PWE in larger proportion, because of higher rates of risk factor for epilepsy[12]. In a systematic way, the vocational rehabilitation is carried out in vocational rehabilitation services or centers (VRC). It is understandable the economical viewpoint of these VRC, because of the applied capital can be recovered with future advantages of working rehabilitation[8]. The American Rehabilitation Services Administration Act of 1973 designated epilepsy as a severe disability[13]. Unfortunately, these priorities were not well established in Brazil where legislation supports disabled people in general, but there is not one specifically for PWE. Brazilian legislation provides protections against discrimination practices as defined by the law number 7853 of 24-October-1989 and act number 914 of 06-September-1993[14]. The protection is for qualified disabled people, those who can perform the work tasks with or without accommodations, what is of special interest of this paper.

So, the main purpose of this study was to know how the vocational rehabilitation problems of PWE sent to a VRC in Rio de Janeiro worked in the rehabilitation of these patients and how much successfully it was.

METHOD

Fifteen patients currently unemployed with seizures who were either in training or rehabilitated, had their cases closed, or had been rejected for rehabilitation. They were identified from the records in the 1997 to 1998 period from the files of the VCR that are not organized by computer list, neither by nosology. The patients were referred to the VRC by the Brazilian Social Welfare. Each patient in the VRC had an interview about their health state and job conditions, in addition to demographic data, social background and training attainments. Data were collected from the files reviewed: relevant medical details were recorded, as well as educational training attainments, and sociodemographic data. The cases temporarily rejected were excluded to lack of complementary exams, such as EEG, or uncertainty diagnosis.

RESULTS

It is stressed the male predominance, and the majority in active work age period of life, low educational level and unskilled professions, all in disability pensions, the majority during several years (Table 1). In those without missing data about the studied variables, the results are: high seizures frequency; several with multiple complains, 13/15 in use of phenobarbital associated or not to other AED (Table 2). Only one person was eligible for the vocational training program, and the majority need better seizure control. The evaluation results are summarized in Table 3.

DISCUSSION

The male predominance of our cases can be due to the usual prevalence profile of epilepsy, and seizures related to accidents. The work suitability is less favorable for unskilled men than women, more prone to home domain works, mainly as a housemaid, a very common job in Brazil. The affected PWE were especially men, of productive period of age, which is compatible with the Brazilian vocational training that gives more benefits to this age group. The single marital status predominance

Table 1. Sociodemographic data and disability pension period of time of clientes considered as epileptics.

Rec	Name	Sex	Age	Marital status	Education	Employment	Disability pension
1	WWC	M	27	concubine	elementary school	bricklayer's aid	8 months
2	EP	M	29	single	elementary school	bricklayer's aid	2 years 9 months
3	PCRB	M	34	single	elementary school	electrician	8 years
4	JLCS	M	37	?	?	bricklayer's aid	10 months
5	LC	M	42	single	?	driver's aid	9 years
6	IMS	M	33	married	elementary school	mail clerk	9 months
7	RC	F	40	single	?	cashier	7 months
8	NA	M	30	single	?	market place worker	?
9	ALO	M	27	single	elementary school	sausage maker's aid	16 months
10	AS	M	31	single	elementary school	locksmith	5 years
11	AR	M	32	single	illiterate	general services aid	9 years
12	AES	F	55	married	?	cooker's aid	5 years
13	QTS	F	34	?	elementary school	servant employed to iron	6 years
14	ADS	M	46	married	college	driver	1 year
15	AP	M	35	married	?	general services aid	2 years

can reflect the social difficulties of this clientele, various with several complains, in use of drugs such as phenobarbital, and with only epilepsy or in association with other comorbidities, all together can difficult the social life, and the sexual relationships. The low social educational level and unskilled professions are not exactly the epilepsy reflex, but can be the Brazilian Social Welfare and the VRC clients profile. Among the evaluation findings of our cases, there are several impending factors for full employment. The poor results of the working rehabilitation of these clients can be related to various unfavorable prognostic factors, such as: later head injuries leading to loss of consciousness; other simultaneous chronic illnesses, such as oligophrenia; total number of seizures; frequent "grand mal" seizures; seizures beginning before 10 years of age; polypharmacy with the undesirable side-effects; as well as working class status, low social class and educational standard[4,15]. Although, it is recognized that psychosocial variables, such as education and cognition, can have more relevance than the seizure frequency itself in finding and maintaining employment[1]. Sillanpaa and Helenius, 1993[16] demonstrated that good communication ability, good intelligence and seizure freedom were significant predictors of a good social competence, including successful employment. They emphasized that outcome studies of epilepsy may be prone to pitfalls and fallacious results. Social outcomes, including work capabilities were studied in a unselected population cohort study with care in the long follow-up, unselected population, well defined case finding, and polycothomus end seizure control variables. The authors found as important independent predictors of poor employability outcome: symptomatic etiology - perinatal asphyxia and imminent abortion and, for psychoneurological developmental/status and behavioral status - mental development, language status and psychotic behavior.

Kallanranta[11] in a Finnish work clinic presented only 9.7% of cases considered to be of mild intensity. Although, 36.6% of the cases were severe, and 53.7% of intermediate ones what reinforce the idea of the severity of the cases sent to VRC in agreement with our results. The success of

Table 2. Clinical Data and vocational rehabilitation of clientes considered as epileptics.

Rec	Age/ onset	Seizure type	Seizure freq/year	Associated complains	AED	Training
1	14	"generalized convulsion"	12 to 24	-	PHB DZ prometzn	eligible * orientation / program-silk-screen
2	14	"grand mal" type	36 to 48	thinking slowness	CBZ+PHB + PHT	temporally rejected (without seizure control)
3	27	"grand mal" type	24 to 36	cranial trauma 7 years ago, multiple complains	PHB	temporally rejected (without seizure control)
4	21	"grand mal" type	seizure "not controlled"	fell from the train as a child. Multiple complains	PHB + CBZ	temporally rejected (without seizure control)
5	?	"generalized aspect"	48	multiple complains	PHB	do not need, only seizure control
6	9	"grand mal" type	48	sporadic headaches	CBZ+CLZ +PHB	do not need, only seizure control
7	"faint" as child	"temporal lobe seizure" and hysterical neurosis	?	multiple complains	PHT+DZP +PHB.	do not need, only seizure control
8	9	"grand mal" type	48	multiple complains, dumb	PHT +PHB	do not need, only seizure control
9	?	"grand mal"	frequent	oligophrenia	CBZ + VA	temporarily rejected (revaluation)
10	10	convulsions	1/month	oligophrenia	PHNT+PHB	rejected (long treatment)
11	as a child	convulsion + absence	without control	oligophrenia	PHB+VA	rejected (personality disorder)
12	?	?	?	visual deficit	PHB+CBZ	rejected (comorbidity)
13	as a child	convulsion seizure	without control	psychosis	PHB	rejected (comorbidity)
14	post-trauma	epilepsy not specified	?	-	PHNT	temporarily rejected (better seizure control)
15	?	?	?	-	PHB+PHT +DZ	temporarily rejected (better seizure control)

*end of the program, drop-out
CBZ, carbamazepine; VA, valproic acid; FNT, phenytoin; PHB, phenobarbital; DZ, diazepan; CLZ, clonazepan.

Table 3. Summary data

Variables	Results			
age (mean, mode, sd)	male (n= 11)	female (n=3)	p	total (n=15)
	33.9, 27.0 (sd=5.9)	43.0, 34.0 (sd=10.8)	0.06	35.8, 27.0 sd=7.8)
education (n=13)	illiterate-1, elementary school-7, college-1			
employment	unskilled (low) labors plus one driver			
disability pension (months)	mean-44.5, SD-38.8, mode-60			
associated complains	multiple complains, sleepiness			
rehabilitation program	elegible=1, rejected=4,temporarilly rejected=6, do not need=4			

rehabilitation was not also high in a survey of epileptic clients of the Maryland State Department of Vocational Rehabilitation: less than half becomes employed, and most had psychosocial problems[13]. Only one of our case showed willing to working, and was eligible for the vocational training after study of suitability of the work, in his case silk-screen work. However, he had abandoned the education program to be garbage collector. The presented figures also show the severity of the functional handicap, and consequent low working capacity of our case serie.

CONCLUSIONS

The studied sample does not show any important successful in the vocational rehabilitation carried out at the Brazilian VRC and in general fits the worst predictors of poor employability. The present study is only representative of the studied sample in similar conditions such as the PWE in Brazilian VRC; these results are not generalized to the whole epileptic Brazilian population with difficulties is working. This can be the reflex of the highly selected population of people with low educational status, unskilled labors, uncontrolled seizures and psychosocial problems. Associated concern is the high underemployment rates as a great problem in Brazil, with more impact in any chronic disabled person. Studies about these constraints are carried out, and the rates of underemployment depend on the qualification and comorbidities of the PWE, and also, of the employment rates of the all population. It is important to recognize the population under risk of poor social outcome, and in this way, it is useful to develop predictors rules for successful rehabilitation programs too. This has to be done taking into account sound methodology for future definition of the population that will benefit most, as it was done by Sillanpää and Helenius[16].

PWE depend on the best as possible seizure control, the reduction of therapeutic side effects, psychotherapy techniques, as well as the familiar and employer education, and legislative protection. The employer should help the PWE by giving them opportunity to receive proper treatment, and the PWE may have employment restrictions, if needed, after clearly statements, as well as, re-employment after appropriated vocational guidance[3]. As PWE can face problems in the work, it is necessary the selection of duties according to their potentialities and deficiencies, after function and work suitability analysis, avoiding long delays in the access to vocational rehabilitation. The organization of the work must minimize the potential risk to an acceptable level; the capabilities have to be recognized and reinforced, and in this way the limitations can be decreased. The first providence is to reduce or abolish the seizure by AED use in adequate form (monotherapy and AED without sedative side effects, if possible). In this way, the vocational training could be closer to the care medical center, where simpler ways of vocational rehabilitation can be implemented too. In reality, they can be the basic nucleus of PWE social integration, avoiding at maximum the necessity to go to the Social

Welfare, disability pensions and posterior referral to the VRC. The multidisciplinary team formed by social worker, nurse and psychologist, as well as the doctors, is fundamental for the knowledge of social, economical, and cultural questions, together with of perceptions of the social reality, familiar and social relationships, and perception levels about epilepsy with better use of available resources[17]. The limited provider biological viewpoint do not satisfies. One must to have special care with the quality of life evaluation of PWE[18]. The VRC members should also know the special characteristics of the PWE, increase the will to know the especial characteristics of those patients, and the time and efforts in their rehabilitation without reduction in their rehabilitation expectation, avoiding labeling ineligibility for those with this possibility. Periodical evaluation must be considered for the real adaptation after approval of the rehabilitation. Those in the disadvantage can have incentives for their rehabilitation, such as in sheltered work settings.

Acknowledgments - I am indebted to the staff of the Vocational Rehabilitation Center of Rio de Janeiro.

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