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EARLY PROGNOSTIC VALUE OF ELECTROPHYSIOLOGICAL TESTS IN BELL'S PALSY – ESTIMATING THE DURATION OF CLINICAL RECOVERY

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Summary. *Bell's palsy is the most frequent disease of the seventh cranial nerve, with a good prognosis. More than 70% patients attain complete clinical recovery, with no noticeable residua. Persistent sequellas are usually noted in cases with profound axonal loss only. Electrophysiological tests may offer valuable information in defining the severity of nerve injury and a possible subsequent disfunction. For these reasons these tests could be significant prognostic parameters. Fifty patients with clinical signs of Bell's palsy were included in our investigation. We analysed clinical signs (the degree of facial muscle palsy) and electrophysiological tests (amplitude and latency of evoked muscle potential, latency of early component of Blink reflex) on the third, seventh and fourteenth day of the onset of palsy. Our results show that electrophysiological parameters are of early prognostic importance in Bell's palsy. Based on electrophysiological parametars, it is possible to predict the duration of clinical recovery and the outcome of the disease.*

Key words: *Bell's palsy, evoked muscle potential, blink reflex*

Introduction

Bell-s palsy is an idiopathic peripheral disease of the seventh cranial nerve. This is the most frequent cranial mononeuropathy with an annual incidence of 10 to 40 cases per 100,000 population with geographical variations (1, 2, 3, 4). It can appear at any age, but mostly in the third and fourth decade of life. The disease was described as a distinct entity by Sir Charles Bell in 1893, and since that time it has commonly been referred to as Ball's palsy. It is characterized by a sudden onset of facial muscles palsy or paralysis without clinical evidence of other cranial nerves involvement. Also, there should be neither signs and symptoms of the middle ear disease nor posterior fossa disease.

The diagnosis of the idiopathic peripheral facial palsy (PFP) is established by excluding any other possible cause and usually is not a problem in everyday clinical practice. However, in order to prevent irreversible axonal damage, a diagnosis and an early prognosis of the course of the illness are both necessary. A pathological process that causes muscle palsy attains a peak during the first two days of illness, but it can have progressive course for 7-10 days, too. Because of these potentially dynamic damages, each prognostic procedure based on clinical manifestation in the early stage of illness is limited. Nevertheless, the lack of any movement of mimic musculature during the first four weeks of illness suggests a bad prognosis (3, 5). Electrophysiological tests may offer valuable information in defining the severity of nerve injury and possible subsequent dysfunction. For these reasons, these tests could be significant prognostic parameters.

Previous electrophysiological investigations point to a special prognostic value of the amplitude of muscle-evoked potential (MEP) in Bell's palsy, since the MEP amplitude depends on the number of exciting axons directly, so a degeneration degree of nerve fibers is directly proportional to the decrease in the MEP amplitude (6, 7, 8, 9, 10). Esslen (11) and Fish (9) emphasized the decrease in the MEP amplitude for more than 90%, compared to the healthy side, as a bad prognostic sign. This decrease in the MEP amplitude is cited in literature as the main criterion for the decision of a surgical decompression. The diagnostic and prognostic value of the MEP latency was discussed and disputed in previous studies, since the MEP latency reflects in the function of the fastest axons, so it can remain within a normal range for a long time. Although the amplitude and the latency of MEP provide valuable information on the distal parts of the nerve damage rate, we cannot estimate the conductivity of the nerve along the nerve, including intracranial segment, using only these electrophysiological parameters. Consequently, Blink Reflex plays an important role in the evaluation of the proximal segments of the seventh cranial nerve function and in detection of the intracranial conductivity block as the main electrophysiological substratum in Bell's palsy (6, 12). Therefore, it is a significant prognostic parameter.

Electromyographic (EMG) investigation of the muscles allows for the registration of action potentials of motor units (AMP), as well as spontaneous and insertion activity of the muscles. It is understood that total absence of action potentials (AMP) during voluntary contractions is a bad prognostic sign (1, 4, 13, 14, 15, 16).

Our research aims at defining the parameters carrying an early prognostic potential of the course and the outcome of illness within a framework of clinical and electrophysiological evaluations of Bell's palsy patients. We primarily tried to establish a possibility of an early identification of the patients with an incomplete recovery but at the same time we tried to estimate the duration of the clinical recovery in patients with a good outcome, i.e. with complete clinical recovery.

Method

A prospective study was done on 50 patients with clinical signs of Bell's palsy, of both sexes, aged from 18 to 80 years. All the patients were examined neurologically and otorhynolaringologically. They showed clinical signs of Bell's palsy, without clinical evidence of other cranial nerve damage or central nervous system diseases. There were no signs of middle ear disease or posterior cranial fossa disease, too. Patients with a chronic or malignant illness were excluded from the experimental group. All the patients received the same medicament and physical therapy.

EMNG testing was performed on 3rd, 7th, and 14th day from the onset of palsy.

For the MEP examination we applied supramaximal stimulation of 0.2 ms duration over the trunk of the facial nerve, using the bipolar stimulating electrode with the anode between the ramus mandibulae and the mastoid and the cathode in front of the tragus of the ear. The MEP was registered with a coaxial needle electrode in the target muscles: m. frontalis, m. orbicularis oculi, and m. orbicularis oris. The amplitude and the latency of the MEP were analyzed.

The mean value of the MEP amplitude was computed, registered in all three muscles. The mean amplitudes on the affected side were computed as percentage ratio of the normal amplitudes on the healthy side (taken as 100%). The patients were grouped according to the ratio in four groups: A (81%-100%), B (41%-80%), C (11%-40%), and D (less than 10%).

The latency of the MEP was also recorded in the same muscles on both the healthy and affected side. The corresponding mean value was computed, and the patients were grouped regarding the latency into: A (no greater than 4 ms), B (between 5 ms and 6 ms), C (more than 6ms), and group D with no MEP recorded.

The Blink reflex (BR) was recorded on a surface electrode by electrical stimulation of the supraorbital nerve at the place of its output. The cathode was placed proximally to the anode. Active needle registration electrode was placed in m. orbicularis oculi, in the middle of the muscle, just below the lower eyelid. The referent electrode was placed on the nose. The n. supraorbitalis was stimulated with the impulse of 15-20 mA, of 100 ms duration, and the signals were fed into amplifiers, band-pass filtered (band-width 20 Hz-10 kHz). The latency of the early monosynaptic (R1) response of the BR on both, affected and healthy, sides was recorded.

Based on the recorded R1 signals, the patients were grouped in: A (the R1 is less than 13 ms), B (the R1 greater than 13 ms), and C (no R1 recorded).

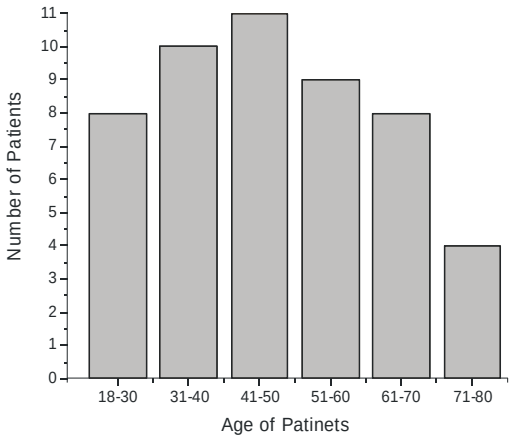
In order to estimate prognostic values of electrophysiological parameters (amplitude and latency of the MEP, latency of R1 component of the BR) we correlated them with the duration of clinical recovery.

The experimental group of patients was clinically tested within twelve months. Based on the clinical recovery, we grouped patients in four groups: A – with recovery during the first two months, B – recovery within 3 to 4 months, C – recovery within 5 to 6 months, and D – incomplete recovery after 12 months of clinical testing.

A functional recovery of the seventh cranial nerve was classified based on House-Brackmann (HB) system (17). According to HB the patients were grouped into six groups.

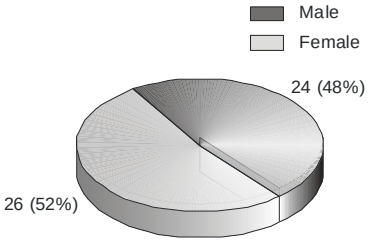
Results

Fifty patients with signs of the Bell's palsy, different sex and age, were involved in this research. Graph 1 shows the age histogram, where patients were grouped within ten years of age.



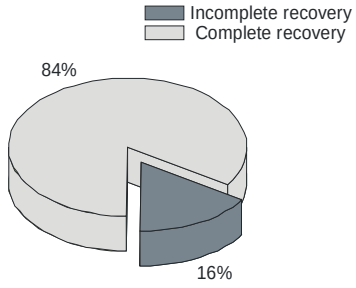
Graph 1. Representation of age groups in patient sample

Graph 2 shows almost uniform distribution of sexes in patients group.



Graph 2. Sex ratio in patient sample

After twelve months of observations, out of 50 patients 44 patients (84%) reached full clinical recovery, while 8 patients (16%) had incomplete clinical recovery, graded from II to IV according to House-Brackmann classification system (Graph 3).



Graph 3. Percentual ratio of patients with complete and incomplete recovery

At the beginning of the disease patients had a different grade of muscular weakness that varied during the first week of illness. At the first examination, 4 patients where classified to group III, 18 patients to group IV, 14 patients to group V, and the rest of the patients, 14, belonged to group VI, as shown in Table. 1. On the seventh day from the onset of palsy, 14 patients were classified in IV group, 21 patients from group V, and 15 patients from group VI (Table 2). The same results were observed on the fourteenth day of the onset of palsy.

Correlating the grading muscular weakness and the length of recovery, we observed low correlation on the third, seventh and fourteenth day of palsy.

Table 1. Palsy grade ratio on the 3rd day of illness (according to House-Brackmann classification) and the length of recovery in months

3. day		Recovery [months]			Incomplete recovery	No. pat.
		1-2	3-4	5-6	> 12 months	
Grade of palsy	I					
	II					
	III	3	1			4
	IV	10	7	1		18
	V	3	7	2	2	14
	VI	2	4	2	6	14
No. pat.		18	19	5	8	50

$\chi^2 = 18.428$; Pearson's R = 0.557; p= 0.01

Table 2. Palsy grade ratio on the 7th day of illness (according to House-Brackmann classification) and the length of recovery in months

7. day		Recovery [months]			Incomplete recovery	No. pat.
		1-2	3-4	5-6	> 12 months	
Grade of palsy	I	10	4			14
	II	6	11	2	2	21
	III	2	4	3	6	15
	IV	18	19	5	8	50
	V	10	4			14
	VI	6	11	2	2	21
No. pat.		2	4	3	6	15

$\chi^2 = 20.417$; Pearson's R = 0.567; p= 0.01

We observed identical results on the 14th day after the first symptoms.

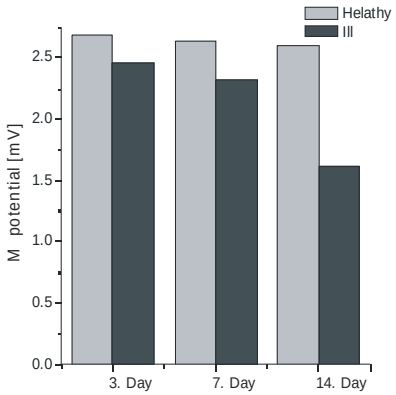
MEP Amplitude

Mean values of the MEP amplitude along with standard deviations, on the healthy and affected side of the face, calculated at each examination on 3rd, 7th, 14th day of the onset of palsy, are shown in Table 3.

Table 3. Means of MEP and SD amplitude on healthy and ill side of the face on the 3rd, 7th, and 14th day of illness

	Healthy side		Ill side	
	Mean	3× SD	Mean	3× SD
3. day	2.6836	2.20491	2.4624	2.73594
7. day	2.6398	2.11632	2.326	2.87382
14. day	2.6004	2.26617	1.6206	2.98758

Results show a significant decrease in the MEP amplitude on the 14th day of palsy (Graph 4).



Graph 4. MEP amplitude ratio on healthy and ill side of the face on 3rd, 7th, and 14th day of illness

Correlating the MEP amplitude with the duration of clinical recovery we observed a negligible correlation at the first electroneurographic testing (Table 4). Precisely, in a majority of the patients (90%), the MEP amplitude was 81–100% compared to the healthy side (group A). One patient belonged to the group B, while 4 patients had no MEP registered.

Table 4. MEP amplitude ratio on the 3rd day of illness and the length of recovery in months

3. day		Recovery [months]			Incomplete recovery	No. pat.
		1-2	3-4	5-6	> 12 months	
Amplitude	A	18	17	5	5	45
	B	0	0	0	1	1
	C	0	0	0	0	0
	D	0	2	0	2	4
No. pat.		18	19	5	8	50

$\chi^2 = 11.060$; Pearson's R = 0.308; P = 0.05

Results on the 7th day proved slightly better, but still a weak positive correlation was registered between the MEP amplitude and the length of recovery (Table 5).

Results on the 14th day showed a significant correlation between the MEP amplitude and the length of recovery (Table 6).

Table 5. MEP amplitude ratio on the 7th day of illness and the length of recovery in months

7. day		Recovery [months]			Incomplete recovery	No. pat.
		1-2	3-4	5-6	> 12 months	
Amplitude	A	18	14	5	4	
	B		2		1	3
	C		2		2	4
	D		1		1	2
No. pat.		18	19	5	8	50

$\chi^2 = 11.983$; Pearson's R = 0.362; P = 0.01

Table 6. MEP amplitude ratio on the 14th day of illness and the length of recovery in months

14. day		Recovery [months]			Incomplete recovery	No. pat.
		1-2	3-4	5-6	> 12 months	
Amplitude	A	16	3			19
	B	2	14			16
	C		1	5	2	8
	D		1		6	7
No. pat.		18	19	5	8	50

$\chi^2 = 88.827$; Pearson's R = 0.891; P = 0.01

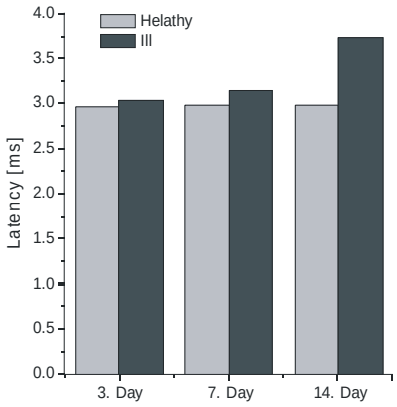
MEP Latency

Table 7 shows mean values of the MEP latency along with standard deviations, on the healthy and affected side of the face, recorded at each ENG examination on the 3rd, 7th and 14th, day from the onset of palsy. From this statistics we excluded patients with no MEP recorded.

Table 7. Means and SD of MEP latency on healthy and ill side of the face on 3rd, 7th and 14th day of illness

	Healthy side		Ill side	
	Mean	3× SD	Mean	3× SD
3. day	2.9567	0.9315	3.0390	3.3864
7. day	2.9813	0.8793	3.1460	3.1041
14. day	2.9780	0.9072	3.7247	3.3438

Significant deviations of the MEP latency relative to the healthy side were recorded on the 14th day of palsy (Graph 5).



Graph 5. MEP latency ratio on healthy and ill side of the face on the 3rd, 7th and 14th day of illness

The results observed at the first testing and on the seventh day of palsy did not show the existence of a correlation between latency and the length of recovery.

Statistics on the data recorded on 14th day of palsy (Table 8), showed a strong correlation of the two parameters.

Table 8. MEP latency ratio on the 14th day of illness and the length of recovery

14. day	Group	Latency	Recovery [months]			Incomplete recovery	No. pat.
			1-2	3-4	5-6	> 12 months	
	A	≤ 4ms	18	18	2		38
	B	4-5ms		1	3	3	7
	C	>5				4	4
	D	No response				1	1
No. pat.			18	19	5	8	50

$\chi^2 = 49.693$; Pearson's R = 0.800; P = 0.01

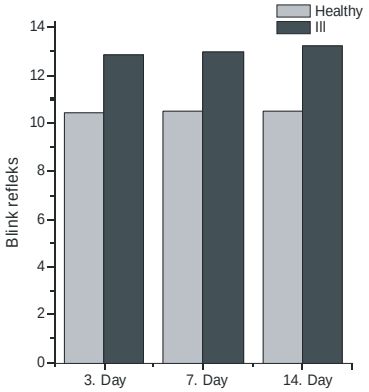
Blink Reflex (BR)

Table 9 shows mean values and standard deviations of the early (R1) monosynaptic response of the BR recorded on the healthy and ill side of the face, at each examination (on 3rd, 7th, 14th day from the onset of palsy). From this statistics we excluded patients with no BR observed.

Table 9. Mean and SD of R1 component of BR on healthy and ill side of the face on 3rd, 7th and 14th day of illness

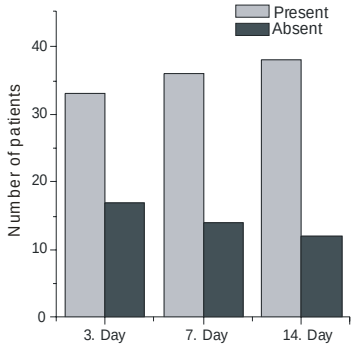
	Healthy side		Ill side	
	Mean	3× SD	Mean	3× SD
3. day	10.4160	3.2448	12.8323	4.2429
7. day	10.4680	3.2154	13.0417	3.9936
14. day	10.4980	3.1392	13.2263	3.7545

The latency of R1 component of the BR showed a significant difference on the healthy side of the face from the very beginning of palsy. In fact, the latency was prolonged or R1 response was completely missing (Graphs 6 and 7).



Graph 6. Mean value ratio of R1 component of BR on healthy and ill side of the face on 3rd, 7th and 14th day of illness

The observed results at each of the electroneurographic testing showed a significant correlation between the R1 latency and the length of recovery (Tab. 10, 11, 12).



Graph 7. Ratio of present and absent R1 component of BR on healthy and ill side of the face on 3rd, 7th and 14th day of illness

Table 10. R1 component latency ratio on 3rd day of recovery and the length of recovery in months

		Recovery [months]			Incomplete recovery	No. pat.
Blink		1-2	3-4	5-6	> 12 months	
	A	14	5			19
3. day	B	3	10	1		14
	C	1	4	4	8	17
No. pat.		18	19	5	8	50

$\chi^2 = 38.996$; Pearson's R =0.746; P = 0.01

Table 11. R1 component latency ratio on 7th day of recovery and the length of recovery in months

		Recovery [months]			Incomplete recovery	No. pat.
Blink		1-2	3-4	5-6	> 12 months	
	A	15	5	1		21
7. day	B	3	11	1		15
	C		3	3	8	14
No. pat.		18	19	5	8	50

$\chi^2 = 43.624$; Pearson's R = 0.774; P = 0.01

The results observed on the 14th day of palsy show a strong positive correlation between the R1 latency response and the length of recovery.

Table 12. R1 component latency ratio on 14th day of recovery and the length of recovery in months

		Recovery [months]			Incomplete recovery	No. pat.
Blink		1-2	3-4	5-6	> 12 months	
	A	14	5			19
14. day	B	4	12	3		19
	C		2	2	8	12
No. pat.		18	19	5	8	50

$\chi^2 = 46.682$; Pearson's R = 0.800; P = 0.01

Discusion

Our study included 50 patients of different age and sex. Sex ratio was almost even (26 women - 52%, 24 men - 48%). The youngest patient was 18, and the oldest was 80 years old, medium value being 47.2 ± 15.87 years. The analysis of the age groups showed quite an even distribution, with a slight predomination of the 30-50-year-old group. The statistic analysis of the correlation with certain age groups and the length and degree of their recovery did not show to be significant, although it has been registered in some studies that older age can badly influence the course of the illness (18, 19). Thus, Heath et al. (20) presented the results of their research showing that the average age of patients who had a rapid and complete recovery was 35.8 ± 15.9 years, while patients with an incomplete recovery were 55.4 ± 18.8 years old. Although the results of our study have not shown the existence of a correlation between the age and the length and degree of clinical recovery, it is necessary to point out that 6 out of 8 patients who had an incomplete clinical recovery were more than 48 years old. These results correspond to the data found in literature, which show that an unsatisfactory course of the illness can be expected in patients over 45 years of age (5).

The results of the clinical research show that a certain number of our patients had a neurological deficit, which had been changing during the first three weeks of the illness, suggesting that the prognosis based on the degree of motor deficit was significantly limited in the early stage of the illness. A poor correlation between the degree of the paresis, the length and degree of recovery was registered in our group of patients. These results show that the degree of motor deficit is not a clinically reliable feature for an early prognosis of Bell's palsy, in particular not in the estimation of the duration of clinical recovery. It is, however, necessary to mention that all patients (14) with signs of an incomplete facial paralysis of the third and fourth degree, on the fourteenth day of the illness, had a rapid and complete recovery (10 patients recovered within the first two months, 4 patients recovered within 3-5 months). On the other hand, six out of eight patients who did not completely recover within 12 months from the clinical observation showed the signs of a complete paralysis of mimic musculature (VI degree according to H-B) of one half of the face. These results show that an incomplete facial paralysis can have a complete clinical recovery as a result, while a complete paralysis indicates bad prognosis, which is consistent with literature data. An absolutely bad prognostic sign is the lack of any movement of the mimic musculature during the first four weeks.

MEP amplitude. The results of our study show that the progressive decrease of the amplitude was registered from the seventh to the fourteenth day of the illness (Diagram 3). Esslen's reports (11) show that the MEP amplitude decrease is recorded from the third to the tenth day, while Hitoshi et al. (21) present their results showing that this decrease occurs in the first seven days and remains stable.

Our study shows that almost all patients (41 out of 43) whose MEP amplitude values were between 11% to 100% compared to the healthy side had a complete recovery, but in different period of time.

The correlative analysis of MEP amplitude and the length of the clinical recovery reveal a minor correlation

during the first days of the illness, since the amplitude deviation was insignificant as well. The results observed on the fourteenth day of the illness show a strong positive correlation between the parameters we were monitoring. The more the amplitude decreased, the slower the recovery was. Most of the patients in whom the amplitude values were 81-100% clinically recovered completely during the first two months, which suggests mild damage of the nerve (neuropraxia). Most of the patients whose amplitude values were 41-80% recovered within 3-4 months. The amplitude values from 11% to 40% indicate a slightly longer recovery, within 5-6 months, which corresponds to the second type of the nerve damage (axonothmesis). The distinct amplitude decrease and even the lack of the same (0-10%) points to a heavy nerve damage (neurotmesis) and an incomplete clinical recovery (6 out of 7 patients did not completely recover within 12 months).

MEP latency. The role of the MAP latency in the early diagnosis and prognosis of Bell's palsy is uncertain. Although some researchers show that abnormal latency can point to a bad prognosis, it is believed that this factor has a limited significance. Since the latency reflects the function of the fastest fibers, it can stay within normal values for a long time even in the cases of a distinct axonal loss. Gilliat and Taylor (22) reported that latency stays within normal values until the moment when M potential is lost. However, some studies have demonstrated that abnormal latency can be suggestive of a bad prognosis. Langwort and Taverner (23) emphasize that the extreme extension of the MEP latency to the impossibility to register it is a bad prognostic sign. Danielides et al. have provided the results of their study made in 1994 and 1996 (24) which show that the latency extension results in a bad prognosis of the illness. They also claim that the reliability of this feature is less important than MEP amplitude for the prognosis.

The results of our research showed that during the first seven days of the illness latency values were normal with or without a minimal asymmetry compared to the healthy part, while after the fourteenth day the extension of the MEP latency was above normal values (Graph 5).

On the fourteenth day after the first symptoms the extension of the latency in most of the patients was registered. In 38 patients (76%) the values varied within the allowed variations, while in 24% the MAP latency was longer than normal.

A statistic analysis of the MAP latency values and the duration of the recovery during the first week did not register the existence of the correlation between these features considering the fact that the latency deviation in the damaged part was minimal. After the fourteenth day a strong positive correlation was registered - longer latency resulted in slower recovery. Most of the patients (76%) had normal or a slightly extended latency (to 4ms) and fast clinical recovery within 4 months since the first symptoms (only 2 patients had a longer recovery which lasted 4-5 months). This fact suggests a mild damage of the fiber (neuropraxia). The patients who had latency values 4-5 ms had much worse prognosis. Three patients had an incomplete recovery, three patients had slow clinical recovery within 5-6 months, and only one patient recovered within the period of 4 months. All patients who had latency values higher than 5ms (4 patients) or complete lack of M potential (1 patient) had an incomplete clinical recovery. These values suggest a bad nervous damage (neurotmesis).

BR electroneurographic tests give us significant information in the quantitative analysis of degenerative fibers in distal segments, but they cannot detect an intratemporal conductive block, which is the primary process in Bell's paralysis. BR shows the conduction through intracranial segment of the facial nerve and therefore it can be an important prognostic indicator. Recent research points to the importance of BR in the prognosis of Bell's palsy. According to Kimura (6), if BR is preserved or previously lost, BR appears again having normal or almost normal conductivity, indicating with an utmost certainty that the recovery will be complete. Thus, on the basis of the BR presence, it can be supposed that the remaining axons will not degenerate any further. Kimura also describes as a good sign the fact that the previously lost BR appears before direct conduction of the distal axonal segments is lost. Mohamed et al. (25) describe a very significant correlation between the presence or absence of BR in the early stage of the illness and final nerve function recovery. Heath et al. (20) also pointed out that the absence of BR is a bad sign. The results of their research showed the absence of BR in the first four weeks of the illness in most of the patients with incomplete clinical recovery (all patients except one). In some cases, patients had a complete clinical recovery in spite of the absence of BR during the first days of the illness. In these cases, the previously lost BR appeared again after four weeks from the onset of palsy. All patients with registered BR at the beginning of the illness had a complete clinical recovery.

The results of our study show a change in R1 monosynaptic response of BR during the first few days of the illness, registered either as the extended latency or the complete lack of R1 response, which point to the intratemporal conduction block – a primary process in Bell's palsy. The values of R1 latency were equalized during the electrophysiological examination. After the first electroneurographic test, they increased slightly up to the fourteenth day.

Previous research shows a prognostic importance of BR, especially for early detection of the patient with a bad prognosis (2, 6, 18, 20, 25, 26). The aim of our research was not only to find the possibility of anticipation of the bad result of the illness, but also to anticipate the length of the recovery in patients with good prognosis. According to that, we analyzed a correlation between the value of R1 latency and the length of the clinical recovery. A statistically significant positive cor-

relation was registered during each electrophysiological test. This correlation was most distinct after the fourteenth day from the onset of palsy. The higher the values of the R1 response latency were, the slower the recovery was. R1 latency to 13 ms pointed to fast recovery within the period of 2 months. The values higher than 13 ms resulted in longer recovery (3-4 months).

The absence of BR was extremely important. Our analysis showed that the number of the patients with absence of BR gradually decreased during the first two weeks of the disease. In some patients, the previously absent BR (at the beginning of the disease) was registered in the course of the illness. Thus, on the third day from the onset of palsy, R1 response was not registered in 17 patients. On the seventh day of the testing, 12 patients showed an R1 response. Eight patients had an incomplete clinical recovery and all of them showed the absence of an early (R1) BR response during the two weeks of the illness. These results point to a great prognostic value of the BR. The absence of the early BR response points to a bad prognosis and an incomplete recovery, which corresponds to the results by other authors.

Conclusion

Clinical parameters in the early stage of Bell's palsy have a grate diagnostic value, but they are not enough for the prognosis of the course of the illness. Electrophysiological tests are more significant in Bell's palsy since they may provide important quantitative information about an axonal damage degree. The most reliable prognostic data occur after the fourteenth day from the onset of palsy. The most sensitive electrophysiological parameters would be: amplitude and latency of M potential and Blink reflex. On the basis of these features, it is possible to predict duration of the clinical recovery and the unfavorable course of the illness. However, for a more complete diagnosis and prognosis a detailed clinical evaluation is necessary. If applied together, clinical and electrophysiological examinations have a great diagnostic and prognostic value in Bell's palsy. This is most important for a patient in a psychological sense, but primarily for the purpose of deciding upon the proper form of treatment, which could mean a surgical decompression, too.

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RANI PROGNOSTIČKI ZNAČAJ ELEKTROFIZIOLOŠKIH TESTOVA KOD BELL-OVE PARALIZE – PROCENA TRAJANJA KLINIČKOG OPORAVKA

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Kratak sadržaj: *Bell-ova paraliza je najčešće oboljenje sedmog kranijalnog živca sa dobrom prognozom. Više od 70% pacijenata dostigne kompletan klinički oporavak, bez kliničkih rezidua. Perzistirajuće sekvele se evidentiraju jedino u slučajevima sa izraženim aksonalnim gubitkom. Elektrofiziološki testovi mogu pružiti značajne informacije o stepenu nervnog oštećenja i mogućoj posledičnoj disfunkciji. Iz tih razloga bi ovi testovi mogli imati značajnu ulogu u prognozi bolesti. Naša istraživanja obuhvatila su pedeset pacijenata sa kliničkim znacima Bell-ove paralize. Analizirali smo kliničke znake (stepen mišićne slabosti) i elektrofiziološke parametre (amplituda i latencija evociranog mišićnog potencijala, latencija rane komponente blink refleksa) trećeg, sedmog i četrnaestog dana od pojave paralize. Naši rezultati pokazuju da elektrofiziološki parametri imaju rani prognostički značaj kod Bell-ove paralize. Na osnovu elektrofizioloških parametara moguće je predvideti trajanje kliničkog oporavka, kao i ishod bolesti.*

Ključne reči: *Bell-ova paraliza, evocirani mišićni potencijal, blink refleks*