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HEALTH-RESORT SEASIDE CLIMATOTHERAPY OF RECONVALESCENT EPIDEMIC HEPATITIS PATIENTS

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The increased morbidity, the lack of specific drugs and the incidence of serious complications and sequelae in epidemic hepatitis attribute to related prophylactic and therapeutic problems a general medical, social and economical significance of utmost importance. Within the complex of measures, aiming full cure and prevention (or healing) of eventual post-hepatitis conditions, a reasonably merited place should be ascribed to resort therapy, mainly by means of balneologic methods and certain peloids (1, 2, 4, 5, 6, 12, 13, 14, 15, 16).

Proceeding from similar considerations, we decided to apply to part of our reconvalescent post-hepatitis patients certain therapeutic-prophylactic agents of which the Varna sea-shore appears to be exclusively rich. We have no available information on the application of these means in other regions of the country in similar cases and moreover, in the literature hitherto reviewed, this item has scarcely received any attention. The patients observed are divided in three groups: 1) pelotherapy (curing muds); 2) balneosea-therapy (heliotherapy and sea-water baths) and 3) controls.

The experimental studies of Bulgarian (11) and foreign authors (1) demonstrate favourable functional and morphologic changes, occurring in the liver under the effect of the thermal and chemical action of peloids. The latter finding has been duely confirmed by clinical experience (9). According to Y. Melamed (7), the Varna curing muds, by physical properties, are cathegorized between the Tuzla and Pomorie peloids. This mud was applied to 61 epidemic hepatitis reconvalescents from the case material of the Infectious Diseases Clinic in Varna, covering the period 1964/1965. All patients were furthermore subjected to five systemic clinico-laboratory examinations; on admission and dismissal from the clinic (acute stage of the disease), one month after dismissal (beginning of pelotherapy), after further 10-15 days (completion of pelotherapy cure) and after further four, respectively, 16 months (final check-up examination). A similar observation was carried out also on a series comprising 76 patients, treated for the same illness, during the same period of time and with the same therapeutical means, except for pelotherapy (fangotherapy) — they were used as controls. With the goal of obtaining objective and comparable data concerning the therapeutical means under investigation, the authors abstained from deliberate selection of the patients for fangotherapy. Nevertheless, to the latter procedure, mainly patients were subjected, running a severer and rather protracted course of an acute hepatitis condition, and feeling a spontaneous need to proceed with their treatment after being discharged

from the clinic. The clinical differences between the various groups of patients are illustrated in table 1.

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	Groups					
Indices In the course of illness	peloid	balneo-sea- therapy	controls			
Mean age (years) Average hospitalization (days) Clinical forms (in %):	31 28	10 19	22 24			
slight moderate severe anicteric	39,2 32,8 8,2 0,0	46,7 33,4 0,0 6,6	47,6 33,2 6,5 6,2			
protracted Duration of urobilinogenouria (mean duration, in days) Duration of bilirubinuria (mean duration in	19,8 16	13,3	6,5 13			
days)	13	6	12			
dehydrocortisone Vitamin B ₁₀ Biomycin	27,8 54,0 9,8	6,6 46,6 0,0	15,6 43,4 0,0			

In the acute stage, the treatment was carried out in the usual manner: bed-rest, carbohydrate-protein diet and Varna spa-water (mineral water), vit. B_1 and C, glucose, heaters over the hepatic area and solux. In cases exhibiting heavier course, additional therapeutic means were prescribed.

Fangotherapy consisted in the application of 8-10 kg mud over the hepatic region in the course of 8 sessions $(15-30 \text{ and } 38^{\circ}-42^{\circ}C)$ for a period of ten days. As demonstrated by table two, at the completion of this type of treatment, a decrease was noted in a number of clinical and paraclinical pathologic indices. However, the substantial diversity, established in the findings of single patients, obviates their classification in strictly specified subgroups. Also, the fact should never be ignored that the tendency observed towards improvement could easily be ascribed to the interference of spontaneous healing processes. All fangotherapeutical procedures were endured without complaints or complications, worth of mentioning, on behalf of the patients. Aggravations were not noted. At the last followup examination (long-term results), convincing unidirectional differences were not discovered (except for the more frequently met hepatomegalia in controls) in the state of the patients of the two groups under study. Chronification and other serious post-hepatitis conditions were not encountered. Bearing in mind the rather heavier initial condition of those treated with mud, this outcome might be related, in all likelihood, to the therapeuticprophylactic method tested.

There is a general acceptance in theory according to which helio-therapy should be considered as contraindicated in the reconvalescence of epidemic hepatitis (hypersensibility to histamine and sun rays, glycogen metabolism

170

Indices (in %)	Pelotherapy			Sea-therapy			Con- trols	
	before	after	last control	before	after	last control	last check-up examination	
Hepatomegalia Impaired disposition Reduced working capacity Sense of heaviness after meals Pains in the right subcostal area Painful liver Lengthened Weltmann Positive McLagan test Positive Kunckel test Elevated transaminase	37,7 31,3 39,3 42,6 45,7 13,1 47,5 32,7 53,8 4,9	29,4 22,9 27,8 16,3 37,7 13,1 39,3 37,7 35,8 4,9	3,6 6,5 9,8 4,9 14,7 9,8 24,5 13,1 43,0 1,6	6,6 0,0 0,0 6,6 0,0 34,4 53,3 60,0 0,0	6,6 0,0 0,0 6,6 0,0 34,4 13,3 53,3 0,0	6,6 0,0 0,0 0,0 0,0 6,6 0,0 0,0 0,0	14,9 6,5 5,1 3,9 7,8 9,2 27,6 9,2 37,0 1,3	

disorders, protein denaturation etc.). Certain questions, having an important practical bearing are as yet unsolved and await more detailed specification, for example: exactly how long after the hepatitis affection, after which clinical forms and in which post-hepatitis conditions, in particular, heliotherapy should not be resorted to? The physical conditioning and prophylactic properties of the fundamental seaside climatotherapy factors - sunbathing and sea-bathing — are well known on a worldwide scale. Are we supposed to deprive children and adults in early posthepatitis states from these valuable biostimulating therapeutic means?

14,7

14,7

6,5

0,0

0,0

0,0

2,6

Against the background thus outlined, we assumed the task of following up the tolerability and effect of the listed above therapeutic-prophylactic factors in a group of children with past history of comparatively mild forms of epidemic hepatitis (see table 1). Seaside therapy was begun 1-3 months after discharge from the clinic. Thermic and actinic factors were accordingly dosed. Solar therapy was carried out under thermic conditions of the aerial environment within the comfortable and subcomfortable zone, dosed according to V. Marinov (8). Ever since the very beginning, helio-bio-dosimetry was performed in order to avoid sun erythema. Eight of the children displayed pigment type of skin reaction and the remainder (7 children) — pigment-erythemic. The first and second solar exposure constitute one fourth of the total individual heliobiodose, the third $-1^{1/2}$ times the initial dose, the fourth -2 times, the fifth -3 times, the sixth -5 times and the seventh - 7 times. Thus, up to the seventh session, the children had an evenly distributed pigmentation. Thereafter, sun-baths were carried out with greater freedom, reaching up to 2 hours duration, but invariably within the comfortable zone and beneath it. Exposure was accomplished near the seashore, where the coolness of the sea breeze was felt more easily. After the third day, sea-bathing was allowed, dosed according to the method of

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1 mg %)

171

Table 2

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gradual cold adaptation (Boksha V. G. and Latishev G. D. - 3), with single time immersion and temperature of the water above 20°C. The seaside therapeutic cure lasted 15 days. All children were favourably influenced by the procedures described, with no untoward reactions. On the last follow-up examination, the children exhibited no subjective or objective deviations from the normal values (see table 2). Irrespective of the encouraging data obtained, for the timebeing, we should be extremely cautious in estimating the effectiveness of the seaside climatotherapy applied, as the group followed up is very limited in number and comprises, in general, rather more favourable cases from prognostical viewpoint (children, slightly pronounced clinical forms).

Conclusion

The preliminary results of the pelotherapy and seaside climatotherapy, applied in hepatitis reconvalescents under the conditions of the health resort Varna, provide sufficient ground to proceed with similar therapeuticprophylactic procedures in the future. Investigations will be performed on a more extensive clinical material, controls will be selected more purposefully and, in case it is possible, will be carried out under sanatorial conditions.

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КУРОРТОЛЕЧЕНИЕ НА ПОБЕРЕЖЬЕ МОРЯ РЕКОНВАЛЕСЦЕНТНЫХ после эпидемического гепатита

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РЕЗЮМЕ

Изучается эффект грязелечения взрослых реконвалесцентных лиц после перенесенного эпидемического гепатита, а также и солнцелечение (солнечные ванны и купания в море) группы детей, перенесших это-же заболевание от 1 до 3 месяцев тому назад. Полученные до сих пор результаты, дают основание продолжить эти лечебные процедуры и в будущем на большем числе пациентов.

172