ČESKOSLOVENSKÝ SVAZ TĚLESNÉ VÝCHOVY - VÝBOR HOROLEZECKÉHO SVAZU ÚV

ZDRAVOTNICKÁ KOMISE

CZECHOSLOVAK MOUNTAINEERING ASSOCIATION

MEDICAL COMMISSION

23.

Proceedings of the seminars of the Medical Commission

1 9 8 4

R E P O R T

In October 1984 the Medical Commision of the Union of Mountain-climbers ÚV and ČÚV ČSTV arranged two seminars of medical workers: 5. - 7. 10. in Sloup near the Macocha and on the 26. - 28. 10. in the Sedmihorky. Seventy doctors took part in these seminars.

I. Rotman gave the report on the International congress of mountain medicine " High altitude deterioration ", which had taken place in March 1984 in Chamonix /Lékař a tělesná výchova 1985, Hotejl 1984/.

L. Chládek /Orthopedic Surgery, Liberec/ gave the lecture with diapositives on the initial ascent of the south wall of Lhotse-Shar in 1984. Organizational causes prevented a mutual comparative functional examination at a workplace before the expedition. During the sojourn in the mountains simple functional tests were carried out with every participant in order to establish the course of acclimatization. The base camp was at 5300 m. Thanks to the experience of the climbers, preventive advice, medical recommendation, and discussions of problems of health, the damage to health was much less than had been the case in other expeditions, and there were no cases of toothache.

L. Oujezdský /Jablonec/ gave detailed information on the problem of the stomatology in the high mountains with a review of the individual disorders of the teeth, and the instruments with the method of stomatologic examination of the mountain climbers before expeditions, and these were complemented by J. Vacek /Praha/ and J. Harlasová /Plzeň/. The RTG examination was important, exhibiting even concealed decay beneath the fillings, imperfectly filled teeth, granulomas etc. After thorough and early examination a perfect treatment of the dentures follows with the removal of all deposits of infection.

I. Miko /Mountain Service, High Tatra Mountains/ in his paper "Personality, tasks and functions of the medical officer of a mountaineering expedition", reported on his experiences during the expedition to the Himalayas in 1981, when climbing Kangchenjunga. The preparation for the protection of health in an expedition begins long before departure: the safeguarding and checking examination of the participants, the preparation of the sanitary equipment so as to ensure the greatest degree of selfreliance under conditions far removed from civilization. During the way up to mountains the doctor has the sanitary control

over the meals, and once in the mountains his task consists of checking the state of health, the treatment of illness and injuries, care of a good physical condition and psychic ease, a check on the course of acclimatization, eating, hygiene, to provide the high camps with medicines and many others. The medical equipment of the expedition to Kangchenjunga and Jannu for 24 participants with two physicians, 7 members of the staff and bearers was 6 cases weighing 24 - 19 kilograms, emergency bag, individual medicine chests and medical equipment for the motor truck.

I. Miko reported on the activity of the doctors of the Mountain-Service in the High Tatra Mountains and on the problems of their rescuing activity in two outlines. Only 10 - 15 % interventions take place in cases of mountaineering accidents, but they are actions that are challenging in every sense, bringing with them frequent risks for the rescuers as well. The time factor is very unfavourable for the injured person, the action may take from 30 minutes to 16 hours /on an average 4 hours/, where the time from the onset of the accidents to the receipt of the report is not taken into account. The activity of the doctor in the mountain service is voluntary, their participation in the proper rescuing activities is a mere 10,5 % of the 1791 hours of work /1963/. In alpine areas the problem is solved by a well-developed air rescuing service with its own medical emergency.

A. Pelikánová /Jablonec n.N./ spoke about her experiences with the medical safeguarding of expeditions to the mountains in the USSR. The health problems differ according to the individual regions - the Central Caucasus from the southern territory, as well as the Caucasus from the Far Mountains in the Pamir-Alai, where the centre of the rescue service is three days march from the centre of the range reaching a height of over 5000 m. Here the actual problem is acclimatization and mountain sickness.

B. Líška et al. /Bratislava/ reported on the preparation of the participants and the scientific program of the expedition of the Slovac Academy of Sciences to Everest in 1964.

P. Stratil /VÚKEO, Brno/ lectured on the principles of proper nourishment of the sportsmen. The origin of so-called civilization diseases is contingent chiefly on insufficiences in the sustenance. Eve-

ry living creature has its natural food, and if it begins to be fed different sustenance a large part of its life is lost. The natural food for man is - or was seeds, fruit and vegetables. He seldom ate meat, milk hardly ever. The way of eating largely changed only since the last century, most especially after the Second World War: the consumption of fresh food sank, as well as freshly prepared meals. A healthy sustenance must contain the necessary amount of proteins /30 - 40 grams resp. 6 - 10 % of the energetic value of the food/, fats /5 - 10 %/ fixed in natural foodsuffs, complex polysaccharids /80 - 85 %/, vitamins frequently destroyed by the preparation of the food, and mineral matter. An integral part must be fibrous matter /20 g daily/, and active enzymes that are not destroyed by heat. During sport activity a proper sustenance should be a matter of course, since the physical burden causes jarm when not supported by proper eating, and hastens the development of degenerative diseases.

F. Šráček /Youth Commission/ and M. Mühlstein gave a review of the history and contemporary problems of youth in mountaineering. Principles of health for the work with youth in mountaineering divisisions were elaborated as early as 1974 and form part of the methodical letter "Mountaineering for youth" from the year 1977: the individual approach, maximal safety, warning against the damaging of the young developing organism, the danger of overburdening, spiritual immaturity, the pedagogic approach the underlining of the necessity of general physical preparation, the underlining of the duties of trainer. The novelization of the sanitary part of the methodic letter will be obliged to concern itself with a group of children younger than 12 yers old, the medical physical observation of the best climbers in the older category, the stricter and emphasizing of the observation of the principles of safety and equipment /bindings, helmets also for practise on training rocks/, prevention of overburdening. The interdiction of initial climbing before the fifteenth year is still kept up. The Medical Commission suggested the following kategories of youth in mountaineering in the contemporary directives: younger pupils 11 - 12 years of age, older pupils 13 - 14 years, younger adolescents 15 - 16 years, older adolescents 17 - 18 years /T. Skřička/. Traditional forms of work with youth are district a state youth camps and especially contests of the mountaineering efficiency of youth. Divisional, district and state circles are directed to the general preparation of youth.

In spite of the endeavour of the Youth Commission the contest has not yet been alligned in the Contest order of the ČSTV.

J. Harlas /Plzeň/ lectured on information from the seminar for the health commissions of the committees of the associations ÚV ČSTV, concerning the problem of immunology and sport and he applied this to the mountaineering. It is necessary to cure all deposits of infection - ORL and dental etc. The adjustment of the regimen includes a strict prohibition of smoking, the prohibition of alcoholic drinks, the extension of the time of sleeping as well as its improvement /bed, airing etc./, hardening, training in perseverence, proper nourishment. It is necesary to avoid the use of superfluous antibiotics, to cure light infections without them. After exhausting the above-mentioned possibilities to use immunomodulative or substitutional treatment in persons with impaired immunity mechanisms.

The analysis of the accident rate in the Czech Mountaineering Association for the Union Conference on the Prevention of Accidents was prepared by L. Rotman. In the years 1980 - 1983 the Safety Commission evidenced 240 accidents during mountaineering, when accidents with grave and fatal outcome were in the majority /over 60 %/. The injuries are graver in cases of defects in surety measures. Fatal accidents were between 0,03 to 0,13 %, in 1984 it was 0,15 % /14 accidents/. Amongst the causes of the accidents personal causes prevailed /90 %/: overestimation, inexperience, recklessness, a bad state of health, and in the first place insufficiency of assurance. The actual accident usually is a result of a chain of insufficiencies and faults. Especially faults in roping, not wearing a helmet and the dangerous emission of binding to the proper sitting tie.

M. Mühlstein carried the discussion of the analysis of the accident rate. The successful exercise of mountaineering is in connection with a high degree of intelectual soundness beside the physical soundness, with theoretical knowledge and successively methodically gained experience and personally psychologically, sociologically bestowed features of character. Mountaineering and its sometimes negative results for the health and life of a man are not the private maiter of an individual and accidents and death are not the natural predicate of this sport, nor the natural toll for the enjoyment in the mountains.

A prerequisite for the lowering of the accident rate is chiefly the raising of the level of the work of the trainers in the divisions, the improvement of the theoretical preparation and the teaching of the binding, the roping, and the physical psychological and moral preparation, the widening of the sanitary requirements during the preventive examinations, and the safeguarding of a sufficient amount of mountaineering equipment and kit of good quality.

O. Hein lectured on the legal responsibility of the trainer. He explained the basic concepts - the forms of the responsibility, legal relations and the disciplinary offenses, and he reviewed the valid legal norms, the normative internal instructions, the methodic letters, and the literature delimitating the extent of the responsibility. He is preparing a methodic letter concerning this problem.

E. Ehler /Neurology, Perdubice/ spoke in detail about the frequent injuries of the skull and brain in mountaineering. Their prevention depends on the consistent wearing of a helmet and the choice of the tour in view of the territory, its fracturability and other factors. For first aid and early treatment of these injuries it is necessary to be familiar with their basic image, their mechanism of the origin of the injury and the complications.

The contribution of J. Hasík /Rescue Service, Chomutov/ concerned new knowledge in resuscitation. In mountaineering accidents one may expect success in resuscitation primarily in cases concerning accidents to the brain and choking as a result of unconsciousness. The basic measures consist in keeping the respiratory tract clear, breathing mouth to mouth and indirect heart massage. In mountaineering there are frequent accidents to the spine. In clinical death resuscitation has, however, no contraindications. Injury to the spine must be respected only in the unconsious with continued breathing and functioning circulation /do not bend the head back/. Resuscitation may be more successful after being struck by lightening. In hypothermia the true cause of death may be the ventricle fibrillation. Even in the rescuer the unfavourable influence of extreme conditions in the high mountains anulate the protective effect of cold on the brain cells from the hypoxia.

If the doctor wishes to intervene effectively in cases requiring resuscitation, he cannot get along without aids and basic drugs /for

intubation, oxygen, a resuscitating apparatus, bicarbonate, corticoids, mesocain, adrenaline, dopamine, intravenous kanylas, electrolyte solutions in plastic packing etc./.

T. Skřička /Medical Commission of the Czechoslovak Mountaineering Association/ was the subject of the lecture: Prevention of Microtraumatization and the Accident Rate: One can find damage to the joints /even arthroses/ of the hip, the knees and the loins, chronic inflamation of the sheaths of the sinews of the flexor muscles of the fingers, inflamations of the tendons of the forearm on the armbone, inflamations of the sinews of the shinbone muscles after long marches in heavy boots, pinful Achillous sinews after ascent over ice, inflamations of the sinews about the patella after long descents with heavy burdens. According to Krtička one can distinguish primary prevention /the choice of individuals, the gradual loading according to age and training/ and secondary prevention /early and correct first aid, adequate treatment and the right placing in sports activity/. In the prevention of the damage caused by sports, compensatory exercise, demonstrated by T. Skřička and K. Dominiková, in a series of diapositives, have a place. Compensatory exercises make use of directed and exact movements, which must be arranged before training, in the exercise, and after training in the evening, so as to prevent defects of the muscle dysbalance. Detailed instructions can be found in the methodic letter of J. Javůrek: "Compensatory exercises in the regeneration in young sportsmen" /Sportpropag Praha, 1980/.

From the viewpoint of the prevention of accidents a specific problem is the connecting of the rope. When hanging in the proper binding round the thorax there is venostasis and paralysis of the strangled upper extremities and the failure of the circulation as a result of the vertical position of the body when hanging. After two hours hanging the compensatory mechanisms fail and the shock usually ends fatally. When falling into the sitting binding proper /the tie about the hips/ a broken spine threatens and the unconscious climber hangs with his head down. When using a combination of the breast and the sitting tie the risk when falling and the threat of shock is suppressed to its minimum. As Z. Pulec et al. proved /Physiological Institute of the Czechoslovak Academy of Sciences/, the unfavourable size of a combined tie threatens the climber with an orthostatic

collapse. The sitting part of the tie must be somewhat looser than is the circumference of the thighs, but not at the price of an exact seating of the body. K. Metelec /School of Physical Training, Praha/ showed a film shot by the Safety Commission of the German Alpine Society about the falling tests with a model /a mannikin/ tied to a sitting rope alone. The tests clearly demonstrated, that in such falls the spine is broken and the organs in the belly are torn.

Almost all the lecturers gave in their references in writing and thus made possible the edition of the proceedings from both the seminars: " Mountaineering and Health - Medical Aspects in Mountaineering "

Ivan Rotman
Příčná 2
405 01 Děčín III
Czechoslovakia

Translation: Tomáš Skřička

ČESKOSLOVENSKÝ SVAZ TĚLESNÉ VÝCHOVY - VÝBOR HOROLEZECKÉHO SVAZU

ZDRAVOTNICKÁ KOMISE

CZECHOSLOVAK MOUNTAINEERING ASSOCIATION

MEDICAL COMMISSION

24.

Proceedings of the conferences of the Medical Commission

1 9 8 5

R E P O R T

In the 1985, the Czech and Federal Commissions of the Mountaineering Union of Czechoslovakia held two conferences attended by over seventy doctors and medical workers of the Union.

The main theme of the conference at Sedmihorky on 11th - 13th October 1985 were the problems of damages caused by low temperature in mountaineering. As a matter of fact, five years have passed since the metodical letter "Frostbites and Hypothermia in Mountaineering" /Rotman, I.: Omrzliny a podchlazení v horolezectví, Praha, ČÚV ČSTV 1982/ was finished and this theme still keeps its importance for us. In mountain resort the injuries caused by low temperature reach up to 22 % /Chamonix/. 11,3 % of 240 injured members of the Mountaineering Union of ČÚV ČSTV suffered from frostbites and hypothermia in 1980 - 1983. Sudden changes of weather and exhaustion together with sudden changes of weather and falls played a decisive role in 32 accidents, i.e. in 16,8 % of 191 death injuries of the members of the Czech and Slovak Mountaineering Unions in 1960 - 1983.

The causes of rising, influencing factors as well as pathogenesis of hypothermia are well known but some effects of low temperature on organ systems are wrongly neglected. Skin sensitiveness damaging occurs at 8 °C, the skill optimum is 12 °C. Muscle cooling lowers contraction strength and contraction duration, if the muscle temperature drops under 25 °C motion capability extincts. Higher viscosity of synovial fluid, "stiff" muscles and joints raise the contingency of muscle and sinew damaging during muscle activity. In normal environmental temperatures exercise lowers diastolic pressure but when cool air is inhaled simultaneously diastolic pressure becomes higher. Face cooling raises bradykardia, high blood pressure, also on simultanous exertion. In patients suffering from ischemia heart insufficiency or stenocardia can occur.

Besides cardiac arrest impalpable puls on carotid artery indicates either extreme bradycardia or ventricular fibrillation. In deep hypothermia /under 28 - 30 °C/ and impalpable puls heart massage is contraindicated if it is not possible to perform it continuously during the whole transport time to hospital, because chest compressions during bradycardia could raise ventricular fibrillation. The whole problem is solvable by application of the cardioscope on the accident spot. Until lately, indirect heart massage in deep hypothermia with a cold heart stiffness was presumed to be without effect. Contemporary research, however, shows coronary perfusion and blood circulation to be secured mainly by thorax pressure changes, the

effect may be supported by simultaneous abdominal pumping.

As far as the method of rewarming in persons in hypothermia more or less unity has been reached. Hot baths have been refused, the easiest and most effective way of raising the corporal core and mainly heart temperature is that of using hot Hibler's compresses of chest and abdomen without any secondary "afterdrop" of the core temperature caused by mixing up cool periphery and warmer centralised blood. The reason is that death is usually caused not by hypothermia itself but ventricular fibrillation raised often by unsuitable treatment steps or by primary illness or an injury.

Death cannot be diagnosed in hypothermia until rewarming the body during resuscitation. In deep hypothermia the plane line on ECG does not entitle to determine death. The hypothermia itself is of a significant protective effect and prolong the survival time in clinical death.

Two mechanisms - freezing with forming of ice crystals in tissues and cold vasoconstriction - are responsible for local cold injury - frostbites; both the mechanisms combine.

Under normal conditions, in the organism defeating itself against hypothermia, sympathetic reflex activation causes arteriolar narrowing and low hematocrit and low viscosity blood gets into capillaries. The skin freezing, mainly plasma in microcirculation stagnates, and microcirculation is quickly regulated by rewarming accompanied by vasodilation. If pathological vasoparalysis, i.e. arteriolar dilation caused by histamine and other tissues hormones without simultaneous skin rewarming occurs like during active vasodilation, high hematocrit blood gets into capillaries, stasis, erythrocyte aggregation and other flow slow-down occur. After rewarming stagnating mass has high viscosity, circulation damaging is of more permanent character, being complicated by endothel damaging and coagulative changes which are characteristic of the 2nd and 3rd stages of frostbites.

Application of laboratory methods /minerals, enzymes, thermography, angiography, sonography, marked technecium, capillaroscopy, nuclear magnetic resonance/ in early diagnostics of a frostbite stage has not contributed to the subject yet.

As far as the speed of the rewarming no unified opinion has been reached up to now but the most suitable method of rewarming as

first aid seems to be that of merging the frostbitten limb into luke-warm water whose temperature is raised up to 40 °C within 30 minutes.

For the treatment itself vasodilator substance prefering sympathetic alfa-blockers are used but an even important measure appears the improvement of blood qualities: viscosity lowering by controlled defibrination /Arwin/, hemodilution, raising erythrocyte flexibility /Trental, Agapurin/. Substances with antiprostaglandine effect /aspirin/ and thromboxan inhibitors /aloe vera/ are used by some authors.

Practical experience and frostbite treatment processes in high mountains were refered about J. Pelikán and L. Chládek. The authors treated many patients in the Caucasus and especially in the Himalayas. The risk of frostbite is incomparably higher in extreme heights, caused mainly by hypoxia, insufficient acclimatisation and a lack of liquids. A longer stay in the heights over 6,000 - 7,000 m is risky, it is dangerous to wait for a better weather, it is better to descend. Perfect footwear is of significant importance. Mountaineers are allowed to take no drugs, expecially no vasodilator substances.

Mountaineering itself has contributed to frostbite treatment. Amputations during expeditions have not been carried out for a long time. But the treatment requires the most active and intense attitude including application of all methods from the beginning. Intraarterial injections and infusions in extreme heights are rather avoided nowadays, patients are usually transported to lower camps or to the base camp where treatment of vasodilator infusions, dextran and Trental, Xanidil or Droperidol, and Dolsin can be started. Blisters can be cut down in 4 - 5 days, in the local treatment applications of Panthenol spray, Neopeviton salve on demarking spots, daily Septonex desinfection, hypermangane baths have proved to be efficient. In most cases antibiotics need not be administered.

Preliminary communication concerning the experience with the new method of pathogenetical treatment of frostbite was given by J.Harlas In accordance with V. Černý's recommendation, the patients were administered Rheodextran, Methiaden-Calcium, Droperidol, heparin and antibiotics. During the successful treatment the skin temperature of the frostbitten tissues were taken.

M. Horník's paper dealt with the question of face bone injuries, their classification, and mainly the way of first aid and further treatment. The first step is air passages clearing and hemorrhage

stopping. The best transport position appears to be that on one's abdomen with forehead rested or that of sitting bent forward. Fractures are fixed by means of plaster or sling bandages or prefabricated pelots or by special wooden fixation.

J. Harlasová spoke about parodont disorders - parodontosis and parodontitis, their causes, treatment, and prevention.

The conference of medical workers of the Mountaineering Union of ÚV ČSTV was held at Tatranská Lomnica on 30th November - 1st December 1985. The programme consisted of three main themes: high mountain physiology, the medical worker's activity in the Union and medical help for mountaineering expeditions.

In his introductory paper dealing with human adaptation to hypoxia K. Gurský analysed the effects of the High Tatra climate on mountaineers' efficiency. From the phylogenetic point of view it must not be forgotten hypoxia is rather an exceptional situation for a man because the life on the earth has been adapted itself to the combined lack of oxygen and excess of carbon dioxide.

The first phase of adaptation to hypoxia in high mountains may be considered as aerobic capacity improvement /higher capacity of functional systems for oxygen transport/ and the second phase as anaerobic capacity improvement /lowered oxygen consumption, higher cell resistance against hypoxia, more intense glycolyse/. The observations have proved man's performance after arrival from the mountains to sea level is favourably affected by training in medium heights.

The up-to-date classification of high altitude pathology occuring in extreme heights was explained by B. Líška. Until recently they have been refered to as continuous stages of one process.

Acute hypoxia occuring during fast reaching about 5,500 m /during several minutes or hours/ is connected with a disturbance of mental functions and collapse /plane ascent, rescue activity, climatic chamber/. Acute mountain sickness accompanied by headache, vomitting, insomnia or dyspnoe occurs in the heights of about 3,000 - 4,000 m. It appears in as many as 55 % visitors. High altitude pulmonary edema is manifested by dyspnoe, cough, weakness, cyanosis, pulmonary "rales", stupor; it may be fatal. It occurs in about 3,000 - 3,500 m and higher. High altitude cerebral edema /in 3,500 - 4,000 m/ is characterised by intense and refractory headache, hallucinations, ataxia, mental disorders and ends often fatal, too. For saving the

life it is necessary to descend immediately likewise by pulmonary edema. Subacute and chronic mountain sikness charakterise the state of the patient who does not recovered completely after acute mountain sickness, with dyspnoe and heart damage /the latter manifesting apart from the height, sometimes after the expedition is over/. If one stays in the heights of over 5,500 - 6,000 m for a longer time high altitude deterioration appears: insomnia, weight loss, exhaustion, irrepressible activity lowering. The stay in the height is also complicated by other health problems: retinal hemorrhage, peripheral subcutaneous edema, thrombophlebitis, embolia, and cold injury.

Many problems have not been solved yet: application of acetazolamide in mountain sickness prophylaxis, the rate of aerobic and anaerobic training in mountaineering, the role of the training in hypobaria and hypoxia in preparattion for climbing to extreme altitude, and many others.

On 2nd October 1985 the "Memorial of the Meritorious Master of Sports Ing. J. Psotka" took place in the High Tatra Mountains. 98 runners have been running along 19,5 km track: Sliezsky dom 1,670 m - Starý Smokovec 950 m - Hrebienok 1,280 m - point 1,700 m - Sliezsky dom 1,670 m, the best time being 1 hour 32 minutes. J. Labus and his team observed many physiological parameters: weight, blood pressure, ertyhrocytes, hemoglobin, haematocrite, vital capacity and other spirometric changes, ECG, biochemical and acidobasic ballance values in 31 persons. Acute load hemodilution was proved and the authors showed the possibilities of the exercise capacity assessment under high mountain hypoxia conditions.

T. Skřička and P. Studeník dealt with the wrongly neglected questions of nutrition. We have experience about the enormous deficit of energy intake and catabolism in mountaineers at high altitude. The authors observed the influence of 10 day absolute starvation on some physiological parameters: weight loss 7,3 - 8,9 kg, subcutaneous fat deficit 2,4 - 6,6 %, RQ decrease on 2nd - 3rd day, higher plasmatic cholesterol and triacylglycerole, ketoacidosis, GAP anion, urea, creatinine, uric acid. Plasmatic prealbumin, serum and urine osmolality, thyreotrope hormone, and trijodthyronine levels dropped. Calcium, kalium, chlorids, natrium, osmotic active substances outflow sank rapidly. Lymphocytes, hemoglobin, and hematocrite values dropped, capillary blood acidity raised.

Taking care of the mountaineers who cannot intake sufficient

quantity of food requires deep knowledge about metabolic processes occuring during starvation. There are certainly significant differencest between organism metabolism of a person starving under simple conditions and the changes occuring during exercise at high altitude. Therefore intake of sufficient quantity of nutriments of any form in the mountains is considered to be a basic precondition of all high mountain expeditions successes.

Mountaineers' medical instructions are provided by medicine workers of mountaineering teams. Their duties were dealt with by J. Harlas. Another his paper was devoted to the principles of the activities of the Medical Commission of the District Committee of the Union. The activities of the Medical Commissions of the Mountaineering Unions of ČÚV, SÚV and ÚV ČSTV were the themes of I. Reiman's, K. Gursky's and T. Skřička's papers.

The last theme of the conference were the questions of medical assistance for mountaineering expeditions. The instructions of ÚV ČSTV No 10/1973 state a team of 10 sportsmen at least has to have a physician. In risky sports a team has a physician even if fewer sportsmen participate. So far, in mountaineering we have not managed to provide every expedition to the high mountains with a physician, not mentioning the conditions in other sports.

[illegible] Pellikán spoke about a doctor's role before departure of an [illegible] the medium high mountains up to 6,000 m. Individual medicine-boxes are stressed; they should be equipped in accordance with the doctor's instructions. Drugs of maximal effectiveness, especially in injections and universal drugs, are prefered. Sufficient quantities of antibiotics, analgetics, antitussics, vitamines, vasodilatantia, remineralizing powders for preparing drinking water acquired from melting snow and ice, infusion solutions for early and intense treatment of more serious illnesses are needed. There has to be sufficient quantity of dressing materials, the instruments being [illegible] to the doctor's erudition; in every case the equipment for suture, incision, simple wound treatment. Each expedition member has to go through a recent examination at sports medical department, functional and internal examination, careful and early stomatological examination, vaccination against tetanus, and women through gynaecological examination. Psychological examination have been started to be carried out.

The doctor's task is to be able to cure every simpler form of illness under conditions existing by means of ... equipment of his medicine-box, the mountaineer should be able to go on climbing after recovery. In more serious cases of illnesses and injuries the tratment has to be started early and it has to be effective so that the climber may recover soon and without sequales.

L. Chládek demured at the fact this year two members of the Union died of acute mountain sickness in the mountains of about 5,000 m. It proves the medical instructions and organisation are not prefect. The Mountaineering Union has to insist on a doctor always accompanying our mountaineers to the high mountains abroud. Exchange team expeditions to the mountains of the U.S.S.R. for 2 – 3 weeks are very risky if the mountaineers want to climb some mountains during their short stay at any cost, then somebody falls ill or dies. Acute mountain sickness is compensated by our insurance company if it occured in the height of over 4,000 m within 3 weeks stay. According to the International illnesses classification, mountain sickness ranks among injuries!

Taking medical care of the members of Dhaulagiri 1984 Expedition was the theme of J. Pelikán's report /given also during the XLIInd Sport Medicine Congress at Tatranská Lomnica on 7th November 1985/.

Conferences include also congress reports given by their participants - members of the Medical Commission, some of those events can be informed about on the basis of acquired materials only. The IVth European Congress of Sports Medicine in Prague in March 1985 was taken active part in by Gurský, Rotman, Skřička, and Wolf, the Medical Commissions of Sports Unions of ÚV and ČÚV ČSTV chairmen's conferences were informed about Rotman. The other important events were: the Mountain Rescue of ČÚV ČSTV medical conference /unified first aid principles, new informations concerning cardiopulmonary resuscitation, primary treatment of spine injuries/; General Assembly of the Medical Commission of the UIAA and High Altitude Symposium in Austria on 27th - 29th September 1985 as well as the International Congress about medical usage of aviation AIRMED '85 in Zürich refered about by I. Rotman and I. Mika respectively.

translation:
MUDr. Tomáš Skřička
Ondrouškova 20
635 00 B r n o

MUDr. Ivan Rotman
Příčná 2
405 01 D ě č í n III