

THE THERAPEUTIC VALUE OF BAZNA NATURAL FACTORS

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Abstract

Introduction. The name of Bazna was mentioned for the first time in a document on 18 February 1302. The history of the resort goes back to 1671, when some shepherds lit a fire to warm up and discovered by chance the natural gas deposit from Bazna. Its concentrated athermal mineral waters contain chlorine, sodium, iodine, bromine with a total mineral content of 17.1-34.5 g/l (the Bazna salt is extracted from the spring water).

Material and method. Mud is extracted from the bottom of the salt lakes in the spa resort (it has a mixed origin, with predominant mineral substances brought to the surface by the spring water sedimenting in the lakes. From the spring water, the Bazna salt is extracted through evaporation. There is a mutual interdependence between processes that take place in the water and those occurring in the mud. Mud from these pools is sulfurous mineral mud with a highly mineralized imbibition solution. The presence of iron hydrosulfide as well as organic substances creates in the sediment mass a reducing saline environment of sapropelic nature but with a high content of inorganic substances. The physical properties of mud formed in the pools are: density, granulometry, caloric properties with values ranging within the limits required by mud therapy. The amount of nitrogen found in the mud of these pools has seasonal variations, being directly related to decomposition processes. Humic acids, synthesis products resulting from the degradation of lignins and other organic compounds, have low values.

Results. The pharmacodynamic effects induced by salt baths are largely due to iodine or bromine, when these are present in the mineral water. Among Romanian mineral waters, Bazna water contains iodine amounts of about 3.8 mg/l. Iodine salt baths improve peripheral circulation. After a course of treatment with iodine salt waters, the salt envelope formed in the skin gradually releases the absorbed ions in circulation, ensuring the pharmacodynamic effects that occur post-balneophysiotherapy. In the presence of iodine, the transport of H⁺ in the cellular respiratory chain is activated and cytochrome oxidase activity is stimulated. Through the activation of circulation, the stimulation of catabolism and defense processes, iodine contributes to the active resorption of inflammatory processes. Studies conducted with radioactive Br⁸² have demonstrated the particular sensitivity of the nerve cell to bromine. After absorption, bromine replaces chlorine in extracellular spaces. Bromine is excreted through urine slowly, over weeks. Since the renal tubule preferentially reabsorbs bromine over chlorine, the urinary Br/Cl ratio is lower than the plasma ratio.

Conclusions. The natural therapeutic factors specific to this area are salt iodine mineral waters, Bazna mud, Bazna salt, continental climate. The resort is mainly intended for the treatment of locomotor and gynecological systems.