

147 SEVERE POISONING WITH THE HERBICIDE GLUFOSINATE (BASTA[®])

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Objective: Glufosinate is a derivative of glutamic acid, which inhibits glutamine synthetase selectively in plants. In the literature 80 poisoning cases were reported in Japan. Experience shows that the ingestion of more than 100 ml Basta[®] (18.3 g glufosinate) may produce coma, severe seizures, and respiratory and cardiovascular depression. We recorded a case of ingestion of a very high dose, that was treated successfully. **Case report:** A 50-year-old woman ingested 1000 mL Basta[®] with suicidal intent. She vomited spontaneously some minutes after ingestion. Early gastric lavage, forced diarrhea, administration of activated charcoal and forced diuresis were performed. Despite these measures, critically increasing central, respiratory and cardiovascular depression occurred 14 hours after ingestion. The patient was intubated intratracheally and artificial respiration performed. High doses of catecholamines (norepinephrine, dobutamine) were necessary to stabilize blood pressure and renal function. For the next 7 days the patient was adjusted under controlled sedation with diazepam. On day 9 sufficient spontaneous respiration was restored. Psychomotor function recovered slowly during the next 4 days. The patient presented retrograde amnesia, motor and amnesic aphasia, diminished vigilance and poor cooperation. A motor weakness of the right leg persisted for a longer period. **Conclusion:** After ingestion of potentially lethal doses of glufosinate a life-threatening situation may develop several hours after ingestion, despite vigorous and early measures to prevent absorption and to enhance elimination. Because the chemical structure of glufosinate is similar to glutamate, a potent excitatory neurotransmitter, sufficient sedation with benzodiazepines may reduce the risk of severe seizures and cerebral damage.