

Respiratory Failure in a neonate after folkloristic treatment with Broom Bush (Retama raetam) extract

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A one week old baby boy was given a tea extract prepared from Broom Bush (Retama raetam - רותם המדבר), a folkloristic herbal remedy for his neonatal jaundice in order to have his ritual circumcision on time. He was born normally at term with birth weight of 3.290 kg. Peak blood bilirubin level reached 16mg% and no therapy was given and he was discharged home on time. At home, the baby was active and alert and eating well. Sudden apathy and cyanosis lead to his admission to the emergency department. On admission, he was lethargic, mildly jaundiced and had shallow breathing. Weight was 3.205kg, rectal temperature 35.2°C. Oxygen saturation was 94% while receiving 100% oxygen by mask with reservoir, but subsequently dropped to 64% necessitating immediate intubation, mechanical ventilation and pediatric intensive care. Later, the parents admitted giving the baby 20cc of a homemade herbal remedy named “azfar”, a few hours earlier. Finally, the plant was identified. Bilirubin level was 15.2mg%. Complete blood count, blood chemistry, urine and cerebrospinal fluid were normal. Fresh frozen plasma was given to correct mild aPTT prolongation. Over the next day normal breathing resumed and extubation was performed. Oxygen supplementation by nasal canula was required for additional two days. Normal activity level resumed several hours after extubation. He was discharged home five days later.

The majority of herbal remedies are unlicensed and their standards of quality, efficacy and safety have not been formulated. Broom bush contains almost 30 different alkaloids, most of them contain Quinolizidine ring. Broom stems contain Retamine and Sparteine which are potentially cardiotoxic and block sympathetic ganglia. Sparteine exerts a curare-like effect causing respiratory failure by paralyzing respiratory muscles. Broom flowers and fruits contain Cytisine and Anagryne, characterized by their affinity to nicotinic cholinergic receptors. These alkaloids affect the central nervous system and may depress brain stem respiratory centers. The aPTT prolongation in this case cannot be explained by the current knowledge. Possibly, there are additional toxic ingredients in the herb or the toxicity of the known alkaloids is different in the neonate.

