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Nutrition borne myolysis; an uncommon cause of myolysis in Europe

(Short communication)

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Quite a few causes leading to myolysis are well-known; among them, accidental food poisoning with coniine (contained in Conium maculatum also known as hemlock) represents a rather unusual event (1). Indirect poisoning of humans by eating small birds consuming hemlock buds seems unusual in this country according to the records of our hospital; however, in other areas of Greece, namely in Lesvos island (Eastern Greece) it is sometimes seen by physicians (4). Here we present a case of acute rhabdomyolysis after a meal containing fresh quails (Ortix corturnix).

A 61 year old housewife, from Mitilini (Lesvos) was admitted to this Hospital for dark urine, muscle pain, weakness, and walking debility. The symptoms commenced suddenly some 24 hours before admission and they were followed by thirst. The patient mentioned that the day before her illness she had eaten fresh quails. On examination, she was an over weighted female with an unremarkable medical history. No drug allergies and no special sensitivity to food were reported. A remarkable muscle stiffness, weakness and pain were evident but no muscle atrophy or loss of voluntary movements or palsies. Physical examination was otherwise normal apart from muscle pain without signs of oedema, inflammation or fever. Tendon reflexes and eye movements were normal. She passed dark brownish urine of normal volume without any signs of dysuria. No use of alcohol, cigarettes, drugs or medication of any type were reported.

The family history was unremarkable: she was a mother of three healthy children.

There was a highly abnormal serum CPK activity (19000 units; normal range 10-185) and a slightly low serum Calcium (4.7 mEq/L); lactic dehydrogenase was elevated (1049 IU; normal range 47-140) and serum transaminases as well: SGPT was 180 and SGOT was 155 IU (range: 15-45). Urinalysis revealed myoglobinuria but no

haemoglobin or albuminuria. Routine laboratory investigation including heamatology tests and blood erythrocytes G-6PD activity were otherwise normal.

The clinical syndrome of myolysis was considered to be due to quail ingestion. The patient was parenterally hydrated.

Three days following admission the patient started feeling better in terms of muscle weakness and muscle pain. There was no more dark brown urine or walking debility but the pain persisted for 5 more days. After another week, she was totally free of symptoms and she was discharged being well.

Conium maculatum is native to Europe and Asia; in the eastern United States, Pacific Coast and southern Canada it is naturalized in waste places (6). The plant contains coniine and closely related alkaloids expressing a curare-like action and nicotinic effects on autonomic ganglia; a strychnine-like convulsant action is also reported. These toxic actions of the plant have been known since antiquity. However, non-neurological features as rhabdomyolysis have been described in recent decades. Humans can be poisoned indirectly by eating birds like quails that have eaten hemlock buds. Interestingly, plant toxicity in birds is lacking (7)

Greece is a passing point for migrating birds on their way from Central Europe to North Africa. Depending on the time period of the year, these birds may become contaminated by eating toxin-containing hemlock (2,3). Therefore, fresh quails are more prone to cause intoxication in humans following consumption of quails. There seems to be a dose-related effect in toxicity due to quails also known from Biblical times (Numbers, 11). The severity of muscle toxicity seems to depend on fatigue, which accelerates the appearance of the symptoms (3)

As it is noted, the same event can also occur by consuming frozen birds (5). Whether farm-grown quails carry the same risk for toxicity although not expected, is not clear. However, it is evident that in European countries a potential risk exists for consumers of meat from wild small birds. Accordingly, all physicians should be aware on this subject; a closer surveillance and a better reporting system, is obviously needed.

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