The use of plants and corticosteroids for weight gain is a common practice among young Moroccan women, particularly in the southern region of the country [1]. These plants are purchased mainly as mixtures prepared by herbalists who may use toxic species in their ignorance of the dangers that can lead to death. We report two cases of young women with fatal fulminant hepatitis due to the consumption of plant mixtures in order to gain weight.

**CASES REPORT**

**Case 1**
A 16-year-old girl consumed an infusion of a mixture of plants containing *Atractylis gummifera* L., *Trigonella foenum-graecum* and almond leaves mixed with contraband corticosteroids sold under the name «Derdag» and antihistamine. Her mother bought the plants from a herborist and prepared the mixture with drugs. The girl developed in few hours, severe nausea and vomiting and somnolence. On arrival at the emergency department, her blood pressure was 110/60 mmHg, pulse rate 110 beats per minute, respiratory rate 22 breaths per minute, SpO2 100% on room air and temperature 37.5°C. She was unconscious with Glasgow coma score (GCS) of 10/15. The physical examination revealed no focal neurological deficits. On day 1, the patient developed a coma (GCS of 6/15). Laboratory tests showed acute renal failure with creatinine 48 mg/l, urea 1.36 g/l. Laboratory tests revealed also major cytolysis (ALT 800 IU/ml and AST 376 IU/ml) and hypoglycemia. The prothrombin time was 15% of normal and total bilirubin was 53 IU/l.

**Case 2**
A previously healthy Breastfeeding 22-year-old woman used suppositories made of a mixture of plants procured from a herbalist in order to gain weight. She experienced severe nausea and vomiting, with coma and acute liver failure. The identification of the composition of the suppositories was difficult; the Agronomic Institute of Rabat identified a single plant: Artemisiae absinthiium.

**Outcome of the cases**
In spite of all treatment and therapeutic efforts including N-acetyl-cysteine, the adolescent girl died 24 hours later and the young women 72 hours after admission.

**DISCUSSION**
The majority of women living in the southern region of Morocco desired to gain weight during their life, especially those of normal weight. This is a result of an association of beauty with overweight. In addition to fenugreek seeds (*Trigonella foenum-graecum*) consumed directly or added to dishes and to special traditional meals consumed as a supplement, they used drugs to induce weight gain. In addition to the utilization of corticosteroids to increase their body weight rapidly, they used traditional suppositories to increase their peripheral fat [1].

However, the property of *Atractylis gummifera* L. to gain weight has never been part of traditional practices. In the first case, the mother took the mixture recipe from a herbalist through being unaware of the plant toxicity.

Poison Control Centre of Morocco has collected 461 cases of *Atractylis gummifera* poisoning (10.6%). 66.7% of deaths due to plants were observed in children, which 77.6% were due to *Atractylis gummifera* [2].

Toxicity of *Atractylis gummifera* L is related mainly to two glycosides: atracyloside and carboxyatractyloside. These glycosides are powerful inhibitors of oxidative phosphorylation in liver mitochondria via inhibition of the ADP transport from external to internal mitochondrial compartments [3].

After ingestion, gastrointestinal symptoms typically occur within 24 hours of ingestion; including vomiting, nausea, abdominal pain, esophagitis, and dysphagia. It can also produce hematemesis. These effects are followed by dizziness and weakness. Renal failure can develop early in the clinical course. More severe events include: hepatitis, hypoglycemia, coagulopathies, renal failure, metabolic acidosis, and CNS depression. Death can occur in hours to days depending on the amount ingested, usually due to hepatic failure [4].

Another problematic aspect of the use of plants, found in Morocco, is that many medicinal plants are difficult to identify when they are sold as roots, powders or bark. In the second case, the woman used suppositories which are sold by herbalists in a green box, without primary packaging and no legal notice. Unfortunately, the only plant identified in these suppositories was Artemisiae absinthiium that not causes liver damage. Chronic use of absinthe leads to absinthism. The symptoms for this addiction include epileptic attacks, hallucinations, and delirium [5].

Poison Control Centre of Morocco (CAPM) has triggered an alert for this type of dangerous products sold freely among Herbalists [6]. CAPM has also conducted companions awareness about medicinal plants use.

**CONCLUSION**
Plants used among young Moroccan women are not trivial because of the ignorance of consumers and herbalists as to the potential toxicity of some plants. Real awareness in schools and for housewives must be initiated. Unfortunately, the legal vacuum maintains anarchy in the marketing of medicinal plants. Adequate regulation must be put in place to prevent this kind of intoxication.

**REFERENCES**