Original Research Article
The Liver Aminotransferase Levels in Diabetes Patients

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Abstract
This study aimed to investigate the liver aminotransferase levels in patients with diabetes and the effect of glycemic control on the levels of these enzymes. The study was conducted on 115 persons, 19 poorly controlled diabetic patients (glucose > 300 mg/dl), 25 moderately controlled diabetic patients (glucose 100-300 mg/dl), 21 well controlled diabetic patients (glucose < 200 mg/dl), and 50 healthy non-diabetic subjects as normal control. Serum glucose, ALT, and AST were assessed in all groups. There was no statistically significant difference in ALT and AST levels between control and total diabetes patient groups. Poorly controlled diabetic patients demonstrated highly significantly increase of ALT and AST compared to the other two patient groups (well and moderate controlled). But there is no significant difference in these enzymes between well and moderate controlled diabetic groups. In conclusion, increased levels of ALT and AST may contribute to the induction of liver disease observed in poorly glycemic control patients.

Keywords: diabetes, Alanine aminotransferase, Aspartate aminotransferase.

دراسة مستويات أنزيمات الكبد (الأميتوترانسفيريز) في مرضى السكر

يهدف هذا البحث إلى دراسة مستويات أнизيمات الكبد (الأميتوترانسفيريز) في مرضى السكر، ويعد تأثير منظم السكر على مستويات هذه الأنزيمات، حيث هذه الدراسة على 115 شخص، 19 مصاباً بسكري المتاحي، 30 مصاباً بالسكري المتاحي، 10 مصابين بسكري الشك (مستوى السكر أقل من 200 ملليغرام لكل لتر) و 40 مصاباً بالسكري المتاحي. في كل عدد من السكر، تم استشارة أمنيات الأميتوترانسفيريز في مصل جميع الأشخاص.

تظهر النتائج أن هناك فرق في مستويات أنيزيمات السكريين بين مصابي السكري الشك (مستوى الأميتوترانسفيراز) ومستويات السكر المتاحي (مستوى السكر المتاحي)، ولكن هناك زيادة في مستويات أنيزيمات السكريين بين مصابي السكري المتاحي ومستويات السكر المتاحي. هذه النتائج تشير إلى أن مستويات هذه الأنزيمات تتأثر بالتحكم الجيد في مستويات السكر أثناء الفترات بين مصابي السكري المتاحي ومستويات السكر المتاحي، وتحتاج إلى تطوير أنظمة للتحكم في مستويات السكر في الفترات بين مصابي السكري المتاحي ومستويات السكر المتاحي.
Toxic Effects of Dissolved and Dispersed Crude Oils on Eggs and Larvae of Some Fishes from Shatt Al-Arab River

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ABSTRACT

Experiments had been made to study the effects of various Iraqi crude oils (Nahran-Omar, Majmun and Rumella) on the eggs and young larvae of common carp (C. Carpio), carassin (C. auratus) and grass carp (C. idella). The eggs and larvae were exposed to different concentrations of dissolved and dispersed crude oils. The eggs mortality is directly proportional to the concentration of dissolved crude oils and the exposure duration. The eggs with developed embryos were less sensitive than young eggs. Nahran-Omar was the most toxic crude oil to eggs, Majmun was the next toxic crude oil, while Rumella crude oil was almost non toxic. The eggs hatching during the test depended on the concentration of dissolved crude oil, the sensitivities of embryos, and various toxicities of crude oils. The crude oil had more obvious effects on young larvae than embryos. The Carassin larvae were less and grass carp larvae were more resistant to dissolved crude oils than common carp larvae of the same age. Dispersed crude oil was more toxic to the larvae than floating oil. The Corexit 9500 solution alone was non toxic in all concentrations used. The chemically dispersed crude oil, however, was more toxic than mechanically dispersed crude oil. A significant biological and behavioral effects of dissolved and dispersed oils on the larvae were demonstrated. The affected larvae were not able to avoid the dispersed crude oil due to destruction of the chemical receptors rapidly at the beginning of contact with the oil.

Keyword: Crude oil; toxicity; fish; Shatt Al-Arab river; dispersant

INTRODUCTION

Oil spill affecting the aquatic life and their habitats in many ways [1]. The severity of the impact depends on the type and amount of oil spilled, the season and weather, the type of shoreline, and the type of wave and tidal energy in the area of the spill [2].
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