



Original Research Article

The Liver Aminotransferase Levels in Diabetes Patients

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Abstract

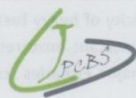
This study aim to investigate the levels of liver aminotransferase in patients with diabetes and the effect of glycemic control on the levels of these enzymes. The study was conducted on 115 persons, 19 poorly controlled diabetic patients (glucose >300 mg/dl), 25 moderately controlled diabetic patients (glucose 200-300 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 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 when compared with the other two patient groups (well and moderate controlled diabetic). But there is no significant statistic for these enzymes between well and moderate controlled diabetic groups. In conclusion, increased levels of ALT and AST may contributory factor to induced liver disease observed in poorly glycemic control patients.

Key words: diabetes, Alinine aminotransferase, aspartate aminotransferase.

دراسة مستويات أنزيمات الكبد (الامينوترانزفيريز) في مرضى السكر

الخلاصة

يهدف هذا البحث الى دراسة مستويات انزيمات الكبد الامينوترانزفيريز في مرضى السكر ومدى تأثير تنظيم السكر على مستويات هذه الانزيمات. أجريت هذه الدراسة على 115 شخص، 19 مريضا ضعيفي السيطرة على تنظيم السكر (مستوى السكر أكثر من 300 ملغم/ديسي لتر)، 25 مريضا معتدلي السيطرة على تنظيم السكر (مستوى السكر 200 - 300 ملغم/ديسي لتر)، 21 مريضا جيدة التنظيم للسكر (مستوى السكر أقل من 200 ملغم/ديسي لتر) و 50 شخص أصحاء وغير مصابين في مرض السكر شكلوا مجموعة سيطرة. تم قياس مستوى كل من السكر وأنزيمات الامينوترانزفيريز في مصل جميع الأشخاص. أظهرت النتائج بان ليس هناك فرق معنوي في مستويات هذين الانزيمين بين مجموعة المرضى الكلية ومجموعة السيطرة ولكن هناك زيادة معنوية عالية في مستويات الانزيمين بين مجموعة المرضى ضعيفة السيطرة على تنظيم السكر و مجموعتي المرضى الآخرين (المعتدلة والجيدة الانتظام للسكر). لكن ليست هناك علاقة معنوية لمستويات هذه الانزيمات عند مقارنتها بين مجموعة المرضى معتدلة السيطرة على تنظيم السكر ومجموعة المرضى جيدة التنظيم للسكر. نستنتج ان زيادة مستويات انزيمات الامينوترانزفيريز في مرضى السكر يعتبر عامل مشارك في مخاطر ظهور أمراض الكبد في المرضى ضعيفي السيطرة على تنظيم السكر.



Original Research Article

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 (Nahrn-Omar, Majnun 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. Nahrn-Omar was the most toxic crude oil to eggs. Majnun 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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