ANABOLIC STEROID INDUCED CHOLESTASIS

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Introduction

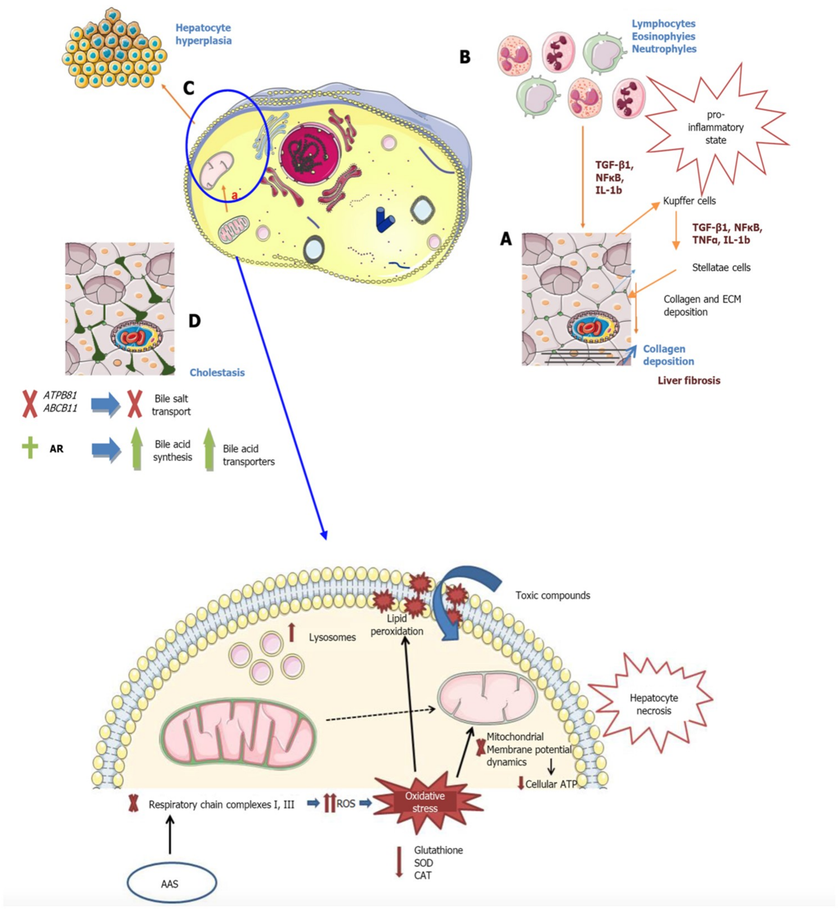
Anabolic steroids used to be confined to just elite athletes, but lately more amateur weight trainers and sport contestants have been adopting its use. This is being fueled by the desire to increase muscle mass, muscle strength, and improve physical performance. The association between anabolic steroids and liver dysfunction is well known, but current abusers of these substances still refer to anecdotal evidence that portrays minimal side effects. We present a case of a young male who developed significant cholestasis after using anabolic steroids

CASE DESCRIPTION

A 29-year-old male who returned from a 5-day trip to Mexico about a week ago presented to the ED with complaints of dark urine, yellow skin, and significant pruritus for the last 7 days. He also reported symptoms of abdominal discomfort with nausea and 1 episode of emesis. He reported using anabolic steroids for the past year to promote muscle bulking. Specifically, he had been taking testosterone, trenbolone, oxandrolone, and methandienone. He had no other medical history and denied excessive alcohol use.

CASE DESCRIPTION CONT'D

On physical exam, he had scleral icterus and diffuse excoriations over his neck and upper extremities. Labs were notable for a creatinine level of 1.37, bilirubin level of 7, AST level of 70, and ALT level of 150. The acute hepatitis panel was nonreactive, and his acetaminophen and salicylate levels were normal. An ultrasound of the abdomen showed hepatomegaly with no other significant findings. He was diagnosed with anabolic steroid-induced cholestasis and initiated on cholestyramine. He showed improvement in his LFTs the following day.



Discussion

Hepatotoxicity is one of the common side effects of anabolic steroids. Different mechanisms have been postulated including direct induction of inflammatory cascades through Kupffer cell activation, production of reactive oxygen species and interference with bile transporter proteins. Furthermore, anabolic steroids can also cause unregulated proliferation of hepatocytes which can lead to hepatocellular malignancies. In most cases, cholestatic liver injury is reversible after discontinuation of anabolic steroids. The degree of bilirubin elevation can be used as a prognostic indicator; markedly elevated bilirubin levels are associated with high mortality and need for liver transplantation. Treatment strategies include choleretics like ursodeoxycholic acid, and corticosteroids. In refractory cases, plasmapheresis and albumin dialysis can be used.

References

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