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Case Report

Acromegaly With HCV- An Uncommon Association.

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Abstract

Introduction: Hepatitis C Virus (HCV) and acromegaly caused due to excessive secretion of growth hormone are rarely associated but present shared risks, especially for hepatocellular carcinoma (HCC) and metabolic diseases like diabetes, as both GH/IGF-1 excess and HCV promote inflammation and liver damage, with acromegaly potentially accelerating liver progression in HCV patients, requiring multidisciplinary care due to overlapping cardiovascular and cancer risks. While HCV can affect liver function (IGF-1 production), acromegaly increases liver stiffness and fibrosis, creating a complex clinical picture.

Case report: A seventy-five-year-old male, a chronic alcoholic for last fourty years, taking in significant amount, smoker and not a known case of any chronic illness was being evaluated for pedal edema and ascites. He was confirmed on investigations to be having chronic liver disease. The complete hemogram revealed anemia and thrombocytopenia, with deranged liver function test in form of mild hyperbilirubinemia, transaminitis with reversal of ALT/AST levels, hypoproteinaemia, hypoalbunemia. The ultrasonogram revealed altered echotexture of liver, mild splenomegaly and ascites. The upper gastro-intestinal endoscopy showed grade one esophageal varices. On testing of viral screen, he was found to be having anti HCV antibody test positive with HbsAg and anti -HIV antibody negative & AFP levels, Chest X-ray, ECG were also normal. The HCV RNA quantitative load was 546701 I.U./ml. He was very tall with height of six feet and two inches, large jaw, long hands, fingers and tongue. Hence clinically acromegaly diagnosis was made. The chest, cardiovascular and neurological examination was essentially normal. He was given antiviral treatment with sofosbuvir 400 mg & Velpatasvir 100 mg for total of 24 weeks duration, along with diuretics and other supportive treatment. He was advised to be on high vegetable protein and salt restricted diet. He achieved sustained virological response (SVR) after 12 weeks of completion of treatment., as evidenced by complete absence of HCV RNA on polymerase chain testing (PCR) report. He is on regular follow up for cirrhosis and as a surveillance for Hepatocellular carcinoma (H.C.C) with six monthly ultrasonogram abdomen and alpha feto-protein levels.

Conclusion: Our case report highlights the combination of acromegaly with HCV, whether there is any association or incidental finding, is area of further research. There are very few case reports in literature of HCV with acromegaly.

Keywords: Acromegaly, Cirrhosis, Chronic Hepatitis C, HCV RNA, Computed tomography Scan.

INTRODUCTION

In acromegaly there are enlarged hands and feet, prominent brow bone or jaw due to excess of growth hormone. Acromegaly itself rarely causes clinical organomegaly of the liver, but HCV infection can lead to chronic liver disease, fibrosis, cirrhosis, and hepatocellular carcinoma (HCC). Active acromegaly, potentially through high insulin-like growth factor-1 (IGF-1) levels, may accelerate the risk or progression of liver complications like HCC in HCV patients. Both conditions are independently associated with an increased risk of type 2 diabetes and insulin resistance, which can synergistically worsen liver disease progression and cardiovascular risk. In patients with advanced liver failure due to HCV, IGF-1 production by the liver may be impaired, leading to high growth hormone (GH) levels but lower-than-expected IGF-1 levels. This can complicate the biochemical assessment and monitoring of acromegaly.

CASE REPORT

A seventy-five-year-old male, a chronic alcoholic for last fourty years, taking in significant amount, smoker and not a known case of any chronic illness was being evaluated for pedal edema and ascites. He was confirmed on investigations to be having chronic liver disease. The complete hemogram revealed anemia and thrombocytopenia, with deranged liver function test in form of mild hyperbilirubinemia, transaminitis with reversal of ALT/AST levels, hypoproteinaemia, hypoalbunemia. The ultrasonogram revealed altered

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Figure 1. Showing Large Face, Jaw and Bilateral ears.

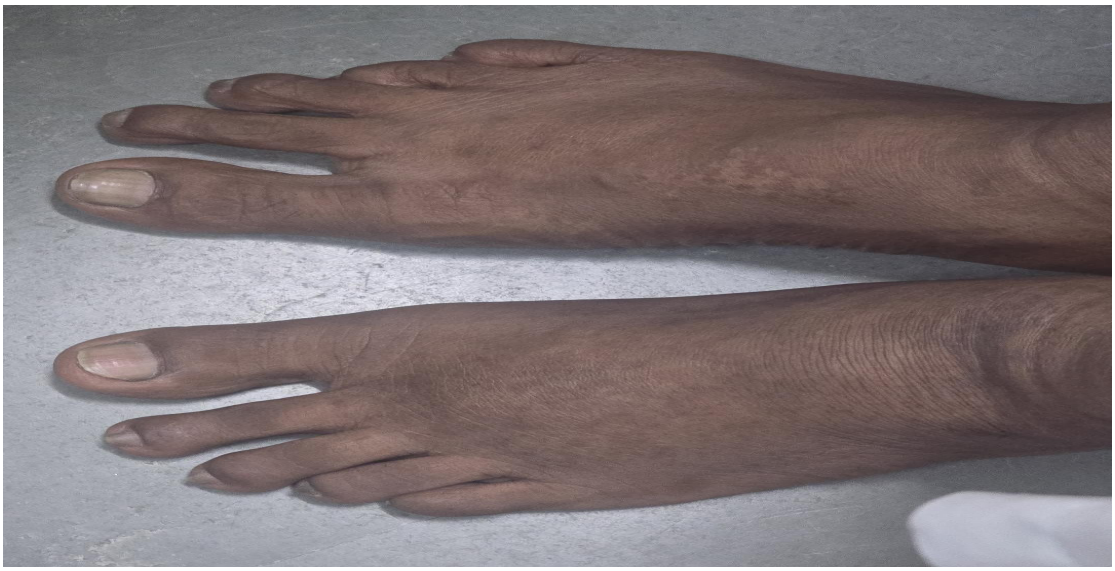

Figure 2. Showing Large bilateral foot and fingers in both feet

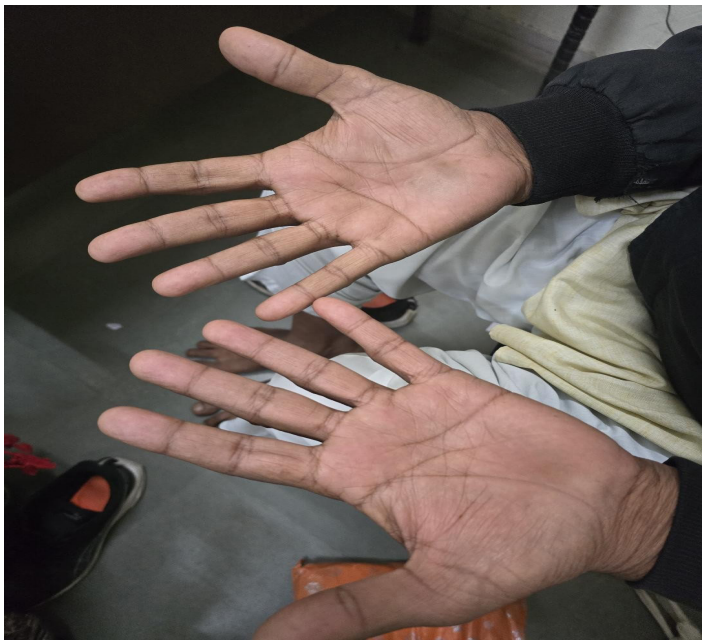

Figure 3. Showing bilateral large hands and fingers on ventral view

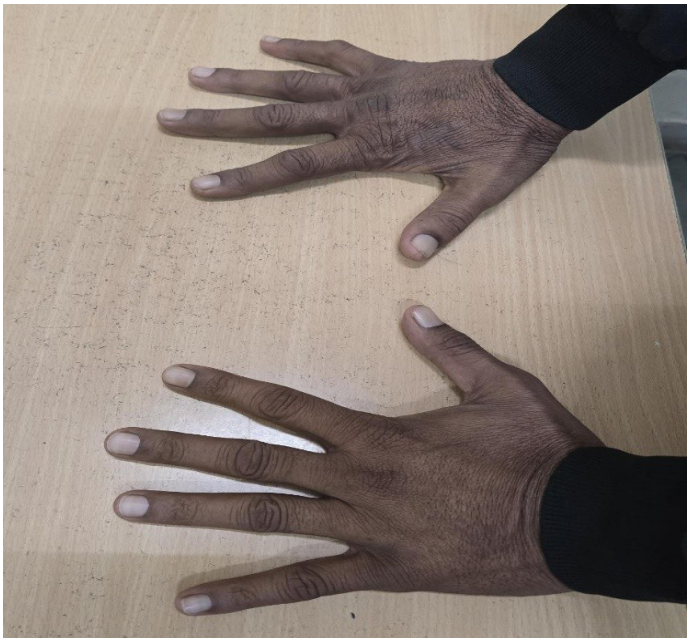

Figure 4. Showing bilateral large hands fingers on ventral view and fingers on dorsal view

DISCUSSION

Hepatitis C virus (HCV) infection, primarily known for its hepatic manifestations, has been implicated in a range of extrahepatic disorders (in up to two-thirds of infected patients with this virus), including autoimmune and neurological conditions [1]. The possible manifestations of the effect of HCV infection on the central nervous system (CNS) are increasingly gaining attention. The mechanisms by which HCV contributes to neurological disorders are not fully elucidated but are thought to involve immune-mediated processes and direct viral invasion of the neurologic system. Chronic HCV infection induces immune dysregulation, potentially triggering autoimmune conditions such as cryoglobulinemia and systemic vasculitis. These processes may increase CNS vulnerability to inflammation and demyelination, facilitating conditions like acute disseminated encephalomyelitis (ADEM) [2]. HCV-related CNS complications encompass a wide spectrum of disorders ranging from cerebrovascular events to autoimmune syndromes. However, their relatively low frequency, in addition to the heterogeneity of neurological manifestations, and the paucity of pathological observations, largely preclude the achievement of reliable information as to the pathogenesis of different syndromes. Acute cerebrovascular events, including ischemic stroke, transient

ischemic attacks, lacunar syndromes, or rarely hemorrhages, have been reported in HCV-infected patients [3-5], being the initial manifestation of HCV infection in some cases [6]. The occurrence of occlusive vasculopathy and vasculitis are well-known events [7,8]. Isolated CNS vasculitis has been coupled with angiographic evidence of multiple focal narrowing of cerebral arteries, and full recovery has been achieved with corticosteroids and cyclophosphamide [9]. In some patients, CNS ischemic changes may occur in the setting of an antiphospholipid-associated syndrome [10], or in association with antineutrophil cytoplasmic antibodies. There are very minimal case reports highlighting association between HCV and acromegaly [11]. Our case report is second one showing association between HCV and acromegaly. In future, further researches on this aspect can enlighten everybody.

CONCLUSION

Our case report highlights the combination of acromegaly with HCV, whether there is any association or incidental finding, is area of further research. There are very few case reports in literature of HCV with acromegaly.

Conflict Of Interest

The authors declare that there was no conflict of interest and consent was taken from patient as well as parents before publishing this case report.

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