



## Resolution of Multiple Large Spider Angiomas after Liver Transplantation in Severe Alcoholic Hepatitis

Ankur Jindal<sup>1\*</sup> and Aditi Gupta<sup>2</sup>

<sup>1</sup>Department of Hepatology, Institute of Liver and Biliary Sciences, New Delhi, India

<sup>2</sup>Department of Dermatology, Institute of Liver and Biliary Sciences, New Delhi, India

\*Corresponding Author: Ankur Jindal, Department of Hepatology, Institute of Liver and Biliary Sciences, New Delhi, India.

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### Abstract

We describe a case of giant cutaneous spider angioma in an elderly male with severe alcoholic hepatitis and its resolution after liver transplantation upon improvement in liver function. Spider nevi are benign vascular lesions mostly seen in patients with decompensated liver cirrhosis. Mostly, these are seen in the superior vena cava distribution and are small with pinhead size central vessel. Giant spider angioma and its resolution post liver transplantation is rarely seen and hence this report.

**Keywords:** Liver Cirrhosis; Alcoholic Hepatitis; Spider Angioma

### Introduction

Dermatological manifestations related to liver cirrhosis are frequently documented but often not emphasized upon. Almost one-third of patients with cirrhosis have spider angiomas. Most of the spider angioma seen in clinical practice are small, discrete sub-centimetric lesions and are more common in alcohol related liver disease. Large giant spider angiomas are rarely reported and their complete resolution after liver transplantation is speculative.

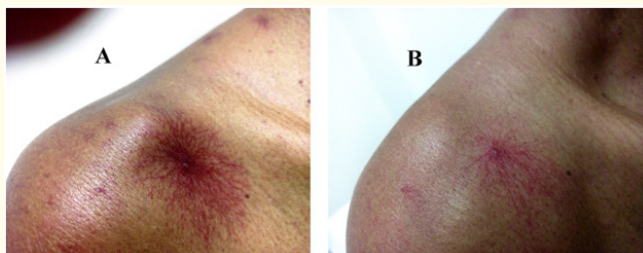
### Case Report

A 55-year old male with alcohol use disorder was admitted with progressive jaundice and ascites for one-month duration. Physical examination showed severe malnutrition with loss of muscle and fat mass, deep icterus, moderate ascites, palpable liver and spleen, pedal edema and presence of multiple large spider angiomas over chest, upper trunk and back (Figure 1). Close-up view of a large spider angioma showed presence of central arteriole with radiating thin-walled vessels (Figure 2a). Viral markers for hepatitis B and C were negative. The diagnosis of severe alcoholic hepatitis and acute-on-chronic liver failure was kept. On evaluation, he also had diuretic induced acute kidney injury and hepatic encephalopathy, which was managed with diuretic withdrawal and albumin

infusions. Upper gastro-duodenoscopy revealed presence of small high-risk esophageal varices. Baseline Serum total bilirubin was 22 mg/dl and Model for End-stage Liver Disease (MELD) score was 28. He showed no response to oral prednisolone at the end of 1 week. Three weeks later, he underwent successful living donor liver transplantation (LDLT). On routine follow up 2 months later, he remained asymptomatic with normal graft functions and most of the spider angiomas had faded or disappeared (Figure 2b).



**Figure 1:** Multiple large spider angiomas over chest, neck and upper trunk.



**Figure 2:** Close-up view of a large spider angioma showed (a) presence of central arteriole with radiating thin-walled vessels and (b) resolving spider angioma after liver transplantation.

### Discussion and Conclusion

Cutaneous manifestations often provide the first clues of the underlying liver disease. Approximately 33% of patients with cirrhosis have spider angiomas [1]. It appears more frequently in patients with alcoholic liver disease and may be associated with high probability of esophageal varices, variceal bleeding and hepatopulmonary syndrome [2]. Typical lesions measures 1 - 10 mm in diameter; commonly occur in exposed areas of the skin, including the face, neck, upper trunk, and arms. Presence of numerous, large angiomas in atypical locations is likely to be abnormal [3]. Given their innocuous nature and asymptomatic course, spider angiomas themselves require no medical treatment and also due to a high risk of bleeding from these vascular lesions.

We reported a case of large, multiple spider angioma in a patient with advanced alcohol related cirrhosis and its resolution after improvement in hepatic functions after liver transplantation. The exact cause as of why these assume such large size remains elusive. There are only few case reports of large spider nevi reported in the literature [4,5]. The present case is unique because of its very large size and its almost complete resolution. A prospective study by Boldys, *et al.* studied evolution of skin changes before and after liver transplantation involving patients with liver cirrhosis [6]. Skin changes typical for liver cirrhosis were found to be reversible after liver transplantation. The vast majority of the nonspecific dermatological lesions linked with cirrhosis disappear within a few weeks to months following the transplantation.

The presence of spider angioma is accompanied by an increased serum estradiol/free testosterone ratio in male cirrhotic patients. People who have significant hepatic impairment cannot detoxify estrogen from the blood, resulting in high levels of estrogen. An increase in number or size of spider angioma may suggest progressive liver damage. Possible mechanisms of their formation

in cirrhosis include arteriolar vasodilatation, neovascularization from angiogenic factors such as vascular endothelial growth factor (VEGF) and basic fibroblast growth factor (bFGF), direct effects of alcohol and estrogen excess due to inadequate hepatic metabolism [7].

### Conflict of Interest

None.

### Financial Disclosures

None.

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