A rare case of extensive cutaneous spider angioma in Zieve’s syndrome: A case report and review of literature

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ABSTRACT

Chronic alcoholism is a global public health problem showing increasing trends throughout the world. Alcoholic liver disease is one of the most important causes of mortality worldwide. Cutaneous features are one of the most frequent manifestations of liver disease and can often be a presenting feature. Spider angioma is one of the cutaneous manifestations in liver diseases. More than six spider nevi are considered abnormal. Here we present a case of a gentleman with a history of chronic alcohol intake and diagnosed with Zieve’s syndrome, who presented with extensive cutaneous spider angioma.

Keywords: Alcoholic Liver Cirrhosis, alcoholism, liver cirrhosis, spider angioma, spider nevi, Zieve’s syndrome

Case Presentation

A 42-year-old gentleman, a farmer by occupation and diagnosed with chronic liver disease 2 years ago and with a history of chronic alcohol intake, presented to our hospital with jaundice for 3 days and altered sensorium for 1 day. The patient had been drinking 120 mL of arrack daily for 12 years, with the last intake 5 days before presentation. The patient also had a history of sleep disturbances along with loss of appetite and weight loss. He underwent multiple therapeutic abdominal paracentesis. On physical examination, the patient was delirious. There was moderate pallor and deep icterus. On head-to-toe examination, signs of chronic liver cell failure were present. On inspection of the chest and upper back, around 156 spider nevi were seen. The patient had tachycardia and blood pressure of 90/60 mm Hg. Initial blood investigations revealed reduced hemoglobin with a history of chronic alcohol intake and diagnosed with Zieve’s syndrome, who presented with extensive spider nevi.
Sivanandam, et al.: Extensive cutaneous spider angioma

Discussion

Spider angioma (or spider nevi) is a benign condition characterized by spider-like skin lesions. The spider-like pattern is due to the presence of centrally dilated arteriole from which branching capillaries give a spider-like appearance. Less than six spider angioma is considered normal. Spider angiomas occur abnormally in high numbers in patients with liver cirrhosis. The underlying etiopathogenesis in liver cirrhosis is due to the action of unmetabolized estrogen on the arteriolar smooth muscle leading to arteriolar dilation. Li et al.'s study showed that young age, plasma vascular endothelial growth factor (VEGF), and basic fibroblastic growth factor (bFGF) are the predictors of spider angiomas in patients with liver cirrhosis. This shows that various other factors (apart from estrogen) are increased due to liver decompensation, which may also have an association with spider angioma.

Usually, in patients with liver cirrhosis, spider angiomas are seen in the superior vena cava territory, that is, in the head and neck region. The exact mechanism behind this propensity is still unknown. Though patients with liver cirrhosis present with numerous spider angiomas, this is the first case of an Indian middle-aged chronic alcoholic patient diagnosed with Zieve's syndrome presenting with more than 100 visible spider angiomas with extensive involvement of the head, neck, and chest region to the best of our knowledge.

In the literature, spider angiomas are reported almost exclusively in patients with liver cirrhosis of various origins. Hane et al. reported a case of a giant spider angioma of 10 cm diameter in an alcoholic liver cirrhosis patient. Yalcin et al. reported a case of a 40-year-old male patient with alcoholic liver cirrhosis presenting with spider angioma in the eyelid.

Studies in the literature have reported that the number of spider angiomas directly correlates with chronicity of the underlying liver diseases. In Li et al.'s study, liver cirrhosis patients had significantly higher serum estradiol levels, and 33% of those with cirrhosis had spider angioma. The authors reported that alcohol intake and serum bilirubin levels were the predictors of spider angioma in liver cirrhosis patients. Our patient was a chronic alcoholic for 12 years. Therefore, spider angioma present in our patient also indirectly predicts the duration of alcohol intake.

Various researchers have also studied the association of spider angiomas with complications of liver cirrhosis. In Silvério Ade et al.'s study, a total of 40 patients with liver cirrhosis were examined to determine whether there is an association between spider angioma and hepatopulmonary syndrome. The authors also concluded that spider angioma might be a cutaneous marker of hepatopulmonary syndrome.

Although spider angioma is a benign condition of the skin, it might help in predicting the prognosis and alcohol intake in patients with liver cirrhosis. Hence, its presence should alarm the physician about the risk of subsequent development of liver disease complications. Spider angioma resolves spontaneously once the underlying condition is treated. In case of persistence, cosmetic surgeries can be performed.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have...
given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

References
1. Global status report on alcohol and health 2018. Geneva: World Health Organization; 2018. Available from: https://apps.who.int/iris/bitstream/handle/10665/274603/9789241565639-eng.pdf. [Last accessed on 2021 Aug 28].
2. Dogra S, Jindal R. Cutaneous manifestations of common liver diseases. J Clin Exp Hepatol 2011;1:177-84.
3. Samant H, Kothadia JP. Spider Angioma. 2021 Jul 23. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2022.
4. Li CP, Lee FY, Hwang SJ, Lu RH, Lee WP, Chao Y, et al. Spider angiomas in patients with liver cirrhosis: Role of vascular endothelial growth factor and basic fibroblast growth factor. World J Gastroenterol 2003;9:2832-5.
5. Hane H, Yokota K, Kono M, Muro Y, Akiyama M. Extraordinarily large, giant spider angioma in an alcoholic cirrhotic patient. Int J Dermatol 2014;53:e119-21.
6. Yalcin K, Ekin N, Atay A. Unusual presentations of spider angiomas. Liver Int 2013;33:487.
7. Li CP, Lee FY, Hwang SJ, Chang FY, Lin HC, Lu RH, et al. Spider angiomas in patients with liver cirrhosis: Role of alcoholism and impaired liver function. Scand J Gastroenterol 1999;34:520-3.
8. Silvério Ade O, Guimarães DC, Elias LF, Milanez EO, Naves S. Are the spider angiomas skin markers of hepatopulmonary syndrome?. Arq Gastroenterol 2013;50:175-9.