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RESEARCH ARTICLE

CASE REPORT: AUTOIMMUNE HEPATITIS IN A 29-YEAR-OLD FEMALE WITH RECURRENT PREGNANCY LOSS

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Abstract

Autoimmune hepatitis (AIH) is a rare chronic liver disease characterized by a wide spectrum of symptoms ranging from asymptomatic to jaundice, which can be confusing in diagnosis because of their non-specificity and the presence of laboratory changes. This case report presents a 29-year-old woman with AIH and past history of repetitive pregnancy losses. She has been diagnosed with various problems such as two rounds of failed in vitro fertilization, five miscarriages and secondary amenorrhea. A liver biopsy proved AIH, and appropriate prednisolone and azathioprine therapy resulted in a positive change in her liver status. Early diagnosis and right management of AIHresulted in significant clinicalimprovement and normalization of liver function tests.

Introduction:-

AIH is a form of chronic liver disease that may cause cirrhosis if the disease remains untreated **(Mack et al., 2020).** AIH is more common in women and might have connections to other autoimmune diseases. However, it is not clear what its link with certain reproductive issues, for example, recurrent miscarriages **(Krawitt, 2006)**. Proper diagnosis and treatment as early as possible can reduce factor affecting liver health and improves fertility **(Manns et al., 2015)**. This paper discusses a female AIH patient with RPL to increase awareness of the relationship of autoimmune liver disease with fertility issues.

CasePresentation

A 29-year-old female with a history of recurrent pregnancy loss (five miscarriages) presented for evaluation of chronic elevation of liver enzymes and anemia. She had been referred from a fertility clinic following unsuccessful IVF attempts. The patient had no significant complaints at the time of referral.

Her medical history revealed that she was previously admitted to in January 2015 for elevated liver enzymes and bilirubin levels. At that time, viral hepatitis markers were negative, and she had a highly positive antinuclear antibody (ANA) titer of 1:1000. Her condition spontaneously improved, but liver enzyme levels remained elevated (2-3 times the upper limit of normal). Unfortunately, she was lost to follow-up until her current presentation.

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Investigations

Laboratory tests and imaging revealed the following findings:

- •ANA: Positive (1:320, coarse speckled pattern)
- •IgG:37.6g/L (normal range: 7.0-16.0g/L)
- •Autoimmune profile: Negative for AMA, ASMA, and LKMA
- •Viral hepatitis markers: Negative for HBV, HCV, and HIV
- •Liver biopsy: Chronic active hepatitis with grade 4 inflammation and stage 3 fibrosis (Scheuer scoring system), an Ishak Activity Score of 15, and Fibrosis Score of 4, along with prominent plasma cell infiltration at the portal interfaceThese findings were consistent with autoimmune hepatitis.

Imaging

Abdominal ultrasound showed normal liver size (16.5 cm), with no abnormalities in the gallbladder, bile ducts, kidneys, or spleen.

Diagnosis

Based on her clinical history, serologic findings, and histopathologic analysis, the patient was diagnosed with autoimmune hepatitis (AIH) **(Alvarez et al., 1999; Czaja, 2016).**

Treatment and Outcomes

It was therefore decided to start the patient on prednisolone since this improved her liver function tests significantly. Azathioprine was included as a steroid-sparing agent. In the long run, her liver enzymes returned to baseline, while her total IgG begun to reduce though was still marginally elevated.

At follow-up, her clinical and biochemical improvement was sustained:

- Bilirubin: 0.59 mg/dL (normal: 0-1 mg/dL)
- ALT (SGPT): 16 U/L (normal: 0-31 U/L)
- Alkaline Phosphatase: 73 U/L (normal: 35-104 U/L)
- Total IgG: 17 g/L (normal: 7.0-16.0 g/L)

Discussion:-

How AIH Is Connected with Recurrent Miscarriages It remains somewhat unclear why autoimmune diseases such as AIH are associated with various reproductive issues of miscarriages, for example. Autoimmune processes perturbation and chronic inflammation might have a contribution to the pregnancy loss for these patient although more studies are required to uncover the relation conclusively (Ref. The pregnancy complications of such conditions and their relation to AIH are shown below; Such conditions include antiphospholipid syndrome where pregnancy outcomes are affected, likely via similar mechanisms to AIH **(Floreani et al., 2015)**.

From a literature review view it has been ascertained that AIH does pose a risk to miscarriage, preterm birth and intrauterine growth restriction though there is minimal evidence on the subject **(Floreani et al., 2015)**. These complications could be attributed to increased serum IgG and different levels of inflammation in the body **(Manns et al., 2015)**.

Long-Term Management of AIH

Prednisolone together with other corticosteroids are the only form of treatment that physicians recommend for patients with AIH, but their long-term use comes with some of the adverse consequences such as osteoporosis and diabetes (Czaja, 2016). Azathioprine is applied as the steroid-sparing agent to reduce the list of side effects **(Mack et al., 2020)**. If patients cannot tolerate azathioprine for some reason, there is a number of other immunosuppressive drugs such as mycophenolatemofetil or tacrolimus**(Manns et al., 2015)**.

Monitoring Disease Progression

The effectiveness of monitoring disease progression can therefore be appraised. Transient elastography (FibroScan) or serum fibrosis markers (ELF score) may be used instead of biopsies to monitor fibrosis in patients with advanced disease staging **(European Association for the Study of the Liver, 2015)**.

AIH Management in Future Pregnancies

It is difficult to manage AIH during pregnancy. Mild/moderate immunosuppressive agents like prednisolone and azathioprine are fairly safe but require diligent observation because the risk of a relapse increases during pregnancy and labour **(Czaja, 2016)**.

Interdisciplinary Care

Because of competitive etiology and its implications for reproductive health, a multidisciplinary approach is needed. Inter professional collaboration between hepatologists, reproductive endocrinologists, obstetricians, and fertility specialists is vital to co-manage liver disease and fertility problems **(Gronbaek et al., 2014)**.

Conclusion:-

Autoimmune hepatitis should be taken in to consideration when young women are experiencing liver enzyme elevation and pregnancy loss. Females with AIH need early diagnosis and treatment in order to ameliorate both liver dysfunction and reproductive health. This case illustrates the benefit of a Team Approach and long-term monitoring, and it also stressed the need for further study of AIH on fertility.

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