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RESEARCH ARTICLE

CASE REPORT: A 42-YEAR-OLD FEMALE WITH SERONEGATIVE AUTOIMMUNE HEPATITIS

Mohamed Mahmoud Ibrahim Mohamed[1], Hesham Fawzy Kewan[2], Mohamad Abdelmonem Omar[3], Rami Khaled Abou El Foul[1], Amer Abdulmola Albawab[3], Ahmed Ramadan[2], Eslam Mohammed Ahmed[1], Nael Mustafa Quraishy[3] and Manal Syed Rezzek[1]

1. Internal Medicine Unit/Gastroenterology, Hatta Hospital, Dubai, United Arab Emirates.
2. Intensive Care Department, Hatta Hospital, Dubai, United Arab Emirates.
3. Orthopedic Department, Hatta Hospital, Dubai, United Arab Emirates.

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Abstract

This report details the case of a 42-year-old woman who was admitted to the hospital with symptoms of fatigue, body aches, jaundice, and dark urine. Additionally, she experienced discomfort in the right upper quadrant and urinary symptoms. Despite negative autoimmune tests, a liver biopsy confirmed the diagnosis of seronegative autoimmune hepatitis. This case underscores the diagnostic complexities associated with this condition and highlights the necessity of histological assessment.

Introduction:-

Autoimmune hepatitis (AIH) is an inflammatory liver condition resulting from an immune response directed against liver cells. The diagnosis is typically established through elevated liver enzyme levels, increased immunoglobulin levels, and the detection of specific autoantibodies. However, some patients may present as seronegative, lacking these classic autoantibodies, which complicates diagnosis [1, 2]. This case illustrates a scenario of seronegative AIH, emphasizing the importance of thorough clinical evaluation and the critical role of liver biopsy for accurate diagnosis [3, 4].

Clinical Presentation:

42 years old patient presented with significant fatigue, diffuse body pain, and jaundice, accompanied by dark urine. She also reported right upper quadrant pain and issues with urination. A physical examination revealed evident jaundice, but other findings were unremarkable. Initial laboratory tests indicated markedly elevated liver enzymes (ALT at 847 U/L and AST at 969 U/L) and a total bilirubin level of 3.5 mg/dL. Despite strong clinical suspicion for autoimmune hepatitis, autoimmune markers returned negative, necessitating further evaluation.Patient denied any drug or herbal medicine her viral markers was negative and liver biopsy confirm diagnosis of auto immune hepatitis she was started on steroid therapy and has significant improvement of her clinical condition and normalization of her liver enzymes after 2 weeks from steroid therapy.

Laboratory Findings:

Before start steroid treatment
•**Liver Function Tests:** ALT 847 and AST from 969
•**Bilirubin Levels:** Initially recorded at 3.5 mg/dL.
•**Gamma-Glutamyl Transferase (GGT):** 163 U/L (normal range 5-40 U/L)

Corresponding Author:- Mohamed Mahmoud Ibrahim Mohamed
Address:- Internal Medicine Unit/Gastroenterology, Hatta Hospital, Dubai, United Arab Emirates.

•**Total Immunoglobulin G (IgG):** Elevated at 17.10 g/L (normal range 7.0-16 g/L)
•**Other Parameters:** INR, viral hepatitis markerHCV, HBV, HIV, serum creatinine, and pH values were within normal limits, while autoimmune markers (ANA, ASMA, LKM) tested negative.

Imaging and Biopsy Results:
- **Ultrasound Examination:** Revealed no signs of biliary obstruction.
- **MRCP:** Showed mild hepatomegaly but was otherwise normal.
- **Liver Biopsy Findings:**
  - Indicated active hepatitis with a grading of 3 and staging of 2-3 based on the Scheuer classification, with an activity score of 16 and a fibrosis score of 2-3 (Ishak modified HAI).
  - Mild to moderate steatosis was also noted.
  - The histopathological assessment raised the possibility of autoimmune hepatitis, steatohepatitis, or drug-induced liver injury.

Diagnosis:
The diagnosis of seronegative autoimmune hepatitiswas confirmed based on the liver biopsy findings in conjunction with clinical evaluations, ruling out other liver diseases. This case illustrates that the absence of conventional autoimmune markers does not exclude the diagnosis of autoimmune hepatitis [5, 6].

Management:
- **Corticosteroid Therapy (Prednisolone):** Initiated on a tapering schedule.
- **Azathioprine:** considered after obtaining TPMT test results as maintenance steroid sparing therapy.
- **Calcium and Vitamin D Supplementation:** Prescribed at 600 mg and 1000 IU daily, respectively, to counteract the potential risk of osteoporosis associated with corticosteroid use.
- **DEXA Scan:** Scheduled for bone density assessment.

OutcomesandFollow-up:
Patient has significant improvement of her clinical conditions maifested by absence of fatigue and ability to do daily activity her liver function test normalized after 2 weeks of starting prednisolone.Blood tests arranged in scheduled interval to monitor liver function and therapeutic efficacy.

Discussion:-
The presentation of seronegative autoimmune hepatitis poses a distinct diagnostic challenge due to the lack of identifiable serological markers [3]. This case emphasizes the importance of liver biopsy, particularly when serological testing does not yield definitive results, as histological findings are essential for establishing a diagnosis [1]. The biopsy revealing active inflammation and fibrosis necessitated the initiation of corticosteroid treatment.

Corticosteroids are the primary treatment for both seropositive and seronegative AIH, demonstrating favorable responses in a substantial majority of cases [7]. The decrease in liver enzyme levels over time signifies a positive therapeutic response [8]. The introduction of azathioprine aims to reduce steroid dependency and offer long-term disease management.

Recent literature indicates that seronegative autoimmune hepatitis may present similarly to classic AIH, reinforcing the need for clinicians to consider this diagnosis in cases of unexplained liver enzyme elevations [5]. Prompt diagnosis and treatment initiation are essential to prevent further hepatic damage.

Conclusion:-
This case highlights the complexities surrounding the diagnosis of seronegative autoimmune hepatitis. It underscores the essential role of liver biopsy in confirming the diagnosis in the absence of serological markers. Early intervention with immunosuppressive therapy can significantly improve outcomes and avert disease progression.

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