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CASE REPORT

Henoch-Schönlein Purpura Associated with Giardiasis in an 18-Year-Old: A Case Report from Mogadishu, Somalia

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Background: Henoch-Schönlein Purpura (HSP), also known as IgA vasculitis (IgAV), is a common childhood vasculitis that frequently involves the gastrointestinal tract. Its occurrence in adults, particularly in association with *Giardia lamblia* infection, is exceptionally rare.

Case Presentation: We report the case of an 18-year-old female, who presented with severe abdominal pain, hematemesis, and a palpable purpuric rash on her lower limbs. Investigations revealed leukocytosis (WBC: $15.5\times10^3/\mu L$), microscopic hematuria, and elevated serum IgA (3.5 g/L). An upper gastrointestinal endoscopy showed diffuse hemorrhagic mucosa consistent with vasculitis. Stool microscopy identified *Giardia lamblia* trophozoites. A diagnosed of IgA vasculitis with severe gastrointestinal involvement and concurrent giardiasis was established. The patient was treated with intravenous methylprednisolone and metronidazole, resulting in significant clinical improvement.

Discussion and conclusion: This case highlights a rare association between IgA vasculitis and an active *Giardia lamblia* infection, and to our knowledge, is the first such case reported from Somalia. It underscores the presence of IgAV in adults and emphasizes the importance of investigating for co-infections in patients presenting with sever GI symptoms. A comprehensive evaluation is vital for ensuring timely and appropriate management.

Keywords: IgA vasculitis, giardia lamblia, henoch-schönlein purpura, autoimmune disease

Introduction

Henoch–Schönlein Purpura (HSP), also known as IgA vasculitis (IgAV), is an immune-complex mediated small-vessel vasculitis characterized by IgA1-dominant deposition in the walls of affected vessels. It primarily affects the skin, gastrointestinal tract, kidneys, and joints. The classical clinical symptoms include palpable purpura, arthralgia, colicky abdominal pain, and renal manifestations such as hematuria or proteinuria.[1]

IgAV is predominantly observed in East Asian populations, with Europeans exhibiting an intermediate rate, although, individuals of African report a lower incidence. However, extensive data from Africa continues to be limited. A pan-African review of vasculitis underscored the widespread awareness of IgAV throughout the continent while highlighting the absence of comprehensive, population-based epidemiological investigations.[2,3]

IgAV occurs predominantly in children, with an annual incidence of 10 to 30 cases per 100,000 individuals. In contrast, it is relatively uncommon in adults, with an estimated incidence of 0.8 to 1.8 per 100,000. Studies report that adults tend to undergo a longer disease course, increased recurrence rates, and poorer clinical outcomes compared to children.[4]

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Case Report

An 18-year-old female with no significant past medical history presented to the Emergency Department at Hodan Hospital, Mogadishu, Somalia, with hematemesis for one day and epigastric abdominal pain persisting for one week. She also reported a diffuse maculopapular rash that had developed over several days. She denied any recent medication use or international travel prior to symptom onset. On physical examination, she was hemodynamically stable. Notable findings included oral ulcers and a palpable purpuric rash involving the back, thighs, and lower extremities, as shown in Figure 1. Initial laboratory investigations revealed *Giardia lamblia* trophozoites in stool microscopy. Due to ongoing hematemesis, the patient was admitted and treated with intravenous fluids, antibiotics, proton pump inhibitors, and antiemetics. As she declined esophagogastroduodenoscopy (EGD), a presumptive diagnosis of gastritis was made. Her symptoms improved with supportive treatment, and she was discharged with outpatient follow-up scheduled in one week. However, she returned five days later with recurrent bloody vomiting, progressive rash, generalized weakness, and worsening abdominal pain. She was readmitted, placed on total parenteral nutrition, and oral intake was suspended. Laboratory tests revealed leukocytosis, with a white blood cell count of 15.5 × 10^3/µL (normal range: 4.0–11.0 × 10^3/µL). Kidney and liver function tests were within normal limits; serum creatinine, blood urea nitrogen, and hepatic transaminases were unremarkable. However, there was mild hypokalemia, with potassium at 3.4 mEq/L (normal range: 3.5–5.5 mEq/L). Additionally, the patient exhibited a deranged coagulation profile, including a prolonged activated partial thromboplastin time (aPTT) of 70 seconds (normal range: 25–35 seconds), prothrombin time (PT) of 19.1 seconds (normal range: 11–13.5 seconds), and international normalized ratio (INR) of 1.6 (normal range: 0.8–1.2). Autoimmune screening, including antinuclear antibody (ANA) and antineutrophil cytoplasmic antibody (ANCA), was negative. Serum IgA was elevated at 3.5 g/L (normal range: 2.01–2.69 g/L), while other immunoglobulins were not assessed. A punch biopsy of the skin rash was performed by dermatology. Histopathology revealed leukocytoclastic vasculitis, showing small blood vessels in the dermis with perivascular and vascular wall neutrophilic infiltration, neutrophilic degeneration, and fibrinoid necrosis, as shown in Figure 2. The next morning, an EGD was performed, revealing diffuse erythematous and

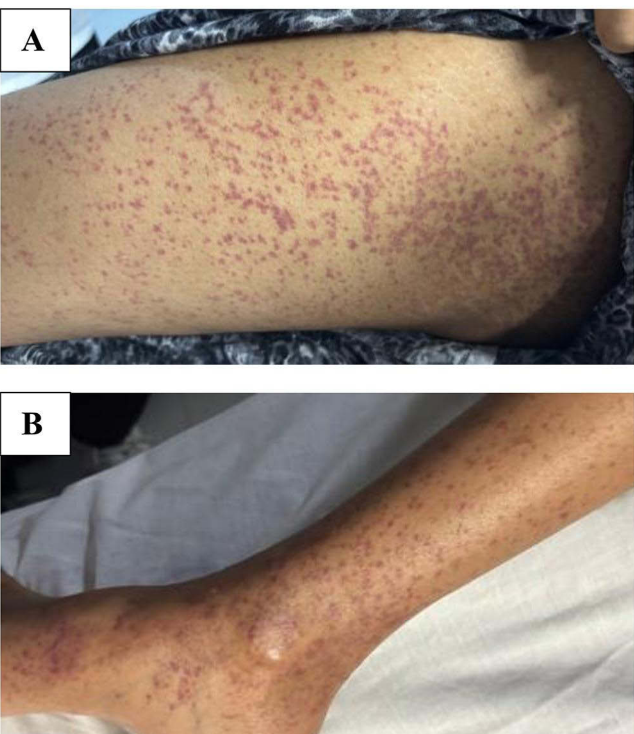

Figure 1 Skin findings on patient presentation in the hospital. (**A**) Left thigh with many scattered, non-blanching, bright pink maculopapular rash. (**B**) The patient's left lower extremity with purpuric rash.

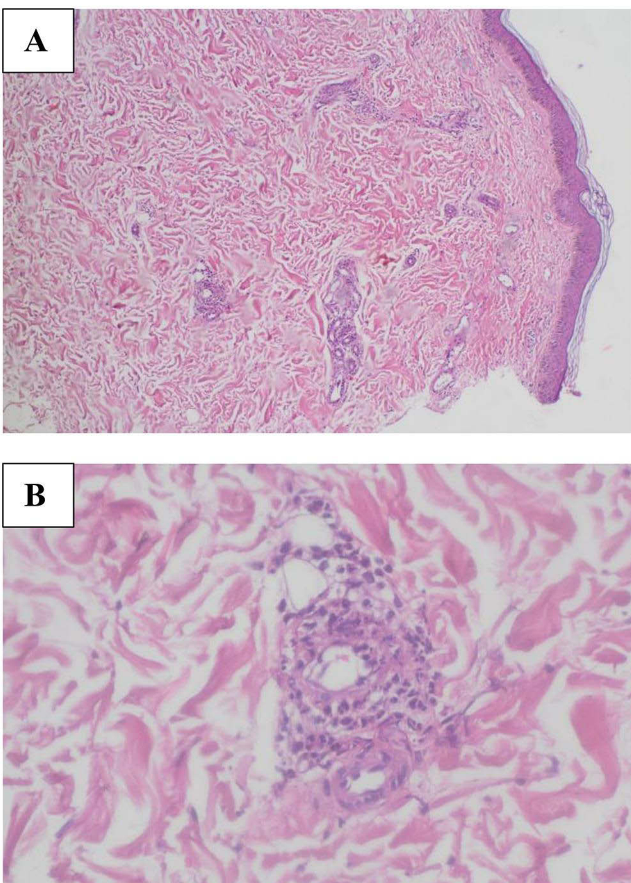

Figure 2 Skin biopsy of purpuric rash which shows IgA vasculitis showing typical manifestations in the skin. The figures (**A** and **B**) show perivascular neutrophilic infiltration, leukocytoclastic, and fibrinoid necrosis, consistent with leukocytoclastic vasculitis.

hemorrhagic mucosa areas in the stomach and duodenum, demonstrated in Figure 3. A diagnosis of IgAV was confirmed, and treatment with 250 mg of intravenous methylprednisolone in 250 mL of normal saline was initiated.

The patient's symptoms, including hematemesis and purpuric rash, showed marked improvement. She gradually resumed oral intake, was successfully weaned off parenteral nutrition, and was discharged in stable condition. A two-week outpatient follow-up showed continued clinical improvement, and no relapse was reported.

Discussion

IgA vasculitis (IgAV) is an immune-complex–mediated small-vessel vasculitis marked by IgA1-dominant deposition in the skin, gastrointestinal tract, joints, and kidneys.[5] While it primarily affects children, adult and adolescent-onset cases often tend to display more severe or atypical presentations. Gastrointestinal manifestations such as colicky pain, bleeding, and hemorrhagic mucosa, occur in up to one-third of cases, occasionally progressing to life-threatening complications. [4,6]

In this case, the patient exhibited clinical and endoscopic evidence of IgA gastrointestinal involvement along with elevated white cell count, deranged coagulation profile and endoscopic evidence of hemorrhagic mucosa, all consistent with an IgAV. In adults presenting with acute abdominal pain and palpable purpura, IgAV should be suspected when inflammatory markers such as WBC and CRP are elevated, and coagulation parameters are abnormal. Abdominal imaging findings such as intestinal wall thickening, further support the diagnosis. Early EGD is recommended for early disease recognition and treatment.[7]

This case uniquely highlights *Giardia lamblia* as a concomitant infection. Previous reports, including a case of IgAV in a 51-year-old man associated with *Giardia* and *Cryptosporidium* co-infection,[8] and another case of a 34 year old woman following travel to Africa and a subsequent *Giardia* infection,[9] suggest that enteric pathogens may act as

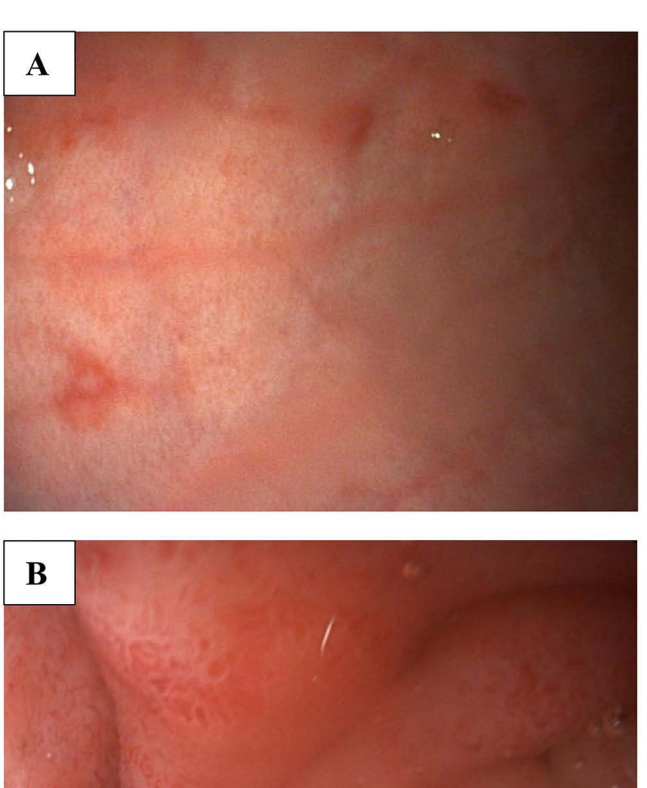

Figure 3 EGD pictures showing diffuse hemorrhagic erythematous areas in the stomach and duodenum: (**A**) Mucosal and linear erythema of the body of the stomach. (**B**) Erythema and edema of the mucosa of the second part of the duodenum.

potential triggers of immune mediated vascular responses. Our report is the first documented case of IgAV in Somalia associated with *Giardia lamblia* infection, thereby contributing to the growing body of global evidence base. However, it is important to emphasize that the observed relationship between *Giardia* infection and IgAV in this case reflects an association rather than a confirmed trigger. Isolated case reports, including ours, can suggest possible pathogenetic connections but are insufficient to establish direct causation. Further studies and case series are needed to clarify whether *Giardia* acts as a true trigger or rather a coincidental finding in patients with IgAV.

The therapeutic approach using methylprednisolone aligns with current recommendations supporting corticosteroids to alleviate severe gastrointestinal symptoms. In our patient, prompt steroid administration led to rapid clinical improvement and symptom resolution.

Conclusion

In resource-limited settings where enteric infections are endemic, clinicians should maintain a high index of suspicion for IgAV in adolescents presenting with abdominal pain, hematemesis, and a purpuric rash. Early recognition and timely initiation of corticosteroids can prevent complications and improve patient outcomes.

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Ethical Approval

Ethical approval was not required from the study site, Hodan Hospital in Mogadishu, Somalia, for publication of a single-patient case report. However, written informed consent for this case publication was obtained from the patient.

Informed Consent

The patient provided written informed consent for the publication of their medical care details and any associated images.

Author Contributions

All authors contributed significantly to the conception, design, execution, data interpretation, and critical revision of this work. They were collectively involved in drafting and reviewing the manuscript, approved the final version for publication, and jointly agreed on the choice of journal. All authors accept full responsibility for the content and integrity of the work.

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Disclosure

The authors have no conflicts of interest to declare in this work.

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