Anesthetic management of a patient with Henoch-Schonlein purpura for drainage of cervical lymphadenitis: A case report

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ABSTRACT

Henoch-Schonlein purpura (HSP) is a multisystem disease and immunoglobulin A-mediated vasculitis with a self-limited course affecting the skin, joints, gastrointestinal tract, and kidneys. Severe renal and central nervous system disease may lead to life-threatening conditions and immunosuppressive agents and plasmapheresis may be needed. We report successful management of a 6-year-old patient with HSP for drainage of cervical lymphadenitis.

Key words: Cervical lymphadenitis, Henoch-Schonlein purpura, vasculitis

INTRODUCTION

Henoch-Schonlein purpura (HSP) is the most common form of acute small-vessel vasculitis primarily affecting children. It is recognized as a systemic vasculitis involving skin, gut, kidneys, and joints.[1] Clinical features include skin rashes, arthritis, abdominal pain, and nephritis. Treatment is symptomatic. The overall prognosis in HSP is excellent, but the long-term morbidity depends on the renal and neurologic involvement. We present a case of a 6-year-old child with HSP for drainage of cervical lymphadenitis.

CASE REPORT

A 6-year-old female child weighing 16 kg, presented with a small swelling in the neck. She was a known case of HSP presented 2 months prior with purpuric lesions with pain in abdomen, vomiting, worsening of the rash, new lesions, and difficulty in walking and swollen feet.

On examination she was afebrile, maintained vitals, had purpuric rashes on the extensor aspect of both arms and legs.

Laboratory examination showed hemoglobin 9.5gm%, bleeding time 2’ 25”, clotting time 4’ 15”, total leukocyte count 9400/mm³, differential leukocyte count N 68 L 22 M 8 E2, platelets 1.8 lacs/mm³. CRP assay was positive (58mgL⁻¹). Liver and kidney function tests, serum electrolytes, calcium, and magnesium examination did not show any abnormality. Urine complete examination was normal. Compliment C3 and C4 were decreased. Serum Immunoglobulin’s revealed an increase in IgA and IgG. Anti-nuclear antibody was negative. Serology was negative for Epstein-Barr virus and Cytomegalovirus, but for streptococcal infection was equivocal.

After premedication with oral midazolam syrup 8 mg 30 min prior, she was admitted to the operating room. Intravenous access was obtained with 22G cannula. Propofol 40 mg, fentanyl 25/ mcg intravenously was used for induction. Anesthesia was maintained with sevoflurane 2-3%, in 50% O₂ + 50% N₂O on mask. Hydrocortisone 50 mg was administered intravenously. She was monitored continuously with electrocardiography (ECG), oxygen saturation (SpO₂), non-invasive blood pressure (NIBP). The patient remained hemodynamically stable and maintained SpO₂ of 99-100% throughout the duration of surgery (10 min).
At the completion of surgery the patient was fully awake. As the patient was comfortable for the first 3 hours in the post operative period, oral acetaminophen was used for pain relief.

**DISCUSSION**

HSP is an autoimmune acute leukocytoclastic vasculitis of childhood, was first described in 1837. It is initiated by deposition of immune complexes as responses to infections such as group A streptococci, mycoplasma, Epstein-Barr, and Varicella virus.[1] HSP mainly affects children between 4 and 11 years and has an incidence of 14 in 100,000 population with peak incidence at 5 years.[2] It usually involves skin, gut, joints, and kidneys, but may rarely have systemic manifestations seen as hepatosplenomegaly and may rarely develop fatal complications like pulmonary hemorrhage and myocardial infarction.[2,3] It presents classically with a unique distribution of the rash to the lower extremities and the buttock area.[4] Joints are frequently involved especially knees, ankles, and elbows; but the disease is not known to leave any permanent deformity and there is evidence to suggest that extrarenal manifestations respond well to immunosuppressive therapy. Gastrointestinal (GI) symptoms occur in up to 85% of the patients. Renal involvement is manifested by hematuria and proteinuria. Severe renal and central nervous system disease may lead to life-threatening conditions, and immunosuppressive agents and plasmapheresis may be needed.

The American College of Rheumatology published diagnostic criteria for HSP in 1990, including age less than or equal to 20 years at disease onset, the presence of palpable purpura, GI bleeding, and a biopsy showing granulocytes in the walls of small arterioles or venules.[3] HSP is primarily a medical disease and requires only supportive treatment once other acute surgical conditions have been excluded. Simple analgesics or non-steroidal anti-inflammatory drugs are used as first-line therapy for relief of arthralgia. Immunosuppression may have a beneficial effect on extrarenal lesions but controlled trials are needed to establish the efficacy of such treatment. All patients with HSP should have their urine analyzed on several occasions during the initial stages of the disease. Proteinuria and hematuria indicate possible renal involvement, which if progresses to renal insufficiency has a poor long-term outcome.

We considered several anesthetic options. Neither a regional block nor an awake fibreoptic intubation under topical anesthesia prior to general anesthesia was feasible, as the child was not expected to cooperate. Therefore, we decided for general anesthesia. Since the surgeon assured us about the time of surgery, we planned for general anesthesia under mask and avoided any invasive access to the airway which could have led to any compression of any pressure points. Perioperative management for liver and kidney functions is important for anesthetized patients with HSP such as preferring Isoflurane/Sevoflurane for maintenance, using atracurium for neuromuscular blockade. Sufficient intravenous fluid administration is necessary. Attention should be paid to decrease the risk of tissue compression such as that associated with positioning, blood pressure cuff, and endotracheal intubation, which may cause necrosis over pressure points. As most of these patients are on long-term corticosteroids, veins can be deep seated and hence difficult cannulation is a possibility. Steroid cover shall be instituted in those on treatment with steroids. Patients can present with varying degree of hypoxemia attributable to alveolar hemorrhages and granular deposits of IgA and may require post-operative ventilator support so arrangement shall be made on individual case basis.

**CONCLUSION**

HSP is an autoimmune acute leukocytoclastic vasculitis of childhood which involves skin, gut, joints, and kidneys commonly. Perioperative management of liver and kidney functions is important. Sufficient Intravenous fluid administration is necessary. Attention should be paid to decrease the risk of tissue compression.

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