Subdural Hematoma – A Rare Complication of ITP
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The main complications of ITP are neurological, which are due to intracerebral hemorrhages. In patients with ITP intracranial hemorrhage is potentially fatal and rare complication with incidence of about 1% (1). Intraparenchymal hematoma and subarachnoid hemorrhage are the main presentations. Subdural hematoma is extremely rare (2). Only a few cases reported in literature, out of which only a few resolved spontaneously with conservative management where as most of the cases required surgical treatment (2,3,4,5). We present a report of a female patient with ITP who developed spontaneous SDH, which was managed conservatively.

Case Report

A 34 years old female with no known co-morbid, presented to local health center with complaints of headache associated with upper respiratory tract symptoms for a few days. Her initial investigations revealed platelet count of 79 X10⁹/L with normal serum biochemistry and she was referred to our tertiary care hospital. She presented next day in the emergency department of our hospital where her examination revealed purpura all over her limbs, few cervical lymph nodes were also palpable, but the rest of exam was normal. Investigations showed zero platelets. Peripheral blood film showed marked thrombocytopenia, large platelet forms present, indicating peripheral destruction. Red cells showed anisopoikilocytosis, elliptocytosis, with hypochromic microcytic red cells. White cells were normal in morphology, no dysplasia, no blast cells seen. Findings were suggestive of ITP. Her autoimmune workup was negative except for anti histone antibodies. biochemistry were normal.

Other investigations including coagulation, thyroid function, compliments level (C3, C4), LDH, liver function and CT brain plain (Figure 1) was performed which showed bilateral subdural hematomas in the frontal areas extending into Falx cerebri showing iso- to hypo densities suggesting sub-acute age. Left sub-Dural hematoma was larger measuring about 11 mm in maximum depth. There was no significant midline shift noted. No evidence of acute infarct, focal mass lesion or midline shift.
Case Report

Patient was admitted in ICU under care of hematology team, eight units of platelets were transfused along with methyl prednisolone 1mg/kg (first dose was given in emergency department), IVIg and broad-spectrum antibiotic. Her platelet count (Figure 2) started improving by second day reaching around 80,000 on fourth day of admission. Neurosurgery team managed Subdural and epidural-hematomas conservatively. Patient made uneventful recovery and was discharged after one week of treatment with final diagnosis of ITP with SDH.

Discussion

ITP, previously known as idiopathic thrombocytopenic purpura, currently stands for immune thrombocytopenic purpura (6). In 1735, Paul Gottlieb Werlhof described this condition for the first time (6). It is caused by acquired autoimmune destruction of antibody-coated platelets in reticuloendothelial system resulting in low platelets but normal coagulation (7). SDH is blood collection between arachnoid mater and dura mater due to traumatic rupture of parasagittal bridging veins, caused by movement of brain within its coverings (8, 9). Although usually traumatic lesions of head lead to SDH, they occur spontaneously in patients with ITP without history of bleeding from any other part of the body (10). Contrary to normal individuals, SDH in ITP appears spontaneously and is very rare (8). Usually present around top and sides of fronto parietal lobes. Platelet count has no relation to the rate of enlargement of hematoma, however its development is associated with low platelet counts (11). Interhemisphereic subdural hematoma is rare and our case shows SDH in falx cerebri (11). As in normal individuals, headache, hemiparesis, altered level of consciousness, signs of raised intracranial pressure, are the usual clinical manifestations but muco-cutaneous bleeding is characteristic of SDH in ITP patients and are more common in younger patients (12). Correction of hematological status of patient and surgical evacuation of hematoma is the main management but conservative management showed spontaneous resolution of SDH in cases presented by sreedharan et al and H seckin et al and in our case also (2,10). Conservative treatment includes IVIg injection and corticosteroids (12).
Discussion

If conservative management is adopted then platelet transfusion is considered at platelet count of <20,000/ mm3 (11). Intravenous steroids, IVIg or both are used as initial medical treatment. Oral steroids are continued for some time after stabilization of platelet counts (11). Patients who do not respond to medical treatment may be benefitted from splenectomy, which is curative in two third of the patients (1). Within 24 hours of splenectomy, platelet count starts rising reaching peak between four to sixteen days, postoperatively (1). In our report 34 years old female presented without any neurological signs had non-traumatic SDH and intra-falcine bleed, which was treated conservatively.

Conclusion

SDH is a rare complication of ITP. Surgery could be avoided depending upon the size and site of SDH. Medical treatment mainly includes IVIg, methylprednisolone and platelets transfusion.

References