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HEMATOMA OF STERNOCLEIDOMASTOID MUSCLE: A RARE PRESENTATION ASSOCIATED WITH ASPIRIN

General Medicine

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ABSTRACT

Low dose aspirin has proven effectiveness in secondary and primary prevention of cardiovascular events and stroke, but is also associated with an increased risk of major bleeding events. For primary prevention, this absolute risk must be carefully weighed against the benefits of aspirin; such assessments are currently limited by a lack of data from general populations. Hemorrhagic complications associated with aspirin use occur primarily at skin or gastrointestinal sites and rarely in the central nervous system. In particular, spontaneous sternocleidomastoid hematoma associated with aspirin is very rare and has not been reported so far in the literature. We report a case of low-dose (75 mg daily) aspirin-related spontaneous hematoma of sternocleidomastoid muscle that was responded successfully of conservative management from taking off aspirin from the treatment schedule.

KEYWORDS

Aspirin Sternocleidomastoid hematoma, Medical management.

INTRODUCTION

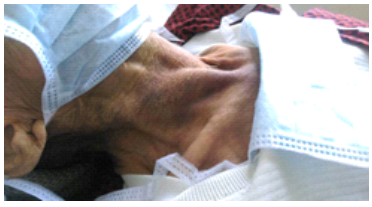
The benefits of antiplatelet therapy in patients with atherosclerotic disease as both primary and secondary preventive measures for myocardial infarction and stroke are well establishe.[1] Bleeding (major or minor) has been reported as a complication of dual antiplatelet therapy with aspirin and clopidogrel, and the addition of clopidogrel was associated with an increase in risk of major gastrointestinal bleeding.[2] Aspirin (also known as acetylsalicylic acid) is used for its analgesic, antipyretic, and anti-inflammatory properties. Aspirin also has antiplatelet effects due to inhibition of thromboxane production; thus, it is used long-term at low doses to help prevent heart attacks, ischemic strokes, and blood clot formation in patients at high risk for clot development. However, there are also well-established undesirable side effects of aspirin, including stomach bleeding, gastrointestinal ulcers, tinnitus, and hemorrhagic stroke especially at higher doses.[3]

The other causes of sternocleidomastoid hematoma include trauma, benign and malignant tumors, inflammatory disorders (periarteritis nodosa, Wegener angiitis), vascular aneurysm, iatrogenic (complication of coronary angioplasty, intramuscular injections), and bleeding disorders (hemophilia).

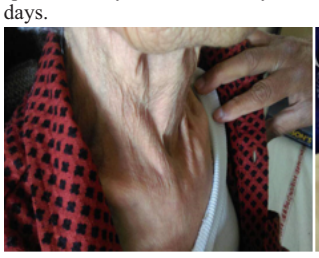
Bleeding in the sternocleidomastoid is not difficult to diagnose as it is easily visible and can present as neck swelling, neck pain, difficulty in swallowing, hoarseness of voice and difficulty in breathing rarely and can mimic stridor. Authors report a case of spontaneous sternocleidomastoid hematoma secondary to antiplatelet therapy that was successfully treated without surgery and provides a review of the literature on similar presentations.

Review of literature showed that these hematomas have been reported in association with coagulopathies, anticoagulant therapy, tumor, infection, pregnancy and vascular malformations. However, no definite cause is found in the majority of cases. Among these potential causative factors, anticoagulants may seem to be predictable[3], but spontaneous sternocleidomastoid hematoma associated with anti-platelet agents is not in the literature as it is very rare.

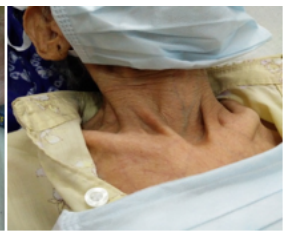
CASE REPORT



A 82-year-old-female patient presented with chief complaints of diffuse bulge over right side of neck since 5 days. Patient is known case of ischemic heart disease since 20 years and on aspirin 75mg and atorvastatin 20mg. There was no history of trauma. On examination patient was hemodynamically stable and a diffuse swelling over right sternocleidomastoid muscle was noted, of size approx. 7 cm X 5 cm. color was purple to brownish, which was warm, non- pulsatile and non- tender suggestive of hematoma. Not associated with difficulty in breathing or swallowing. All baseline investigations came out to be normal regarding hematoma formation. Complete hemogram, platelet counts, LFT, KFTs, PT/INR were within normal limits.Hematoma was confirmed by USG neck. Patient was managed conservatively i.e., aspirin was stopped. Hematoma started to regress in size spontaneously in 12 to 15 days and completely disappear in 25-28 days.



After 1month



After 3 months

DISCUSSION

Dual antithrombic therapy including aspirin and clopidogrel is currently recommended for at least 1 year following a confirmed acute coronary syndrome (ACS) and/or stent placement. Clopidogrel is used as a secondary prevention therapy in addition to aspirin in patients at high risk of thrombotic events as a result of recent myocardial infarction or stroke.[1] Spontaneous muscle haematoma (SMH) is an uncommon condition often overlooked or misdiagnosed[4], and potentially life-threatening, particularly in frail and elderly patients. For a quick diagnosis and to choose the best treatment, a high degree of suspicion is necessary especially in patients with acquired coagulopathy (e.g., oral anticoagulant therapy, antiplatelet therapy).

A reduced blood level of haemoglobin and abnormalities in the coagulation profile should also raise the index of suspicion of SMH and prompt further work up. In our case as the hematoma was small no abnormalities were present in coagulation profile and haemogram. Diagnostic imaging techniques such as ultrasonography (US) and/or computerized tomography (CT) areusually used to obtain diagnosis. Conservative treatment consists of analgesia and recoagulation therapy.

If the patient has a clotting disorder it may be necessary to give vitamin K, fresh frozen plasma, recombinant clotting factors or protamine sulphate (in patient under treatment with heparin).[5] The need for a blood transfusion has to be gauged on the hemodynamic status and comorbidities of the patient (e.g., ischemic heart disease). An active bleeding that does not tend to stop spontaneously can be treated either by interventional radiology procedures (angiography and embolization of the bleeding vessel)[6], or by surgical evacuation of the haematoma and the ligation of the vessel. Also haemodynamic instability and suspicion of sepsis are an absolute indication to surgery.[8] Surgery can be complicated by the difficulty in identifying the bleeding vessel in the context of the haematoma.[7] Occasionally, haemostasis can be achieved by removing the haematoma and packing the cavity.

Evidence suggests that continuing dual antiplatelet therapy beyond one year after DES PCI reduces the risk of major adverse cardiac events.[9] However, the gap between cardiovascular benefit and bleeding risk shrinks following the initial year of dual antiplatelet therapy.

A study reported low-dose aspirin induced SSEH, which showed moderate coagulopathy including of 10-16% platelet aggregation with arachidonic acid and collagen (normal range :>70%) and normal bleeding time.[10]

Four studies reported increasing incidences of major bleeding events (including all GIbleedingand ICH and UGIB with increasing age.[11]

For adults aged 60–69 years with a 10-year CVD risk of >10%, the USPSTF recommends that the decision to use low-dose aspirin to prevent CVD and colorectal cancer be made on an individual basis, after consideration ofthe balance between benefits and risks.[12]. Data such as those presented here will inform such decision-making regarding the benefit–risk profile of aspirin. In the presence of risk factors, SMH must be kept in mind as the differential diagnosis in cases of pain of lower abdominal quadrants, as well as, lumbar or gluteal pain, to avoid incorrect and unnecessary surgical procedures and to minimize mortality and morbidity in this group of patients.

CONCLUSION

Antiplatelet therapy is associated with hemorrhagic events, may involve almost all organ systems of body G.I. haemorrhage and IC bleed are the most fured one which may require transfusion of platelets.[13] Decreased blood coagulation , increased B.P., liver disease, thrombocytopenia, insufficient thrombin generation, increased INR, insufficient platelet function (as in our case). Complete evaluation must be done to find out the cause in hematoma formation and its progressive enlargement.[14] The use of concomitant medications like clopidogrel, NSAIDs and other anticoagulants and peptic ulcer and H. pylori infection should also be evaluated.

Hematoma of sternocleidomastoid muscle is a rare complication of aspirin as it has not been reported in literature till now. Early recognition, discontinuation of medicine and appropriate management resulted in resolution of hematoma and good clinical outcome.

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