

Anticoagulants Induced Ecchymosis

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Abstract: Introduction: Definition: An ecchymosis is a subcutaneous spot of bleeding similar to a hematoma. The term applies to the subcutaneous discoloration resulting from seepage of blood within the tissue. The main symptom of ecchymosis is discolored skin; the color of the patch corresponds to how old and severe the injury is. Anticoagulant Induced Ecchymosis: Warfarin-induced skin necrosis is a rare complication of anticoagulant therapy. Cutaneous findings include petechiae that progress to ecchymoses. Ecchymosis is a relatively rare, potentially fatal side effect of warfarin. It is most commonly reported within 10 days of initiation of therapy. It is a paradoxical, potentially fatal adverse effect of the drug. It occurs secondary to the development of microthrombi and endothelial cell damage in the vessels of dermal and subcutaneous tissues. First recognized in 1943, there have been an estimated 300 cases reported, affecting approximately 0.01–0.1% of patients on the drug. Case Report: A 40 years old male patient was admitted in General Medicine ward of Gandhi hospital, Hyderabad. The patient has chief complaints of shortness of breath since 2 days to 1 week, grade-2 to grade-3 associated with chest pain since 3 days. The patient had bilateral pedal edema 1 week back. History of similar complaints 2 months back. On examination the patient was found to be conscious, coherent and afebrile. Bilateral pedal edema was present. Blood pressure was 90/60 mm of Hg, which is slightly lower. The patient was operated 3 months back for mitral valve replacement and is on tablet Acitram since then. Patient is a known case of hypertension and is on tablet Ramipril. **DISCUSSION:** This case was reported as Congestive Cardiac Failure with Cardiogenic shock and Ecchymosis (due to the chronic use of an anticoagulant i.e Acitram). The initial treatment given for this patient was Injection Dobutamine in a dose of 100mg, Injection Dopamine in a dose of 80mg, Injection Lasix in a dose of 20mg 2 times a day, Tablet Acitram (anticoagulant) in a dose of 2mg once a day, Tablet Digoxin in a dose of 0.25mg once a day, Tablet Enam in a dose of 5mg once a day, Tablet Met XL in a dose of 12.5mg once a day, Tablet Aldactone in a dose of 25mg twice a day. The patient developed ecchymotic rashes after a treatment of 3 days with Acitram and the drug was put on hold Conclusion: This case report thus depicts the adverse effect caused due to the chronic usage of anticoagulants which is a type of skin necrosis i.e. ECCHYMOSIS. This condition can be reversed by holding the drug after stability in the patient's condition.

Keywords: Anti-coagulants, Ecchymosis, Haemorrhage, Microthrombi, Acitram

1. Introduction

1.1 Definition

An ecchymosis is a subcutaneous spot of bleeding with diameter larger than 1 centimetre (0.39 in). It is similar to (and sometimes indistinguishable from) a hematoma, commonly called a bruise. A broader definition of ecchymosis is the escape of blood into the tissues from ruptured blood vessels. The term also applies to the subcutaneous discoloration resulting from seepage of blood within the contused tissue.

1.2 Symptoms

The main symptom of ecchymosis is discolored skin, caused by the bursting of capillaries and leakage of blood beneath the skin. The color of the patch corresponds to how old and severe the injury is.

When the leakage is recent, the area of ecchymosis may appear dark blue, black, or purple, but it will fade to yellow or green over time.

Ecchymosis alone is not typically a cause for concern. Like bruising, it is most common on legs and arms, and it often results from minor injuries sustained, for example, by bumping into furniture. Ecchymosis also frequently appears in areas where the skin is thin, such as the eyelids or lips.

It is common to see ecchymosis and bruising in highly active children and in older adults because the skin thins and the capillary walls grow more fragile with age.

When trauma is not responsible for ecchymosis, it can occur in people of any age.

2. Anticoagulant Induced Ecchymosis

Warfarin-induced skin necrosis is a rare complication of anticoagulant therapy with a high associated morbidity and mortality requiring immediate drug cessation. Cutaneous findings include petechiae that progress to ecchymoses and hemorrhagic bullae. Characteristic dermatopathological findings are diffuse dermal microthrombi with endothelial cell damage and red cell extravasation with progression to full-thickness coagulative necrosis.

2.1 Warfarin

Warfarin is commonly called a "blood thinner," but the more correct term is "anticoagulant." It helps to keep blood flowing smoothly in your body by decreasing the amount of certain substances (clotting proteins) in your blood. This medication is used to treat blood clots (such as in deep vein thrombosis-DVT or pulmonary embolus-PE) and/or to prevent new clots from forming in your body. Preventing harmful blood clots helps to reduce the risk of a stroke or heart attack. Conditions that increase your risk of developing blood clots include a certain type of irregular heart rhythm (atrial fibrillation), heartvalve replacement, recent heart attack, and certain surgeries (such as hip/knee replacement).

2.2 Side effects

Haemorrhage is the primary concern for patients on warfarin and they might query whether a bleed or bruise they are

experiencing is cause for concern. Haemorrhage may be an indication of an elevated international normalised ratio (see CPD on pp251–4). Bleeding can be minor, such as bleeding from gums, or can be potentially fatal, such as gastrointestinal or intracranial bleeding.

Management of bleeding depends on the severity and the location of the bleed. Minor bleeds may only require a lower dose or temporary omission of warfarin (e.g., two days). In addition to stopping warfarin, treatment with oral or intravenous vitamin K may be required. The effects of vitamin K can take several hours to occur, so in the case of severe haemorrhage where the immediate restoration of functional clotting factors is required prothrombin complex concentrate (factors II, VII, IX and X) should be used.

3. Prevalence

Ecchymosis is a relatively rare, potentially fatal side effect of warfarin. It is most commonly reported within 10 days of initiation of therapy. Warfarin is currently the most widely prescribed oral anticoagulant. Ecchymosis is a rare, paradoxical, and potentially fatal adverse effect of the drug. Ecchymosis occurs secondary to the development of microthrombi and endothelial cell damage in the vessels of dermal and subcutaneous tissues. Since this rare complication was first recognized in 1943, there have been an estimated 300 cases reported, affecting approximately 0.01–0.1% of patients on the drug. Typically, warfarin-induced ecchymosis presents within three to ten days of warfarin initiation.

4. Case Report

A 40 years old male patient was admitted in General Medicine ward of Gandhi hospital.

- The patient has chief complaints of shortness of breath since 2 days to 1 week, grade-2 to grade-3 associated with chest pain since 3 days.
- The patient had bilateral pedal edema 1 week back.
- History of similar complaints 2 months back.

On examination the patient was found to be conscious, coherent and afebrile.

Bilateral pedal edema was present.

Blood pressure was 90/60 mm of Hg, which is slightly lower.

All the other vitals were found to be normal.

The patients were operated 3 months back for MITRAL VALVE REPLACEMENT and are on tablet Acitram since then.

Patient is a known case of hypertension and is on tablet Ramipril.

5. Discussion

This case was reported as Congestive Cardiac Failure with Cardiogenic shock and Ecchymosis (due to the chronic use of an anticoagulant i.e Acitram). The initial treatment given for this patient was Injection Dobutamine(catecholamines) in a dose of 100mg, Injection Dopamine (inotropic agents) in a dose of 80mg, Injection Lasix (furosemide) in a dose of 20mg 2 times a day, Tablet Acitram (anticoagulants) in a dose of 2mg once a day, Tablet Digoxin (anti- arrhythmics) in a dose of 0.25mg once a day, Tablet Enam (ACE inhibitor) in a dose of 5mg once a day, Tablet Met XL (BETA BLOCKERS) in a dose of 12.5mg once a day, Tablet Aldactone (diuretics) in a dose of 25mg twice a day.

The patient developed ecchymotic rashes after a treatment of 3 days with Acitram(anticoagulant) and hence the drug was put on hold from day-4.

6. Conclusion

This case report thus depicts the adverse effect caused due to the chronic usage of anticoagulants which is a type of skin necrosis i.e ECCHYMOSIS. This condition can be reversed but holding the drug after stability in the patient's condition.

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