A study of 31 patients with easy bruising from University Hospital, Kuala Lumpur

Ng Soo Chin,[1] MRCP (UK), FRCPA (Aust),
Lecturer

PL Koong,[2] SMLT
Medical Laboratory Technologist

Haematology Division, Department of Pathology,[1] University Hospital,[2]
Faculty of Medicine, University of Malaya, Kuala Lumpur.

Summary

Thirty one patients were investigated for the main complaint of easy bruising. These patients had normal platelet count with no past history of immune thrombocytopenia or systemic disorders known to predispose to bruising and a negative drug history. The evaluation of these patients' included clinical review (history and physical examination) plus coagulation tests consisting of bleeding time, prothrombin time, partial thromboplastin time, thrombin time, fibrinogen level, FXIII screen and platelet functions test. Seven of the paediatric patients had acquired platelet dysfunction with eosinophilia (APDE). In 17 (94.4%) of the 18 adult patients no abnormality was demonstrated. Hence APDE was the commonest cause of easy bruising in children while the haemostatic defect contributing to easy bruising in adults remained unknown.

Key words: Easy bruising, Malaysian patients, acquired platelet dysfunction, eosinophilia.

Introduction

Patients presenting with a main complaint of easy bruising are not uncommon in clinical practice. A careful clinical evaluation wound unravel the cause of the easy bruising in most of them by virtue of the significant bleeding history and/or associated clinical signs. There remains a group of patients whose only complaint is easy bruising with no other significant bleeding problem and clinically they are in good health. This study was undertaken on this group of patients seen in the University Hospital over a period of three years.

Patients and methods

Between 1987 and 1989, 31 patients were investigated for the main complaint of easy bruising in the Coagulation Laboratory of University Hospital. These patients had normal platelet counts, with no history of immune thrombocytopenic purpura or systemic disorders known to result in bruising and a negative drug history. The evaluation of these patients included a detailed clinical history, physical examination and the relevant laboratory tests which included full blood pictures and coagulation tests; that is prothrombin time (PT), partial thromboplastin time (PTT), thrombin time (TT), fibrinogen level, factor XIII screen, bleeding time and platelet function tests.

To ensure optimal samples for coagulation studies, the patients had their blood taken in the laboratory and all coagulation tests were performed within two hours after blood collection

using standard methodology.[1] The bleeding time was done by Duke's method.[2] Platelet aggregation tests using platelet aggregometer[3] were performed with collagen, ristocetin, adrenalin and adenine diphosphate (ADP). Eosinophil count was obtained by counting – chamber method.[4]

Results

In the paediatric age group, male patients predominated while the reverse was true in the adult patients (Table 1). Ten (62.5%) of the adult patients were from the 21–30 age group. In 17 of the 18 adult patients studied, no abnormality was detected. One patient was probably a haemophilia carrier (Table 2), as further tests demonstrated low level of FVIIIc (30%) and normal level of FVIII: Ag (80%). Seven out of the 13 paediatric patients studied were diagnosed as acquired platelet dysfunction with eosinophilia (APDE) and no abnormality was detected in five of them (Table 3). Of the seven patients with APDE, their age group ranged from five to 14 years and six of them were males. All of them had absolute eosinophilia ($> 0.4 \times 10^9/L$). Lack of secondary platelet aggregation with ADP was the commonest platelet aggregation abnormality and was seen in four (66.7%) patients (Table 4).

Table 1
Biodata of patients

	Paediatric	Adult	Total
Male	11 (73.3%)	4 (26.7%)	15 (48.4%)
Female	2 (12.5%)	14 (87.5%)	16 (51.6%)
Total	13 (41.9%)	18 (58.1%)	31 (100%)

Table 2
Diagnosis of adult patients

Diagnosis	No. of patients
Probably haemophilia carrier	1
No abnormality detected	17*
Total	18

* 13 had platelet function tests done

Discussion

This local study on patients with easy bruising (otherwise well) showed that most of the adult patients would be "labelled" as having the 'simple easy bruising' syndrome. This is a common benign disorder which occurs mainly in woman.[5] These patients typically have normal coagulation and platelet function tests and they have recurrent circumscribed bruises (spontaneous or after minor trauma) as seen in our patients. The pathophysiology of this condition remains unknown.[6] A variety of causes have been speculated and these include fragility of skin vessels, antibodies to

Table 3
Diagnosis of paediatrics patients

Diagnosis	No. of patients
APDE	7
Storage Pool Defect	1
No abnormality detected	5
Total	13

Table 4
Haematological profile of patients with acquired platelet dysfunction with eosinophilia

	Age/Sex	Bleeding Time (1'–5')	Eosinophil Count ($40–400x10^6$/L)	Platelet Aggregation		
				Ristocetin	Collagen	ADP
1)	9/F	2' 53"	1,644	N	N	N
2)	10/M	7'	1,112	N	N	No 2° aggregation
3)	5/M	8' 17"	2,660	N	N	No 2° aggregation
4)	14/M	9' 11"	5,000	N	Impaired	No 2° aggregation
5)	7/M	4' 58"	1,734	N	N	No 2° aggregation
6)	9/M	9' 22"	1,880	Slightly impaired	Slightly impaired	Markedly impaired
7)	6/M	4' 10"	1,274	–	Not Done	–

platelets or psychogenic in origin.[7] The important practice point is that these patients are not associated with excessive post-operative bleeding.[5] No therapeutic agent has been proven of value in treating the easy bruising. The patients need to be reassured that they are not suffering from any serious haemostatic disorder.

APDE was found to be the commonest cause of easy bruising in the paediatric patients. APDE is a condition characterised by spontaneous easy bruising occurring commonly in children. These patients had normal platelet counts but their platelet functions were abnormal. There was always associated eosinophilia. APDE has been reported to be the commonest cause of purpura in Thai children.[8] However, this condition has not been mentioned in standard textbooks of paediatrics or in any haematology books. Three APDE patients were reported locally[9] and the authors stressed that the condition could easily be missed if the diagnosis was not thought of. In six of our patients who had platelet aggregation tests done, absent secondary aggregation to ADP was the commonest finding. The same finding was reported by Kueh et al.[10] The pathophysiology of the disease remains unknown; an immunological mechanism was thought to be likely.[10] The patients with APDE recovers spontaneously within six months to a year. Serious bleeding is uncommon and no intracranial haemorrhage has been documented.[11]

A course of anti-helminth drugs is recommended as about half the patients have concurrent parasitic infestations and it would be prudent for patients to avoid trauma or elective operations if the disease is 'active'.[11] Platelet transfusion can be used to stop bleeding in patients with excessive bleeding or large haematoma.[12]

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