

Post-extraction bleeding – An aid to diagnosis?

Case report

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Abstract

Haemophilia A, the most common of bleeding disorders is characterized by bruising and spontaneous bleeding into the joints but may remain undiagnosed if present in the mild form. A case is discussed where episodes of bruising and joint swelling as a child were misdiagnosed as rheumatic fever and the bleeding disorder was diagnosed following recurrent episodes of bleeding after extraction of an upper molar tooth.

Key words: Haemophilia A, bleeding, extraction, case report.

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Introduction

Haemophilia A, an x-linked recessive bleeding disorder, is the most common type of inherited bleeding disorder affecting approximately 1 in 10 000 persons.¹ Although transmitted as a sex-linked disorder largely affecting males, it has been shown that 25 per cent of all cases of haemophilia A arise by spontaneous mutation.² The disorder is attributable to decreased blood levels of properly functioning procoagulant Factor VIII. The severity of the disease depends on the level of circulating clotting Factor VIII and is characterized by prolonged clotting time and partial thromboplastin time. The platelet count, platelet function tests and bleeding time are normal.³ The clinical presentation of the disease depends on the circulating levels of Factor VIII and is categorized as mild, moderate, and severe. Table 1 shows the presentation of the disease clinically depending on the severity.

Patients with haemophilia A often give a history of bruising, joint swelling, and unusual bleeding associated with minor trauma or surgical procedures.

The disease, however, may remain undetected without such history. This article describes such a case where previous episodes of bruising and joint swelling were diagnosed as rheumatic fever. The haemophilia remained undetected until the extraction of a tooth.

Case report

An 18 year old male was referred to the Oral Surgery Department with a persistent bleeding socket following extraction of the upper right first molar two weeks previously. Despite local measures, the bleeding persisted although the socket of the upper left first molar extracted at the same time had healed uneventfully. The medical history was inconclusive except for a history of bruising and rheumatic fever as a child for which he had been admitted into hospital on three occasions with swollen joints.

Examination intraorally revealed the upper right first molar socket to be sutured, however, bleeding and trauma to the palatal mucosa was evident. Radiographs confirmed the presence of a retained root fragment in the socket. Arrangements were made to remove the root fragment and an urgent coagulation screen was arranged simultaneously. The patient was reviewed the following day with no evidence of bleeding from the extraction site. Further blood tests were carried out and the results obtained are shown in Table 2. A diagnosis of haemophilia A was made. At review three days later the patient presented with the socket bleeding again, and an infusion of desmopressin (18 ng), a synthetic vasopressin analogue, was given. At suture removal no bleeding was noted and healing was uneventful. The post-infusion blood results are shown in Table 3.

Long-term management will involve preventive advice and regular dental care to avoid the necessity for future dental extractions. However, should this be needed, careful pre-operative measures will be

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Table 1. Relation of Factor VIII_c concentration and severity of bleeding

Factor VIII coagulant activity	Clinical features
Less than 1% (severe)	Spontaneous bleeding into muscles and joints. Severe bleeding after trauma. Skeletal deformity.
1-5% (moderate)	Occasional spontaneous bleeding. Severe bleeding after mild trauma.
5-25% (mild) 25-30%	Severe bleeding after major trauma. Tendency to bleed after major trauma.

required in order to avoid recurrence of the same problem.

Discussion

This case presented diagnostic problems in that although two teeth were extracted simultaneously one healed uneventfully whereas the other continued to pose problems with bleeding. Mild haemophilia may undergo extractions without any postoperative problems with bleeding if carried out atraumatically.⁴ However, in this case the traumatic extraction of the upper right first molar where a root fragment had been retained and the palatal mucosa was severely damaged may have contributed to the persistent bleeding.

In the diagnosis of haemophilia, a careful history provides more valuable information than laboratory tests,⁵ especially when evaluating children. It would appear that in this case the history of bruising in childhood and episodes of spontaneous joint swelling were most likely to be due to the bleeding disorder and not associated with rheumatic fever. Rheumatic fever is an illness of childhood with symptoms of arthritis and carditis. Its onset may be abrupt with fever and joint pains and is usually preceded by a sore throat 1-3 weeks before. It settles in less than two months and the joint pains settle over a period of weeks if left untreated. The diagnosis of rheumatic fever depends on the clinical and laboratory results and the Jones criteria have been used to make the diagnosis.⁶ Although the presenting features of rheumatic fever have changed over the past years, fever still remains one of the most common clinical findings.⁷ It would appear

Table 2. Pre-infusion levels of Factor VIII and clotting time

	Test	Control
Prothrombin time	16 s	14.5 s
Activated partial prothrombin time	66 s	39 s
Thrombin (clotting time)	14.5 s	15 s
Factor VIII _c	14%	143%

Bleeding time: 11 minutes (normal).

Table 3. Levels of Factor VIII and K..... C..... clotting time compared before and after infusion of desmopressin

	Pre-desmopressin	Post-desmopressin
K.....C.....clotting time	60 s	44 s
Factor VIII _c (clotting assay)	14.8%	56%

Normal levels of activated partial prothrombin time: 30-40 seconds.

that when the patient was admitted as a child with joint swelling, there was no history of preceding fever or sore throat prior to the joint swelling which had occurred spontaneously. Additionally, it was not possible to ascertain from the patient or parents whether any laboratory tests were performed to confirm the diagnosis of rheumatic fever. The history of bruising would probably confirm the presence of an underlying bleeding disorder and the diagnosis of rheumatic fever in the absence of other clinical signs would be unlikely.

Haemophilic arthropathy is one of the most important manifestations of haemophilia, and it is important to carry out a detailed history to eliminate any underlying bleeding disorder prior to performing any extractions or surgical procedures. This is particularly essential in the mild haemophiliacs who may remain undiagnosed until late adulthood. If diagnosed pre-operatively, appropriate precautions may be taken to assist with avoiding complications postoperatively.

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