Documenting family history in colorectal cancer patients - a retrospective audit

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Abstract
History elicitation is vital in the diagnosis and management of clinical cases. Failure to elicit a complete history can make us liable for negligence. This retrospective audit done in a DGH, investigates the Family History Documentation of CRC (Colorectal Cancer) patients.

Introduction
Colorectal Cancer is diagnosed in over a quarter of a million people in the UK each year and is the third most common type of cancer (http://www.statistics.gov.uk). The total number of new cases per annum is around 34,000 [1]. The prognosis for patients is highly dependent on the stage of disease. There are a number of systems in use of which the Dukes System is the most widely used. The 5-year survival for Duke A is 80%-90%, Duke B 60%-70%, Duke C 20%-30% and Duke D 5%-10% [2].
Colorectal cancer is common and the incidence is closely related to patient age. After age, the second most common risk factor is family history of colon cancer. In fact, it is one of the most hereditable cancers with 20-25% of colorectal cancers (CRC) occurring in patients with a family history of the disease or with an early age of onset.[3,4] Both of these types of presentation suggest a genetic predisposition[5]. Recognition of family cancer syndromes through history allows the primary care provider an opportunity to offer healthcare advice to an entire family[6].

Relatives of patients with sporadic colon cancers have a two to nine fold increased risk of developing large bowel cancer compared to the normal population[7]. This risk is highest for patients younger than forty-five and not significant for people sixty years or older[8]. There is no national screening protocol, which is cost-effective for colorectal cancer[9]. Therefore eliciting a good history and surveillance protocol in relatives of high-risk patients is highly desirable. Failure to elicit this history in the face of advances in genetic knowledge, and failure to identify familial CRC has provoked claims of negligence against healthcare providers[10].

Objective
The aim of this study was to audit the documentation of any family history of cancer in the medical records of patients with CRC in one hospital. The audit was restricted to patients less than 60 years of age.

Material and methods
This audit was done in a District General Hospital (Nevill Hall Hospital, Gwent) by the Department of General surgery. The notes of patients aged under sixty years of age, and newly diagnosed with colorectal cancer over a three-year period from 1997-2000, were examined. Family history documentation of CRC in GP referral letters, pre-clerking notes, or elsewhere were recorded. Note was also made about enquiries into family history of other cancers, such as breast, ovary or endometrium. The degree of completion of the record was also noted regarding particularly the age at onset, the relationship of relatives with a positive cancer history, and whether or not a cancer family tree was present.

Results
In the three-year period (1997-2000), 50 patients below the age of sixty years were newly diagnosed with CRC. Their median age was 52 years with a range of 25 to 59 years. A total of 41 GP referral letters could be traced of which only 5 (12%) referred to family history relevant to CRC. In the medical records completed by pre-registration house officers (PRHO), only 18/50 (36%) had a record of relevant family history. Overall, only 27/50 (54%) patient notes made any reference to a family history. These figures indicate that in 46% of cases staff did not make any mention of family history in the case notes. Negative family history for other cancers was mentioned in only 14 cases (28%). A family history of polyps was recorded in only one patient.

Family History Recorded	Elective Admission	Emergency Admission	Total
Yes	23	4	27
No	14	9	23
Total	37	13	50

Table 1. *Recording of family history in relation to type of admission*

In the 27 case notes containing reference to a family history of cancer several deficiencies were noted. The age at diagnosis of any familial cancer was mentioned in only 10/27 cases, and a formal cancer family tree drawn up in only 2 of 27 case notes. The degree of the relationship of the family member affected by cancer to the patient fared slightly better (22/27). The type of admission (elective or emergency) did not co-relate with any recording of family history in case notes (P=NS: *Chi-square test*):

Discussion
There is good evidence which links early detection of CRC with improved survival rates[11]. Variousmodalities of screening such as mass faecal occult blood test and flexible sigmoidoscopy are currently under study[12]. However no cost-effective national screening protocol for CRC has been approved[9]. An accurate record of family history in patients with CRC, used in conjunction with established criteria for screening, such as Amsterdam criteria, helps to identify high-risk families[13]. Furthermore, a regular update of family history in young patients who present with CRC may help to identify the tumour spectrum suggestive of family cancer syndrome.[14]

Our study may be biased as it is retrospective and negative histories may not have been recorded. The type of admission showed no difference in the incidence of a family history record, an observation that suggests that junior doctors disregard or are not aware of the importance of family history. We suggest that family records may be improved with the use of protocol forms that would help to ensure the inclusion of family history data. Failure to record this data may possibly contribute to a late detection of cancer, and it is not inconceivable that in the future this might constitute grounds for a claim of negligence.

Conclusion
This study identifies a lack of awareness and incompleteness in recording detailed family histories of CRC patients at both primary and secondary levels. This should be regarded as an important omission from the medical records

Recommendations

A diagnosis of colorectal cancer should be accompanied with a completed 'colorectal database' record, including family history. This should ensure a complete medical record and a long-term referral document.

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Rapid corrosion of scalpel blades after exposure to local anaesthetics: clinical relevance of this interaction

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Abstract

Background: Infiltration of local anaesthetic into an area before incising with a scalpel is common surgical practice. After a chance observation that a carbon steel scalpel rusted within minutes of contact with local anaesthetic, the corrosive effects of normal saline and local anaesthetic solutions on carbon and stainless steel surgical blades were investigated.

Methods: After a series of preliminary studies with approximately fifty scalpels, we used a semi-quantitative technique using digital photography to demonstrate the corrosive effect of local anaesthetic on twelve carbon steel scalpel blades. These blades were exposed to saline, lignocaine and bupivacaine, and the surface changes were recorded and compared. A stainless steel blade was also photographed for comparison.

Results: All blades were found to rust in all three solutions, but there were considerable differences in the rate of progression and the surface area of the blade affected. Corrosive effects occurred rapidly on the carbon steel blades when exposed to all solutions, the process beginning within minutes of immersion. The overall effect was most marked with blades partially immersed in local anaesthetic. The stainless steel blades were much more resistant rusting, but had started to corrode by twelve hours, and were substantially rusty after 24 hours. Total immersion in solution produced minimal effects and thus rapid corrosion requires an air-liquid interface.

Conclusions: This paper demonstrates the surprisingly rapid speed of corrosion of the standard carbon steel scalpel blade when exposed to solution, especially in the presence of an air-liquid interface. This phenomenon has not been previously described and has a number of implications. In the developing world, scalpels may be re-used, and in such circumstances avoidance of contact with local anaesthetic may increase the life of the blades. In addition, excess tissue damage from the poor performance of a rusted blade may occur and may tattoo the skin with rust. Furthermore, there is evidence to suggest that iron oxides may have carcinogenic and cytotoxic properties. Carbon steel blades are often preferred as they can be manufactured sharper and cheaper, however, we would recommend either their replacement after contact with local anaesthetic, or the use of stainless steel blades in particular circumstances.

Introduction

The chance observation that a carbon steel scalpel blade left in a pool of bupivacaine rusted rapidly, led us to further investigate the speed of this reaction and whether this was likely to be significant over the time-course of most surgical procedures. We exposed a variety of carbon steel and stainless steel scalpel blades to solutions of normal saline, lignocaine and bupivacaine, and recorded the surface changes by photography to give a semi-quantitative analysis.

Materials and Methods

Pilot studies

To avoid excessive photography, preliminary experiments were undertaken on a variety of scalpel blades that showed consistent rusting of all carbon steel blades exposed to local anaesthetic. In one such experiment (figure 1) three separate carbon steel blades of four different types (numbers 10, 11, 15 and 20 blades, Swann-Morton, Sheffield UK, twelve in total) were exposed to a drop of lignocaine for a 3 minutes and showed significant rusting during this time course.

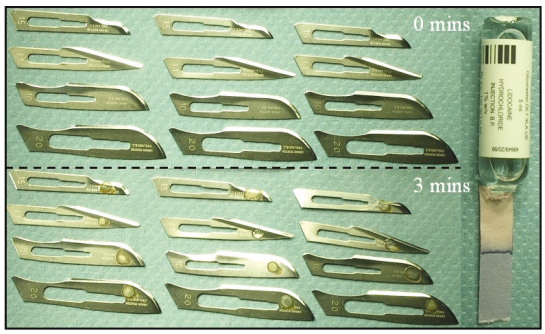

Figure 1: *A preliminary experiment on 3 sets of 4 different scalpel blades (number 10, 11, 15 and 20 blades, 24 altogether), demonstrating uniform corrosion of all blades subjected to a drop of lignocaine. Photographs were taken every minute for 10 min-*