

Clinical photograph from the Royal Infirmary of Edinburgh – 1853

NA Malcolm-Smith

Honorary Fellow, Department of Anaesthesia, Critical Care and Pain Medicine, Royal Infirmary, Edinburgh, Scotland

ABSTRACT A child with a facial defect is presented using clinical details recorded in a ward journal of the Royal Infirmary of Edinburgh for 1853. The entry in the journal is illustrated by a clinical photograph and a pen and ink drawing. The operation for facial reconstruction is described together with an account of the post-operative course and outcome. The differential diagnoses and views on the aetiology of the patient's disorder are considered. The photograph itself is described and the historical and social background of the patient are outlined.

Correspondence to NA Malcolm-Smith, 43 Craiglea Drive, Edinburgh, EH10 5PB

tel. +44(0)131 447 2572

e-mail nigel@malcolm-smith43.wanadoo.co.uk

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INTRODUCTION AND BACKGROUND

This case report comes from the clinical notes of a girl who was admitted to the Royal Infirmary of Edinburgh under the care of Professor James Syme. The description of the findings is enhanced by the inclusion of a photograph of the child.

The potential for photography to illustrate medical conditions was recognised early in the development of the process.^{1,2,3} Daguerreotypes of clinical cases were made from which were taken etchings,⁴ and the Hill and Adamson collection includes the calotype of an unnamed woman with a goitre.^{5,6}

In this presentation the name of the patient and clinical details are documented in a Royal Infirmary of Edinburgh ward journal of 1853 (Figure 1). A photograph ('photographic drawing') is included in the case record⁷ and this, together with the history and examination, allows a fresh assessment of the diagnosis to be made.

THE CASE OF ELIZABETH FLEMING

The patient, Elizabeth Fleming, is recorded in the General Register of the Royal Infirmary of Edinburgh as being aged nine years, the daughter of a weaver from Denny, Stirlingshire. She was admitted on 8 June 1853 under the care of Professor James Syme.⁸

History and Examination

The mother stated at the time of admission that 'the child had suffered from a fever six months ago after which a black spot appeared at the side of the mouth and that a large part of the cheek came away.' The examination describes

'a large vacancy in the right cheek, half of the upper lip is gone, the lower is entire but is drawn down by the cicatrix. The saliva dribbles constantly from the mouth, the right side of the tongue is quite exposed and articulation is indistinct and difficult . . . the jaw is only slightly moveable yet she masticates her food remarkably well . . . the opening of the parotid duct is seen in the cicatrix, several of the teeth protrude outwards and render the appearance extremely hideous.' (See Figure 2)

Diagnosis

In the General Register of Patients the 'disease' is recorded as 'Sloughing after fever – Chronic, above 45 days' and in the index to the Ward Journal 'Lupus – effects of.' In the

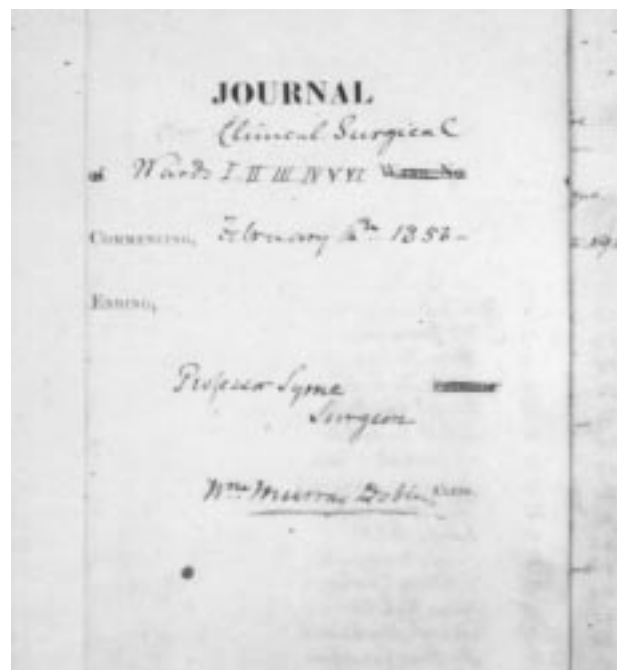


FIGURE 1 First page of ward journal.



FIGURE 2 Photograph of the patient, Elizabeth Fleming.

entry in the ward journal itself the diagnosis is summarised as 'Effects of sloughing of the face' and further on as 'Effects of Sloughing after Fever(?)'. It is upon this diagnosis that Syme appears to have based his surgical plan.

Treatment

Closure of the facial defect was to be undertaken in two stages and the operative management is described in the following entries in the ward journal. As a preliminary 'The teeth were removed by Mr Syme about ten days previous to the operation' – presumably because their protrusion would jeopardise any flap closing the cheek.

Closure of the defect is described thus:

'July 1st. Chloroform was administered until complete anaesthesia was produced and the incisions were made in the manner rudely represented in the following diagram [see Figure 3] – the flap was carried up and made to fill up the vacant gap in great part.'

The detail may be seen in the accompanying enlargement of the drawing (Figure 4). Syme had expertise in the use of flaps and had written that the

'plan of lateral displacement supplies the defect by separating flaps of skin from their subjacent connections and transferring them to the side where they are required, without any twisting of the connecting isthmus.'



FIGURE 3 Page of ward journal showing drawing of operation.

All seems to have gone well initially as the next entry reads:

'July 2nd. Child has been remarkably still – a strap was applied so as to afford additional support to the flap.'

Good progress was not maintained however.

'July 4th. Flap has appearance of sloughing at the edge – the straps applied yesterday have not been removed and they appear to support what remains sound of the flap...

'July 5th. Slough of about half an inch of upper part of the flap has come away'.

In fact things went from bad to worse as the next entry reads:

'July 25th. Child is now in much the same state as when admitted into Hospital.'

Eventually the failure was recognised and the last entry reads:

'Dismissed in Status quo Aug 18th 1853.'

No further account of this case can be found though Syme regularly published reports of cases under his care in the Edinburgh Medical Journal of that time.



FIGURE 4 Detail of flap.

DISCUSSION

The actual diagnosis at the time of admission seems to have been in question, understandable in the light of contemporary knowledge. The photographic record together with the reported facts allows some reassessment of the case to be made.

The notes describe how in this child a spot had appeared which was rapidly followed by destruction of the soft tissues. In the index of the ward journal 'lupus' is entered as the cause of this girl's disfigurement. 'Lupus' or '*noli me tangere*' (as it was also known) was recognised as a slowly developing lesion confined to the skin: Syme described it as 'an obstinate ulceration of the nose and adjacent parts always superficial in the first instance . . . but sometimes extending more deeply and causing extensive destruction of the face' though he does not give any suggestion as to its aetiology. Syme did not recommend operative treatment for 'lupus', relying on improvement in general health and the use of local applications especially arsenical preparations. It is likely therefore that in this case lupus as a diagnosis had been discarded, even if it had ever been seriously considered, particularly as Syme noted 'the disease sooner or later suffers a spontaneous cure'.¹⁰

Surgeons prior to the 1860s were uncertain about the causes of inflammation and gangrene, but were acutely aware of the potentially disastrous effects. In this case

the patient's mother describes the event which triggered the destruction of the face as a 'fever' associated with a 'black spot at the side of the mouth . . . a large part of the cheek came away'.

Two possible inflammatory causes recognised today, and which may have been responsible for the patient's condition, are cancrum oris and necrotising fasciitis.

Cancrum oris is a rapidly spreading gangrenous extension of acute ulcerative gingivitis (Vincent's angina) caused by a mixed flora of Gram negative organisms. The disorder is associated with poor oral hygiene and the lowered general resistance and is commonly associated with depressed socio-economic conditions.¹¹ Necrotising fasciitis caused by streptococcal infection is extremely virulent and in the nineteenth century would probably have been rapidly fatal.

Elizabeth Fleming's social circumstances are not mentioned in the ward journal. Examination of the parish records for Denny at that time shows that there were families by the name of Fleming receiving 'relief' though there is no confirmation that this patient's family was amongst them. She may well have been from a poor background as at that time the traditional hand weavers were impoverished owing to the low wages following the introduction of factory production of cloth.¹²

The photograph itself may have been taken by William Murray Dobie, Syme's surgical clerk, who was reputed to be a photographer. It is an accomplished clinical illustration, the patient being posed to show the pathological lesion without distracting background. The actual print is on albumin paper, a process developed in the early 1850s.

Following her discharge from hospital no more has yet been found out about Elizabeth Fleming as follow-up visits to were not the rule. The parish records for Denny do not record her death in the two years after her hospital admission nor do the records include anyone of that name from Denny in the National Registry of deaths after 1855.

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