Chronic disease

- Common experiences and different presentations.
CONTENTS

1. **Introduction**

2. **Chronic severe atopic eczema and its psychological cause and effect relationship: a case history**
   Dr. Dunn, General Practitioner.
   Muirhouse Medical Group, Edinburgh.

3. **Presentation and treatment complications in temporal arteritis: a case history**
   Dr. Treasure, General Practitioner.
   Muirhouse Medical Group, Edinburgh.

4. **Fibrosing alveolitis - disease characteristics and management strategies: a case history**
   Dr. Dunn, General Practitioner.
   Muirhouse Medical Group, Edinburgh.

5. **Crohn's Disease - initial presentation and overview of the chronic disease: a case history - aetiology, current management strategies and problems: a review**
   Dr. Palmer, Consultant Gastroenterologist.
   Western General Hospital, Edinburgh.
Introduction

Regardless of individual disease characteristics, there are certain similarities in the experience of chronic disease. The doctor has to offer his/her support, often over a lengthy period, to a patient who will probably never be 'cured' and may even die of the disease. The doctor must also provide the most appropriate management strategy. Such is not an easy task when one considers the undesirable side-effects of many drugs and the long periods which the patient may have to take them for. The patient has to live with disease. Although it might not kill him/her, often it will affect every aspect of his/her life. I have chosen 4 cases which both highlight these features and which describe different presentations of chronic disease.
Chronic severe atopic eczema and its psychological cause and effect relationship: a case history

Lisa Carter

Summary A 29 year old unemployed man presented 12 years ago with a widespread, weepy excoriation of most of the body surface, excluding the face. He was hospitalised, and has since spent a total of 352 days in in-patient treatment for atopic eczema. His illness has profoundly affected his life. I suggest that this case report shows examples of the psychological effects of severe atopic eczema, and the effects of psychological factors on its exacerbation and precipitation.

Eczema is a skin reaction pattern. There are several types of eczema with their own distinguishing features, but it is generally characterised in the acute stage by the presence of redness, swelling, papules, vesicles, exudation, crusting, scaling, and in severe cases, large blisters. Chronically, it is less vesicular and exudative, but more scaley, pigmented and thickened. Lichenification and fissuring are also more likely. Atopy is the genetic predisposition to produce IgE antibodies to excess and to develop one or more of hay fever, urticaria, asthma and eczema.

Atopic eczema usually begins in infancy, but may also develop later in childhood or adult life. The character and distribution of the skin lesions vary with age. In infancy, it is often widespread, weepy and vesicular, commonly affecting the face. In childhood it becomes drier and occurs predominantly at the elbow and knee flexures. In adults, there tends to be a lower grade but more widespread involvement of the knee and elbow flexures, the trunk, face and
hands. Luckily atopic eczema doesn’t always progress to adulthood, with 2/3 of children going into spontaneous remission before the age of 10. It may return with stress however. Atopic eczema is often intensely itchy and may be complicated by bacterial and viral infection. Eczema may be precipitated and exacerbated by stress in vulnerable individuals and may produce marked reactive depression when it occurs in body areas important for self image. I report a case which is unusual in its severity and which exemplifies relationships between eczema and psychological factors.

Case Report

A 29 year old white unemployed man presented 12 years ago with severe atopic eczema. There was a widespread, weepy excoriation of most of the body, excluding the face. He was pyreptic. He had suffered from atopic eczema since childhood but this was the first exacerbation severe enough to warrant hospitalisation. He had been seen three weeks previously at the Royal Infirmary dermatology clinic where he was advised to attend for daily dressings. He had defaulted due to inability to pay the bus fares between Muirhouse and central Edinburgh. He was readmitted 22 days later and spent 14 further days as an in-patient. It was felt at the time that he wasn’t making an effort to self-treat. This was a pattern that was to repeat itself many times over the years.

Between 1987 and 1990 there were seven flare-ups severe enough to warrant hospitalisation. On 2/5/90 he was admitted with widespread atopic eczema with bacterial superinfection. He spent 16 days in the Royal Infirmary, Edinburgh and again it was felt that the patient’s prior non-compliance with daily dressings was an important aetiological factor in this repeat acute exacerbation.

He has also suffered from asthma since childhood and was admitted as an emergency to the Western General, Edinburgh on 23/2/87. He spent a week in hospital. In July 1990 Dr. Roberts (his G.P.) and Dr. Greening (respiratory physician from the Northern General, Edinburgh) referred him to a clinical psychologist because of the somatic symptoms he was experiencing from anxiety over his
asthma and eczema. He defaulted, didn’t reply to related letters and a spate of hospital admissions followed. Between 1990 and 1993 there were 6 hospital admissions where the average duration of stay was 20 days.

From 20/6/92 he spent 13 days in the Royal Infirmary and City Hospitals, in Edinburgh. Eczema herpeticum was diagnosed. He was discharged and was later readmitted (14/8/92) 14 days after stopping attending for daily dressings to go on holiday. He spent 27 days in hospital. He again defaulted on attending for daily dressings and seven weeks later was admitted with a bacterial superinfection. This stay’s duration was 22 days.

There is a family history of atopy, with his maternal grandmother suffering from eczema.

He was a barman until 1990, but had to give up his job because it was having a detrimental effect on his eczema. He has since remained unemployed. He has been married for 18 months and has a three year old daughter who also suffers from eczema. His wife finds the stress of his eczema difficult to bear and has considered separation on a number of occasions. They did split up for 6 months prior to the conception of their child. They hoped a baby would bring them closer together. He constantly scratches and often has difficulty sleeping. The bed clothes are regularly covered in flaked off skin and blood. His wife changes these as much as she can - they have no washing machine and she washes them by hand. Flaked off skin also drops around the house. Their vacuum cleaner is currently broken. He is a shy and nervous man, who is intermittently troubled with anxiety symptoms, particularly that ‘his heart is racing’. He feels down ‘most of the time’. He cites the reason for his various episodes of non-compliance with treatment as being because he was ‘fed up’, an understandable sentiment given the chronic and severe course which his disease has taken. However, given his disease status and the certain worsening of symptoms which non-compliance entails, his behaviour does seem odd. He rarely leaves the house as he is embarrassed by his appearance and his only
confiding relationship is with his wife. Both drink rarely but each smokes 30 cigarettes a day. His wife is also unemployed.

**Discussion**

The precise role of psychological stress in the aetiology and clinical course of atopic eczema still remains to be elucidated. However, a number of studies have shown both that there is a causal relationship between stress and eczema exacerbation, and that the presence of eczema can affect the psychological make-up of the sufferer.

50 atopic eczema sufferers kept a diary for a fortnight where they recorded their daily emotional states and their skin condition. The results of meta-analyses showed that both stress and depression were significantly related to changes in skin condition. Interpersonal stress on Day X predicted atopic eczema on Day X + 1, the relationship being reciprocal. Depression was predicted by the skin condition of the previous day, although this relationship was not reciprocal (i.e. depression didn't necessarily imply a prior skin exacerbation, there were other factors which could trigger off feelings of low mood). Although this study was based on subjective assessment of both mood and skin condition, the results do have implications for relationships between stress, depression and atopic eczema. It is interesting to note here that the patient's run of hospital admissions between 1990 and 1993 started within weeks of the loss of his bar job. Now he is constantly living under the stresses of poverty, poor housing, unemployment, social isolation and marital difficulties.

It has been suggested that coping style and other cognitive factors are important in modulating the effects of psychosocial stresses on eczema exacerbation. Having seen the patient in the home environment, I wonder how far his coping strategies have developed. He also attended the Young Person's Unit at the Royal Edinburgh Hospital as an adolescent due to disruptive behaviour in the family home (this may or may not have had an affect on his
current problems). Although his style may be better than it appears, it is unlikely that it is sufficient to meet the demands of his disease.

It has been demonstrated that atopic eczema patients do have significantly high levels of anxiety and problems dealing with anger and hostility. The presence of an 'eczema personality trait' is accepted by many, but its aetiological role is unclear. Although anxiety and stress management can be useful in treatment, the relationship between personality and the presence of atopic eczema is, with current understanding, a 'chicken and egg situation'. It has been suggested however, that chronic intractable eczema may be a sign of impaired parent-child relationships, but as of yet there is no hard evidence to meet this claim.

In conclusion, this patient has experienced psychological as well as physical morbidity due to his eczema. It appears that psychological problems are common in those who suffer from chronic severe eczema, but their precise role in the aetiology of eczema has yet to be clarified. However their identification and management are important in atopic eczema therapy.

2nd April 1993


Presentation and treatment complications in temporal arteritis: a case history

Lisa Carter

Summary
A 67 year old woman presented 2 years ago with a 3 week history of headache associated with scalp tenderness and general malaise. The erythrocyte sedimentation rate was raised at 125mm/hour. High dose oral prednisolone therapy was started immediately as part of a gradually reducing regime. The patient has now been on continuous oral steroid therapy for 2 years. She has developed osteoporosis, depression and other Cushingoid features during this period. This report shows examples of steroid side effects in chronic disease therapy and discusses therapeutic strategies which may solve this clinical problem, as well as describing a classical presentation of temporal arteritis.

Temporal arteritis mainly affects the over 60s. Polymyalgia rheumatica may occur concurrently. It is an inflammatory disease of unknown aetiology which affects medium sized arteries, the external carotid and its branches being particularly susceptible. An autoimmune basis for the disease is speculated since its incidence is increased in those who have rheumatoid arthritis and autoimmune thyroid disease. Clinical features of temporal arteritis are mostly the result of occlusion of the affected vessels.

There may be a history of visual impairment, arthralgia, myalgia and jaw claudication associated with the commonest characteristic complaints of continuous headache (particularly in the temporal regions) and scalp tenderness. Rarely the patient may exhibit Raynaud’s phenomenon of the tongue. The patient may also be pyreptic on presentation and exhibit focal neurological signs.
Tortuous, hardened temporal arteries may be prominent, but this is often insignificant since they are seen in many older people. The ESR is usually raised at greater than 50mm/hour and can be elevated to more than twice this value.

With strong clinical suspicion and an elevated E.S.R., high dose oral prednisolone therapy is initiated immediately, before a positive temporal artery biopsy is received, because the risk of visual impairment is high (if it is a presenting feature, it usually remains even with immediate implementation of a high dose steroid regime). The dose is gradually reduced according to clinical response and E.S.R. values. Maintenance therapy is required for at least a year, often for the rest of the patient's life.

Case Report

A 67 year old widow presented 2 years ago with a 3 week history of headache, malaise and scalp tenderness. The E.S.R. was markedly elevated at 125mm/hour. Therapy with 40mg of prednisolone daily was started. Temporal artery biopsy confirmed the diagnosis. The dose was gradually reduced over the next 7 weeks to 20mg/day. The patient was maintained on this dose for 5 months. In the sixth month of treatment a reduction regime of 1mg/month was instigated. Unfortunately, she suffered two relapses whilst on this therapeutic regime, with complaints of jaw claudication and generalised aches and pains. In response the steroid dose was increased on both occasions, once to 20mg and once to 40mg.

After 5 months of steroid therapy, the patient began to complain of neck pain. A plain cervical X-ray showed demineralisation. A year later she was suffering from severe back pain. Lumbar spine X-ray showed severe osteoporotic changes and L2 collapse.

After 18 months of steroid therapy a diagnosis of endogenous depression was made, and Lofepramine 70mg twice daily was
prescribed. The patient had previously suffered a bout of depression 18 years ago.

There was never evidence of glucose intolerance and urinary glucose was always negative on testing. The patient gained 7 kg in weight over the 2 year period. Other Cushingoid features are marked (i.e. moonface, slight buffalo hump, striae, easily bruised skin, muscle wasting).

She is an ex-light smoker (5/day) and drinks less than 2 units of alcohol a day.

Initially mobile with a limp, the patient is now housebound in her first floor flat and requires a walking aid for mobility within the home. Her daughter lives nearby and is supportive. The G.P. visits fortnightly. She is currently on 9mg prednisolone a day, as part of a reducing regime.

**Discussion**

The discussion will address the following issues:
1) what is an appropriate steroid therapy regime?
2) what therapeutic strategies are currently available to reduce steroid side effects?
3) how far can the patient’s additional problems be attributed to the long term side effects of steroids?

Temporal arteritis is usually controlled on 40mg prednisolone/day, although patients with persistent visual symptoms may need 60-80mg initially. Slow reduction to 20mg daily by 8 weeks minimises relapse, and a maintenance dose of 7.5mg/day after 6-9 months should suffice. Steroid withdrawal is often possible after 2 years, but some patients may require 4 or more years of treatment. Relapse is best diagnosed clinically, with E.S.R. levels used as a back-up laboratory parameter. A recent temporal arteritis treatment study showed E.S.R. value as a poor predictor of
relapse, but it is used for steroid dose titration in dosage reduction\(^3\).

The treatment of this patient observed the recommended regime in part, but due to clinical relapse and persistently elevated E.S.R. levels, "text-book" reduction in dosage was not possible.

The relationship between steroid dose and associated side-effects has been investigated. One study\(^4\) showed side-effects to be significantly related to an initial prednisolone dose of greater than 30mg as well as to the cumulative dose. This study also concluded that the patients taking a mean daily dose of 5 mg or less were significantly less likely to develop side-effects. Therapeutic strategies which incorporate a reduction in the daily steroid dose may therefore prove useful in minimising side-effects.

Azathioprine may be used as a steroid sparing agent in temporal arteritis and polymyalgia rheumatica therapy\(^2\). It has also been suggested that intra-muscular injections of methylprednisolone may combine an efficacious treatment for polymyalgia rheumatica with a reduction in cumulative dose. In a recent study\(^5\) remission was achieved in polymyalgia rheumatica when 120mg methylprednisolone injections were given at 3 weekly intervals for 12 weeks. Monthly injections of methylprednisolone on a reducing regime were shown to maintain remission for 12 months in all 16 patients prospectively studied. The lower cumulative steroid dose meant that side effects were minimal, with no suppression of the hypothalamo-pituitary-adrenal axis seen within 12 weeks of initiation of treatment. These results have yet to be evaluated in a controlled trial, and research is required as to whether i.m. injections are appropriate for temporal arteritis as well as polymyalgia rheumatica therapy.

To achieve fewer steroid side-effects, prophylaxis against their occurrence could be used as an alternative to actual reduction in steroid dosage. Oral 25 hydroxyvitamin D and oral calcium therapy have been shown to prevent glucocorticoid induced osteopenia in polymyalgia rheumatica\(^6\). 24 patients with polymyalgia rheumatica...
were given 500mg elemental calcium daily for 9 months and were randomly allocated to receiving 25-hydroxyvitamin D (Group A) or a placebo (Group B). Serum alkaline phosphatase and 24 hydroxyproline excretion were decreased in Group A and radial bone mineral content was insignificantly increased. It was significantly decreased in the placebo group.

This patient's additional problems (possibly with the exception of her depression) were a direct result of the long term steroid treatment regime which is currently recommended. Although the disability she now experiences through osteoporosis is preferable to the outcome of non-treated temporal arteritis, its prevention would have improved her morbidity significantly. Hopefully the problem of long term steroid side effects which are currently seen in association with a wide variety of chronic diseases will soon be resolved.

12th May 1993


Fibrosing alveolitis - disease characteristics and management strategies: a case history

Lisa Carter

Summary An 83 year old widower presented 3 years ago with progressive exertional breathlessness and a persistent dry cough. Diagnosis was made on characteristic clinical signs, chest X-ray and pulmonary function tests. An initial trial of steroid therapy was implemented, on which he has been maintained. The patient is now on long term domiciliary oxygen therapy and is housebound. This report presents a clinical history of cryptogenic fibrosing alveolitis and the discussion looks at new management strategies.

Scadding first described the term fibrosing alveolitis over 25 years ago. Currently it kills more that half of its sufferers within five years of diagnosis, response to treatment is poor and its incidence is rising1. When the cause is unknown it is called cryptogenic. The pathophysiological picture of fibrosing alveolitis is seen in connective tissue disease, post drug and organic material exposure (e.g. asbestos, avian protein) and in opportunistic infections in immunosuppressed patients. Most people with fibrosing alveolitis are cigarette smokers and men are affected in slight excess. Its prevalence is approximately 2-5 per 100,000 and it kills more than 1000 people per year. Onset is usually in the fifth and sixth decades1.

Fibrosing alveolitis probably represents a group of diseases with similar pathological changes, rather than one single disease.
Its pathology is characterised by an inflammatory thickening of alveolar walls and intra-alveolar monocellular infiltrate. Progressive fibrosis usually ensues\(^2\).

This disease classically presents with a history of progressive exertional breathlessness and a persistent dry cough. Finger clubbing and hyperventilation are often marked. Fine end expiratory crackles which do not clear on coughing are heard bilaterally in the chest, particularly in the lower zones posteriorly. Central cyanosis may develop as the disease progresses.

The disease shows a limited response to steroid therapy. There have been few clinical trials but combined series results show subjective improvement in 54% and objective improvement as shown by pulmonary function and chest X-ray in 23%\(^1\). A trial of prednisolone therapy is recommended, with an initial daily dose of 40-60mg for 6-8 weeks gradually reducing to a maintenance dose of 10mg if repeat measurements of lung volumes, transfer factor and chest X-ray show improvement\(^3\)

**Case History**

An 83 year old male ex-book keeper presented 3 years ago with a 7 month history of worsening exertional breathlessness. Initially he put his symptoms down to 'old age' but consulted the G.P. when he became distressed by his persistent cough and disturbed sleep.

On examination he was breathless, cyanosed and had a respiratory rate of 30. He had finger clubbing. Fine inspiratory and end expiratory crackles were heard on chest auscultation which did not clear on coughing.

Diagnosis was confirmed by the presence of characteristic bilateral lower zone opacities on chest X-ray and a restrictive pattern on pulmonary function tests. He was negative for rheumatoid factor. There was no history of cyclophosphamide, bleomycin or
amiodarone exposure. He has never worked with asbestos or hard metal and doesn’t keep pigeons. He stopped smoking 23 years ago.

Oral steroid therapy was commenced at a daily dose of 40mg, which was gradually reduced to 10mg within 6 months. He has since been maintained on this dose.

He was clinically diagnosed as being in cardiac failure 18 months ago and now takes 80mg of frusemide daily. He has received domiciliary oxygen therapy for the last year.

His breathlessness, which is severe even at rest, limits his mobility such that he rarely leaves his house. He also sleeps upright in a chair. His G.P. visits fortnightly and friends do his cooking, cleaning and errands.

Cryptogenic fibrosing alveolitis is the diagnosis, since no specific aetiology has been found.

**Discussion**

There has been much interest in improving the bleak prognosis of fibrosing alveolitis by more effective treatment regimes. Ribavirin was cited in one report as markedly improving symptoms in a patient with cryptogenic fibrosing alveolitis. A further pilot study however concluded that there were actually no beneficial effects of ribavirin therapy.

A cyclophosphamide - low dose prednisolone regime has also been researched as an alternative to high dose prednisolone with reduction to a maintenance dose. It has been shown that patients with seriously impaired total lung capacity (TLC) on presentation (60-79%) do better on the combined regime; whereas there is no difference in outcome between the two therapies in patients presenting with TLC’s of 80% or more. This combined regime is currently used, with daily doses of up to 20mg of prednisolone and
150mg of cyclophosphamide. Decisions on treatment regimes are made largely on the likely incidence of side effects. Azathioprine may be substituted for cyclophosphamide if the disease is unresponsive1.

Cyclosporin A has been postulated by one study group as a possible therapeutic agent in severe cryptogenic fibrosing alveolitis that is unresponsive to steroid and cyclophosphamide therapy. In 7 patients the average survival time was doubled from 2.5 to 5 months on cyclosporin A, when compared with a control population. Although this seems minimal benefit for the risks incurred by treatment with cyclosporin A, the idea is that this extra time may facilitate the transplant surgery which is now becoming more accessible to those who suffer from this disease6.

Presently the widely used therapy is oral prednisolone, which is combined with domiciliary oxygen therapy as symptoms progress. Although long term oxygen therapy is useful - a review of its use in chronic respiratory failure found that at follow-up after its administration 51 out of the 64 patients studied had a paO2 of greater than 8 kPa when breathing oxygen and that they had a significantly higher paO2 (6.7 S.D. 1.2) when breathing air7 - it is a supportive rather than a curative measure.

It has been suggested that the reason for the poor therapeutic response in fibrosing alveolitis is due to the disease only presenting clinically when sufficient fibrotic damage has occurred to produce symptoms1. On the other hand, early diagnosis would only be useful if efficacious therapeutic agents were available. Immunosuppressive agents, with their undesirable side effects, are currently all that is on offer. A therapeutic agent which could block the synthesis of collagen, without concurrent side effects of immunosuppression, would make earlier diagnosis worthwhile.

The future for improvement in fibrosing alveolitis mortality would thus appear to lie in drug management strategies which make use of a better understanding of the biochemical pathway of collagen8. A drug which could attack at vulnerable sites in the
collagen synthesis mechanism may be able to prevent fibrosis without recourse to immunosuppression. Until then therapeutic intervention will continue to rely on poorly efficacious immunosuppressive agents and fibrosing alveolitis will continue to be a chronic disease which kills.

19th March 1992
Crohn’s Disease
- initial presentation and overview of the chronic disease: a case history
- aetiology, current management strategies and problems: a review

Lisa Carter

Summary A 28 year old man presented 5 years ago with a 2 week history of diarrhoea. He lost two stones in weight over this period, and experienced sweating, shivering and lower abdominal pain. Sigmoidoscopy and biopsy were very suggestive of Crohn’s disease. This patient has tended to inappropriately self-medicate during the course of his disease and to default on hospital outpatient appointments. He has recently suffered marital difficulties as a result of his disease. He is a heavy smoker. The case history provides a description of initial presentation and an overview of the chronic disease. The discussion reviews research on the aetiology of Crohn’s, the treatment strategies currently available and the problems encountered in those who live with the disease.

Crohn’s disease is a disease of the alimentary canal characterised pathologically by localised areas of non-specific transmural inflammation and the presence of non-caseating granulomata. Any region of the alimentary canal from mouth to anus may be affected, but those most commonly involved are, in order of frequency, terminal ileum and right side of colon, colon alone, terminal ileum alone, ileum and jejunum.

The incidence of Crohn’s is rising and is currently 5-10 per 100,000 per year. Crohn’s can be considered as part of a spectrum of inflammatory bowel disease and in 15% of patients it is hard to
differentiate between Crohn's disease and ulcerative colitis. It usually presents during the second to fourth decades but it can occur at any age. The sexes are equally affected.

Although Crohn's is of unknown aetiology, several possible causative factors have been considered; infective agents, oral contraceptives, diet (particularly sugar), smoking and abnormal immunological response.

Crohn's is a chronic disorder and whilst its mortality is only twice that of the general population, its unpredictable relapses and remissions render it an unpleasant and serious condition. Pain is the commonest symptom and may be accompanied by diarrhoea and fever. Malabsorption is a common problem and many patients suffer from malnutrition and weight loss. The case history provides a description of initial presentation and an overview of the chronic disease. The discussion reviews the aetiology of Crohn's, the treatment strategies currently available and the problems encountered by those who live with this disease.

Case History

This 28 year old male lorry driver presented 5 years ago with a 2 week history of watery diarrhoea, frequent visits to the toilet and occasional blood in the bowel motion. He also suffered from shivers, sweats and lower abdominal pain. He lost two stones in weight during this period. He had no history of previous infectious contact, foreign travel, rashes or joint problems. There was no family history of inflammatory bowel disease.

Sigmoidoscopy at presentation showed a red, engorged mucosa with loss of vascular pattern. There was no frank ulceration, contact bleeding or rectal involvement. These results were very suggestive of Crohn's disease. He was discharged from this, his first, admission on 30mg prednisolone daily, which was gradually reduced to 5mg by out-patient follow-up at five months. His colitis had not settled on
this dose, so it was subsequently increased to 15mg per day for the next month.

It was felt 6 months after presentation that his disease may have been resolving spontaneously, because there was little tenderness on rectal examination and only mild inflammation was visible on sigmoidoscopy.

However, in February 1990, 2 years after the initial diagnosis his disease flared up and he was investigated again. Significant findings were a low plasma albumin, active proctocolitis and changes consistent with Crohn's disease on colonic biopsy and also the presence of granulomata on rectal biopsy. He was treated with Asacol 500mg tds. for 6 weeks along with local steroid enemas. By April 1990 his condition had improved and he had gained weight. However, he was not keen on the use of these enemas in his therapy.

For the next 14 months, he maintained an average 10mg daily prednisolone dose, and defaulted on three hospital out-patient appointments. Not being able to get time off work was the reason given.

Between November 1990 and April 1991 he was unwell, with intermittent abdominal pain, diarrhoea and bleeding. It is interesting that he stopped smoking whilst the disease was in remission prior to this period, and then started again when the disease flared up. By April, there were serious problems in his marriage, with his wife threatening to leave. His father attended the out-patient clinic with the patient to complain that nothing was being done about his son's disease. The family had not expected it to be a chronic thing and were at their wit's end. It became clear that during this recent period of ill health the patient had been self-medicating on an ad-hoc basis, taking up to 50mg of prednisolone a day and then cutting right down to low doses. The G.P. had given clear instructions on how to reduce the steroid therapy.

The patient currently complains of severe left iliac fossa pain and diarrhoea up to twelve times a day (sometimes mixed with
The stool is of normal colour, it doesn't smell excessively or float and is easily flushed away. He is lethargic and anaemic but has no arthralgia. On examination he looks well, is well hydrated and is apyrectic, but exhibits marked lower abdominal tenderness. Sigmoidoscopy was very painful and showed deep ulceration and contact bleeding of the descending colon. He is presently on 40mg per day of prednisolone. Biochemical parameters of disease are within normal limits, with the exception of the E.S.R. which was mildly raised. Stool cultures were negative.

This man lives with his wife and child. He is currently employed as a lorry driver and admits to smoking 20 cigarettes a day.

Discussion

This case history shows how Crohn's presents initially and highlights its characteristic relapsing and remitting course. Although not as severe as some cases of Crohn's can be, this man has experienced significant morbidity due to his disease. The adverse effects of not attending for follow-up nor complying with prescribed treatment regimes are also shown, since treatment is based on a programme of various possibilities rather than on one specific drug, and is very much tailored to the individual’s response. This discussion will review research on the aetiology of Crohn's, the treatment strategies currently available and the psycosocial problems encountered by those who suffer from the disease, with reference to specific events in this man’s case history.

The aetiology of Crohn's disease is still largely a mystery. Current thinking proposes a defective immune system as the pathophysiological basis for the wide variety of signs, symptoms and presentations seen in this disease. The idea is that certain subjects are not able to deal, immunologically, with certain gastrointestinal lumenal antigens. It is as yet unclear whether this inability lies in the lumenal antigens themselves (in that they are...
abnormal in some way), the mucosal uptake of lumenal antigens, their uptake by macrophages or the macrophage-T cell interaction. It is postulated that the heterogeneity of presentation and duration of Crohn's disease in different individuals may be related to defects in different levels of the immune system.

It is widely accepted that cigarette smoking and the oral contraceptive pill have an aetiological role, particularly in the aggravation of symptoms and signs in those who have already been diagnosed as having Crohn's (N.B. the subject of the case history is a heavy smoker). Recently the presence of multi-focal gastrointestinal infarction has been revealed in subjects with Crohn's disease⁵, and a pathogenic mechanism of focal thrombosis has been suggested - smoking and taking the oral contraceptive pill are both risk factors for thrombosis. With regard to the subject of this case history, it is difficult to assess how smoking has affected his disease. He wasn't smoking during a year's remission but when symptoms flared up in November 1990 he started again. Ex-smokers tend to restart during a stressful life event, so perhaps his Crohn's had a larger aetiological role in his smoking than vice versa. However, his continuing smoking certainly won't benefit his Crohn's.

Psychological factors (e.g. stress) are held by many as being important in promoting relapse/exacerbating current signs and symptoms in Crohn's disease. Two recent studies have attempted to quantify and qualify this relationship. 124 patients with Crohn's disease and ulcerative colitis were followed up for 6 months. Their behavioural and biological characteristics were monitored during this period. It was concluded that there was an increased risk of Crohn's relapse in those exposed to high stress, as compared to those who weren't (RR = 2.6 95% C.I. 1.3-4.9)⁶. A smaller study where 10 people were asked to self-report signs and symptoms of Crohn's disease showed that daily life stresses did affect individual's reporting of Crohn's. Further research is required to validate the results of these two studies. Both looked at small groups of people, and because of the psychological morbidity associated with any chronic, painful disease, large, well constructed studies are required to differentiate between stress causing Crohn's
disease and Crohn's disease causing stress. The subject of the case history was miserable at times with his disease. It is more tempting to suggest that he was miserable because of his disease, rather than his misery causing his relapses. However, a psychological aetiology in relapse certainly cannot be excluded.

The patient's treatment regime varied, as is typically seen in the management of Crohn's disease, with Asacol, prednisolone and local steroid enemas being prescribed at different times. Because the cause of Crohn's has yet to be elucidated, treatment is facilitative rather than curative.

Dietary therapy has shown promise in the control of Crohn's disease, and more research is being done in this field.

For medical control of Crohn's disease, a variety of antibacterials and immunosuppressive agents are on offer. Antibacterials are used as an adjunct in Crohn's therapy and are particularly useful therapeutically when fistulae, abscesses, bacterial overgrowth and perianal lesions are present. With regard to specific antibiotics, metronidazole has been shown to be more effective when there is either large bowel or large bowel and small bowel involvement, rather than where Crohn's disease is confined only to the small bowel. Fusidic acid is an antibiotic with T cell immunosuppressive effects and thus has potential for a two pronged attack on Crohn's disease. A study of 8 patients with chronic active, therapy resistant Crohn's disease showed improvement in 5 with fusidic acid therapy. There were no serious clinical side effects but dose reduction was required in two patients due to nausea. Although these results aren't conclusive, they will open up the field for further research into the efficacy of fusidic acid in controlling Crohn's.

Corticosteroids are the most widely used immunosuppressive agent in Crohn's. It is difficult to assess whether this patient's disease was well controlled on oral steroid therapy because of his tendency to self-medicate. However, problems with their long term
side effects and their inability to control resistant Crohn's have prompted research into alternative immunosuppressive therapies.

Cyclosporin, with its T cell specific immunosuppressive properties, has been shown to be rather better for chronic active Crohn's disease therapy than for acute attacks\(^\text{12}\). It is particularly useful in non-responsive Crohn's and where fistulae complicate the disease. However, although it is quick to work in controlling disease activity, there is a high relapse rate after termination of therapy which is not prevented by a low dose maintenance regime. Also, the common side effects of hypertrichosis and paraesthesiae and the rare but serious threat of nephrotoxicity are somewhat problematic\(^\text{13}\).

Azathioprine and 6-mercaptopurine are useful in resistant and fistulous Crohn's disease, and have also shown efficacy in its prophylaxis\(^\text{10, 14}\). There are problems, however in the threat of lymphoreticular malignancy as a consequence of their long-term use.

This patient was treated at one stage with Asacol (mesalazine coated with Eudoget-S) retention enemas. Mesalazine is a non-sulphonamide containing 5-aminosalicylic acid derivative, which was developed because of the high incidence of side effects experienced with sulfasalazine. Its exact mechanism of action is unknown, but it is useful in active proctosigmoiditis (the patient's diagnosis at the time) and in patients who are unresponsive to or intolerant of steroids. Its main side effects are perianal irritation and trauma secondary to insertion. In a study\(^\text{15}\) where relapse rates were measured over 4 years in 34 patients on Asacol and 127 patients on sulfasalazine, Asacol was shown to better at maintaining remission where the terminal ileum was not involved.

The majority of patients will require surgery at some time\(^\text{16}\), but this patient has never reached this stage. Unlike the situation with ulcerative colitis, surgery cannot be curative because Crohn's can occur at any point along the alimentary tract. Its purpose is to relieve obstruction due to stricture and to treat fistulae which won't resolve on conservative treatment.
This patient and his family have experienced significant psychological morbidity during the course of his disease. At one point his marriage was in difficulties. Although he is still working, he defaulted on out-patient appointments 3 times because he couldn’t get time off work. A recent case-controlled study\(^ {17}\) showed that 30% actively concealed their illness from employers as a result of their experience of previous discrimination in employment. In April 1990 it came to light that his family were extremely distressed because they hadn’t understood that the disease could take a chronic and severe course. Unfortunately, there is little to assist in making a prognosis when the diagnosis of Crohn’s is first made\(^ {18}\), although the type of presentation does give clues as to the type of relapse a patient will experience.

In conclusion, treatment is based on a programme of various possibilities and is very much tailored to meet the needs of the individual. Regular attendance for follow-up and compliance with an often modified treatment regime is thus very important in achieving satisfactory control of disease activity. However, a definite aetiological mechanism needs to be elucidated before curative rather than facilitative therapy can be researched and instigated. Also, patients with Crohn’s disease require psychological support and clear information during the course of their disease. In fact, this may have some beneficial effect on their disease relapse rate.

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