Sarcoidosis – a cause of steroid responsive total alopecia

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Summary: We present a case of sarcoidosis complicated by total alopecia and a myopathy occurring in a young West Indian woman. There was a very satisfactory response to oral steroids.

Introduction

Although cutaneous involvement in sarcoidosis is relatively common, alopecia is rare. There are a few reported cases of cicatricial alopecia due to sarcoidosis which predominantly affects black women with evidence of intrathoracic sarcoidosis and cutaneous involvement at other sites (Golitz *et al.*, 1973). Treatment including intra-lesional and systemic steroids has generally been disappointing (Golitz *et al.*, 1973; Rudolph *et al.*, 1975). We have recently observed significant regrowth of hair after systemic steroid therapy in a patient who presented with total alopecia due to cutaneous sarcoidosis together with involvement of lung, liver and muscle.

Case report

A 23 year old West Indian woman presented with a 3 month history of increasingly severe exertional dyspnoea, pain and swelling in her lower legs and anorexia. Four years earlier she had developed total alopecia over a period of a few weeks which had persisted apart from one brief episode of scanty re-growth of head hair 18 months earlier which only lasted for about one month. On examination there was total absence of head and body hair with no evidence of scarring (Figure 1). There were small oval dusky red nodules over her wrists and ankles but no involvement of the scalp. The calf muscles were very tender to palpation and there was overlying pitting oedema. Chest expansion was symmetrically reduced but there were no added sounds. There was no hepatomegaly and the rest of the examination was normal.

Investigations showed deranged liver function tests, an elevated serum creatine phosphokinase and a myopathic picture on electromyography. The chest X-ray showed patchy shadowing in both lung fields but

Figure 1 The patient showing alopecia.

no hilar adenopathy, and pulmonary function tests revealed a restrictive defect with marked impairment of gas transfer. Mantoux testing at 1 in 1,000 was negative despite BCG inoculation in her teens. Biopsy of liver and calf muscle with overlying skin showed numerous non-caseating granulomata. The scalp was

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also biopsied which showed fibrosis and chronic inflammatory infiltrate around many hair follicles and sebaceous glands. In places this infiltrate was granulomatous and included Langhans type giant cells (Figure 2).

Because of deteriorating liver function (serum bilirubin rising from 23 $\mu\text{mol/l}$ to 45 $\mu\text{mol/l}$ and alkaline phosphatase rising from 753 U/l to 1,020 U/l, upper limits of the normal range being 20 $\mu\text{mol/l}$ and 350 U/l respectively) and increasing dyspnoea she was commenced on prednisolone 50 mg on alternate days. During the subsequent 9 months there was complete resolution of her dyspnoea, muscle pain and leg oedema, anorexia and skin nodules. The disappearance of the leg oedema presumably reflects control of the active granulomatous inflammation in the skin and underlying muscle. In addition there has been definite and continuing re-growth of hair (Figure 3). It is now about 2 cm long over most of the head and axillary and pubic hair has also returned. Repeat biopsy of the scalp 6 months after starting treatment no longer showed the inflammatory reaction that was

Figure 2 Scalp biopsy showing a granulomatous infiltrate around hair follicles and including a small well defined sarcoid granuloma and a multinucleate giant cell.

Figure 3 The patient showing regrowth of scalp hair and eyebrows.

present around almost all of the follicles in the pre-treatment biopsy. The liver function tests and creatine phosphokinase have returned to normal and remained so and the pulmonary function tests have markedly improved. She is now taking only 7 mg of prednisolone daily.

Discussion

Both alopecia (Golitz *et al.*, 1973; Rudolph *et al.*, 1975) and myopathy (Callen, 1979) are rare manifesta-

tions of sarcoidosis. We can find no previous report of total alopecia occurring in sarcoidosis, nor of such a convincing response to treatment with steroids. Hair growth has been progressive during the 9 months since starting treatment, whereas there had been no significant regrowth during the previous 4 years. The alopecia antedated the other manifestations of sarcoidosis by several years and we suggest that cutaneous sarcoidosis is worth considering in patients, especially coloured women, presenting with total alopecia.

References

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