DISCUSSION

Cardiovascular syphilis has become a rarity in most countries, since the introduction of penicillin treatment has all but eliminated the tertiary manifestations of the disease. In South Africa, however, syphilis still remains an important cause of heart disease. Thus it accounts for 0.6% of all cases of cardiovascular disease at Groote Schuur Hospital. In non-Whites 1-2% of heart disease is due to syphilis—10 times higher than in Whites. Moreover, recent reports in the literature suggest that syphilis is again on the increase. Syphilis should always be considered when angina pectoris is encountered in the younger age-group, especially if other evidence of aortitis is present. Disproportionate angina in the presence of mild aortic incompetence is strongly suggestive of this condition. Positive serological tests are supportive evidence, but may be an incidental finding in a patient with coronary atherosclerosis.

The only certain way of establishing the diagnosis is by coronary angiography; the obstruction is localized to the coronary ostium, the rest of the coronary vascular tree being normal. The appearance is quite unlike coronary atherosclerosis where the obstructions are generally multiple and situated distal to the ostia. A full course of penicillin may sometimes be of value but has been very disappointing in our experience. Surgery is required to relieve the narrowed coronary ostia. It was of considerable benefit to our patient, even though the main manifestations were those of progressive heart failure due to myocardial disease. Presumably restoration of coronary blood flow relieved myocardial ischaemia and the heart failure was reversible.

SUMMARY

A case of atypical left chest pain, probably anginal in nature, with progressive heart failure culminating in acute paroxysmal nocturnal dyspnoea and severe disability, has been described. Auscultation initially revealed a gallop rhythm only, but later with control of the heart failure a soft early diastolic murmur became audible. Syphilitic coronary ostial disease was confirmed by coronary arteriography, normality restored by surgery, and a striking benefit resulted for the patient.

Syphilitic ostial disease must always be considered if angina pectoris occurs in a young man; if aortic incompetence is present; if the ascending aorta is dilated or calcified; or if disproportionate angina pectoris is present in the presence of aortic incompetence.

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REFERENCES


ALOPECIA AFTER TICK BITE

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Few parasites are as versatile as ticks in causing or transmitting diseases in man and domestic animals. The disorders of man in which ticks are involved are the following.1-3

**Dermatoses.** Acute local reactions include pain, itch, urticarial swelling, subcutaneous haemorrhage, necrosis and ulceration. Chronic reactions include ulceration; persistent papules, nodules or tumours whose histological appearances may suggest squamous carcinoma or some benign or malignant disease of the reticulo-endothelial system, eczema and lichenification and allergic reactions akin to papular urticaria.9 Tick bites are often sites for secondary bacterial infections and occasionally for myiasis.

**Envenomization.** Inoculation of toxic salivary fluids may result in severe systemic disturbances with generalized urticaria and vomiting (ixodism).

**Tick paralysis.** A toxin elaborated by some ticks causes an acute ascending flaccid paralysis which, in children, may be mistaken for infantile paralysis. Affected adults usually have paralysis of a limb.

**Otoacariasis.** Some ticks favour the auditory canal as a feeding site.

**Infections transmitted.** Diseases conveyed to man by ticks include rickettsioses (e.g. Rocky Mountain spotted fever; South African tick-bite fever), viroses (e.g. Colorado tick fever; loping ill), spirochaetoses (tick-borne relapsing fever), and bacterial infections (tularemia and, perhaps, erysipelas). Erythema chronicum migrans and acrodermatitis chronica atrophicans are almost certainly due to some micro-organism transmitted by ticks,4 and the list of tick-borne diseases is constantly being lengthened.

I have recently seen two patients with an unusual cutaneous reaction, alopecia of the scalp, following tick bite.

**Case Reports.**

The patients were children, a White boy aged 7 years and a Cape Coloured boy of 2 years. The sequence of events was identical in both. The mother accidentally discovered a tick firmly attached to the scalp and picked it off. Over the next week the hair fell out in a circle, 3 cm. in diameter around the bite, leaving the area quite bare. There was no systemic disturbance.

The children were first seen about 10 days after removal of the tick when hair loss had ceased (Fig. 1). In the centre of the bare area was a little scab which was removed to uncover a tiny clean depression. The bare scalp was normal in all respects except that the surface was slightly scaly. A few long hairs remained, but there were no stumps or exclamation-mark hairs such as are often found in alopecia areata. Hairs in the marginal area were normal and there was no increase...
of telogen hairs. No fungous elements were found in hairs or scales.

Fig 1. Alopecia after tick bite. State of scalp in White boy 10 days after removal of tick.

No further loss of hair occurred after the first week. Regrowth over the whole area was visible after 2 weeks in the case of the Cape Coloured boy; thereafter he was lost to view. The White boy, seen after a month, showed regrowth at the periphery of the lesion; after 2 months the whole area was covered with fine hairs 3-5 mm. long.

In neither case was it known how long the tick had been attached to the scalp before it was removed. The parasites had not been retained, and identification was impossible. In both cases the tick was described as small, hard and brown, suggesting that it was an ixodid tick.

DISCUSSION

A case identical to those described was seen in January 1965 by Dr. H. van der Meulen of Cape Town. The patient was a White boy aged 8 years. An area 4 cm. in diameter was denuded within a week of removal of a tick from the scalp. Regrowth was complete after 3 months except for a tiny central area which had been ulcerated.

I have discovered only one apparently identical case in the literature, that described by Sauphar as 'Alopécie peladoïde consécutive à une piqûre de tique.' Severe itch at the back of the head in an 8-year-old boy led to the discovery of a tick whose removal was followed by a chain of events the same as in my cases.

Ross and Friede described 2 cases of alopecia in children aged 8 and 11 years caused by the bites of Dermacentor variabilis. Multiple bites had produced a moth-eaten appearance of the occipital scalp reminiscent of that seen in the alopecia of secondary syphilis. Individual bare areas were oval in shape, the long axis measuring about 1-3 cm. The hair loss was permanent.

According to the authorities at the Veterinary Research Institute, Onderstepoort, Transvaal, cases similar to those I have described are not uncommon in animals, but they do not appear to have been reported in the literature. Such cases are generally associated with ticks possessing long mouth parts such as Hyalomma or Amblyomma. At the site of penetration of the mouth parts there occurs a focal necrosis surrounded by an erythematous zone. The salivary secretion of the tick contains unidentified substances which affect hair follicles causing the hair to fall, leaving a squamous appearance of the skin surrounding the bite.

A case of alopecia following the bites of ixodid ticks in a horse (South African) is illustrated in the Corpus Iconum Morborum Cutaneorum.

The earliest relevant comment is cited by Nuttall and Warburton. Pliny, in his Historia Naturalis, relates that the blood of a healthy pulled-out tick is said to act as a depilatory.

Tick saliva contains spreading agents and anticoagulants and may contain toxins and substances causing haemolysis, agglutination, histolysis and local anaesthesia. I had thought that a toxin might be the cause of the alopecia in these cases, but Arthur Rook (Cambridge, England) suggested that anticoagulants were equally suspect. Anticoagulants are at present the commonest cause of chemical alopecia, and all those in use, heparin, the heparinoids and the coumarins, will induce alopecia. The alopecia they produce is fundamentally of the telogen effluvium type, but their mode of action on the hair follicle is uncertain. Heparin has some antimitotic activity, but other mechanisms are probably concerned.

Lack of accurate information about the ticks involved and about the nature and constituents of tick saliva make further speculation pointless.

SUMMARY

Two cases are described in which localized alopecia followed the removal of a tick from the scalp. The alopecia is not permanent. The role of ticks as causes or vectors of disease in man is briefly discussed.

REFERENCES