

of overt safeguards (in England) for the parents at the crux of the action, especially the dull and mentally handicapped. We believe that arrangements for reporting care actions in under-5s should be changed, separating out all instances of statutory removal of the newborn and children in their first three months of life. This would allow more detailed scrutiny of very early care actions and maternal abandonment for research and would enable better evaluation of a practice that has emerged tentatively over the past ten years. It would also provide more answers to questions about the drastic use of statutory powers and would, we believe, place the procedure in the context of all child care proceedings. We believe that removal at birth is occasionally necessary and appropriate, but that more information is needed before proper criteria can be recognised and agreed. We had, for instance, wrongly assumed that psychotic illness or severe mental handicap only would justify removal of first-born children.

Care will be needed in avoiding some extremes of intervention in the perinatal period, when all that may be required is to hold the mother and baby together while further inquiries and assessment are set in motion, as advocated recently by Dr Christina Cooper.<sup>14</sup> Donald Bross, in a paper presented at the 2nd International Congress on Child Abuse and Neglect in 1978, suggested ways in which various US State laws might be used to bring about some control over a woman in late pregnancy and at childbirth. In Britain wardship might be tried<sup>13</sup> to treat mother and baby as one entity, a particularly relevant possibility as more mother-and-child residential assessment units are developed.

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## Outside Europe

### Smoking and Africa: the coming epidemic

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Over the past 30 years cigarette smoking has become the main environmental cause of disease and death in many developed countries. This contrasts with the state of affairs in developing countries, where diseases of infection and malnutrition are the main source of reduced life expectation. A recent World Health Organisation report<sup>1</sup> directed attention to the immediate and serious threat of smoking diseases in the developing world. It considered that without strong and resolute action "smoking diseases will appear in developing countries before communicable diseases and malnutrition have been controlled." WHO's Director General recently named smoking as "Probably the largest single preventable cause of ill-health in the world."

This paper describes the development of tobacco smoking in Africa, suggests that smoking-related diseases similar to those seen in Western countries may be beginning to emerge there as well, and illustrates how consumption is rising and how this is being promoted.

#### The smoking habit

Tobacco was introduced into Africa in the fourteenth century, when the Turks brought it to Egypt.<sup>2</sup> About the year 1560 Portuguese and Spaniards brought tobacco to east Africa, and from there its cultivation spread to central, west, and south Africa.<sup>3</sup> An English sea captain, Crowley, was the first to report tobacco smoking in Africa in the year 1607.<sup>4</sup> Calling at Sierra Leone on his way to the East Indies, he saw "Tobacco growing in small patches and natives smoking it." The smoking habits of Africans are governed by local custom and economic status. Cigarette smoking is replacing the traditional pipe or hookah, which is still used, especially in rural areas. The prevalence of smoking is higher in urban than in rural areas, where only men used to smoke, but the proportion of women who smoke is now rising, as in Egypt.<sup>2</sup> In Lagos 42% of men and 2.4% of women smoke cigarettes.<sup>5</sup> In Senegal 80% of urban men but only 15% of rural men smoke cigarettes.<sup>6</sup> In the towns smokers start younger and smoke more; 62% of black workers in a Johannesburg factory smoked cigarettes.<sup>7</sup>

Smoking is increasing among African children and adolescents. Forty per cent of boys and 8.4% of girls from a Nigerian secondary school smoked.<sup>8</sup> In Uganda 33.4% of male and 7% of female students were found to smoke and 85% of them had already started smoking before entering university.<sup>9</sup> A South African study of 1505 children at 12 high schools showed that 16% were regular smokers.<sup>10</sup>

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## Smoking-related diseases in Africa

A review of smoking-related diseases in Africa shows that they are already making their appearance. Thus the two commonest types of cancer in the Natal Bantu are of the lung and the oesophagus.<sup>11 12</sup> The incidence rates of lung cancer are among the highest in the world and for men lie between those of the USA and those of England and Wales at 24 cases per 100 000 population.<sup>11 12</sup> Altogether 72.2% of the cases in men occur between the ages of 40 and 64 compared with 38% in the UK. Lung cancer in men has increased sixfold and in women about fivefold over 11 years. Schonland and Bradshaw concluded that: "The present rate of lung cancer in urban Bantu of Natal is a recent phenomenon and is an expression of a rising tendency which may not have reached its peak." They also noted that the distribution of lung cancer in Natal Bantu was higher in areas where there were more white people, suggesting an association with better economic opportunities. The table records results in other studies from southern Africa and shows much higher smoking rates in patients with lung cancer than in controls.

Cigarette consumption in black Africans among lung cancer patients and controls

Country	Author	No studied	% of cigarette smokers among:	
			Patients with lung cancer	Controls
Rhodesia	Cookson <i>et al</i> <sup>13</sup> (1974)	234	78.5	38
Rhodesia	Gelfand <i>et al</i> <sup>14</sup> (1968)	32	87.5	22
South Africa	Schonland and Bradshaw <sup>15</sup> (1969)	45	91	60

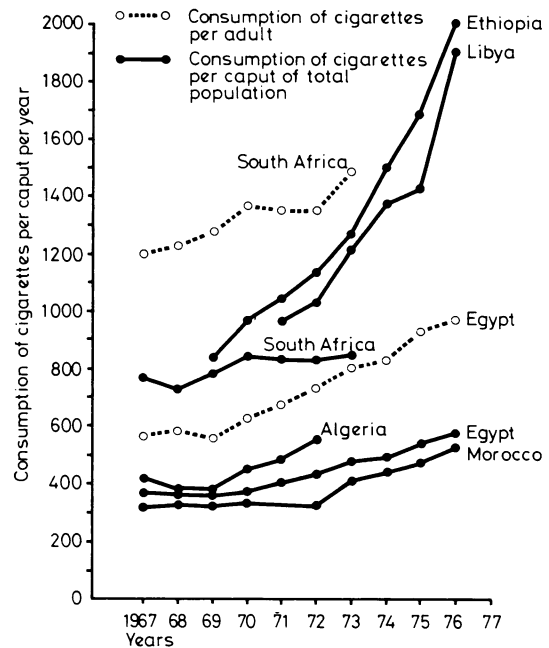
The incidence of carcinoma of the oesophagus in blacks in Durban, South Africa, and Rhodesia is among the highest in the world, exceeded only by that in Turkmenistan, USSR.<sup>15</sup> Though the figures are small, all 26 black patients from Rhodesia with cancer of the oesophagus were smokers compared with just over half of a control group.<sup>16</sup> Again, a study in 196 African patients with oesophageal cancer seen in Johannesburg, and compared with 1064 control patients,<sup>17</sup> showed close association between pipe smoking and oesophageal cancer. Of 135 patients with oesophageal cancer from the Sudan, nearly half were women.<sup>18</sup> The habit of placing tobacco mixed with other substances under the tongue or in the labiodental groove, a habit Sudanese women share with men, was thought likely to be an important factor.

Other suggestive associations with cigarette smoking in African subjects are bladder cancer,<sup>19 20</sup> myocardial infarction,<sup>21</sup> and chronic bronchitis.<sup>22</sup>

## Cigarette consumption and promotion

Cigarette consumption was examined in the six African countries where statistics were available<sup>23</sup> (figure). In all of them it rose steeply between 1967 and 1976 and actually doubled in Libya and Ethiopia. In Egypt and South Africa adult as well as total cigarette consumption were recorded and were consequently higher. In Egypt the cigarette sales of the Eastern Tobacco Company increased by 23% between 1976 and 1978 but sales of imported cigarettes rose by 25% between 1977 and 1978 (Dr Sherif Omer, personal communication, 1979). Between 1965 and 1976 the volume of tobacco imports into Africa almost doubled, reflecting rising tobacco consumption in several countries.<sup>24</sup> "The world's largest airlift of cigarettes is operated from Britain to two countries in Eastern Africa. About 210 metric tons of cigarettes are carried every month from London to Sudan and Somalia. These flights are operated for BAT (UK and Export) Ltd, the British subsidiary of British American Tobacco. It is estimated that this contract for Khartoum and Mogadishu in Somalia is worth about \$6.54 million annually and the tobacco company uses the airlift to export between eight and 10% of its UK export tonnage."<sup>24a</sup> Cigarette smuggling is common in some African countries and is thought to account for about one-third of total consumption in the Sudan.

Many African countries plan to expand tobacco growth so that they can supply their own needs and also export tobacco.<sup>25</sup> Tanzania's tobacco output increased sevenfold between 1962 and 1974 and is likely to do so further with the help of the International Development Association, which is affiliated to the World Bank.<sup>26 27</sup> Nigeria has increased tobacco cultivation by about 10% a year to meet local demands. Zaire, whose imports of tobacco rose by about 30% between 1969 and 1973, expects to be self-sufficient by 1980.<sup>28 29</sup>



Consumption of cigarettes in six African countries from 1967 to 1976.

Cigarettes are heavily promoted in Africa. Wickström studied cigarette marketing in Kenya and Ghana.<sup>30</sup> He found heavy tobacco advertising and an efficient distribution network for cigarettes in all parts of both countries. In Kenya, although the tobacco industry is a British American Tobacco subsidiary with a Government monopoly, advertisement is said to be "quite liberal and more aggressive than in either the UK or US,"<sup>30</sup> indicating that advertising sells the product, as well as increasing brand shares as the industry claims. Smoking is presented as a socially desirable custom by showing young and happy people and by relating smoking to manliness and success in life. There are no significant restrictions on advertising and no Government warning on the packet. In Ghana the cigarette industry is active in sponsoring sports and social events.<sup>30</sup>

## Discussion

In Western countries cigarette smoking had been widespread for about 30 years before its association with lung cancer, chronic bronchitis, and coronary heart disease was recognised. This has led some Governments and health authorities to try to persuade people not to smoke; and in some developed countries, including the USA and UK, consumption has already begun to fall. As a result tobacco companies have started to diversify and also to intensify promotion of cigarettes and the growth of tobacco in the Third World. Although mean tobacco consumption in Africa is much less than in Western Europe and North America, the rate of increase is much faster and is thought to have increased by about one-third between 1970 and 1978.

Tobacco exports from Britain are valued at about £250m a year, but much of the profits of the British-based tobacco companies comes from their subsidiaries in African and other developing countries. This has been encouraged by development grants for new tobacco factories in the UK, which have been valued at £30m between 1972 and 1979, and by the Queen's Award for Exports to Rothmans in 1977.

Cigarettes bought in the UK may have much lower tar and nicotine contents than the same named brands bought in Africa. When tested in the Oakridge National Laboratory, USA, State Express 555 bought in Nairobi was found to contain 31 mg of tar and 2 mg of nicotine, while in England it contained 18 mg of tar and 0.9 mg of nicotine.<sup>30</sup> The short-term economic benefits

of tobacco for developing countries are now believed to be outweighed by the long-term disadvantages.

British American Tobacco has denied that there is evidence to show that smoking causes disease in the developing world. In 1976 its chairman stated: "In most developing countries consumption of cigarettes is very low and in some cases very low indeed. In India, to take an extreme case, the per capita consumption is less than one-third of a cigarette per day and there is, as far as we know, no statistical association between smoking and health in these countries" (reply at annual general meeting).

The present situation in southern Africa combined with experience in India, where tobacco-related diseases are prevalent, appears to show that British American Tobacco had not studied the lessons to be drawn. It is tragic that these countries should be the scene of operations for three of the world's largest tobacco companies, which are based in Britain (British American Tobacco, Imperial Tobacco, and Rothmans), especially since many British universities and individual doctors have done much to build up health services and medical education in these developing countries. The Government should be urged to control the export of tobacco to developing countries in Africa. Cigarette smoking has already sown the seeds of a new epidemic in Africa, and some of the results are already apparent.

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In German reports "neutrophile stabkernige" and "neutrophile segmentkernige" leucocytes are identified separately in routine differential leucocyte counts. If this differentiation has clinical validity what are the relative norms for these values and why do we not observe this differentiation routinely?

*Neutrophile stabkernige* or stab cells are unsegmented—that is, immature neutrophils. Normally neutrophils are not released from the marrow until the nucleus has become segmented (*neutrophile segmentkernige*), so the proportion of stab cells in the peripheral blood is very low. Stab cells are seen in the blood as a result of early release from the marrow, the most common cause being bacterial infection, though it may accompany the marrow response to haemorrhage or haemolysis. Such an increase in stab cells is usually reported as a "shift to the left" of the neutrophils; little extra information would be gained from an exact differential count. If necessary a bone marrow will provide more useful information about white cell production. A shift to the left is usually accompanied by a neutrophil leucocytosis and often by toxic granulation of the neutrophils. In severe bacterial infections and in malaria there may, however, be a fall in the total neutrophil count, and the presence of a left shift is a useful indication of infection. In chronic neutropenia of childhood there may also be a left shift together with a reduction in total neutrophil count. In some forms of leukaemia and myeloproliferative disorders there may be a left shift of the neutrophils as part of a range of primitive myeloid cells.

When an addict has had a dose of morphine or heroin sufficient to cause miosis, is there any drug, including cocaine, that will counteract the miosis and dilate the pupil? If so what type of dosage would be required? Could the miosis be counteracted by homatropin eye drops?

Miosis due to morphine and related drugs originates centrally and is the result of overactivity of the parasympathetic part of the third nerve nucleus. This is transmitted by the third nerve via synapses in the ciliary ganglion to acetylcholine-releasing nerve endings at the pupil sphincter. Intravenous injection of the morphine antagonist naloxone to the patient after an overdose of morphine relieves the miosis even before the patient regains consciousness, a useful indication that the miosis and coma are due to morphine or related substance. The effect of morphine can be counteracted peripherally by eye drops containing any of the atropine-like drugs, which block the action of acetylcholine on the pupil sphincter. Homatropine is one such drug, but it is relatively ineffective and slow to act. The faster acting drugs such as cyclopentolate 1% (Mydrilate) or tropicamide 1% (Mydriacyl) should prove more useful. For a prolonged effect atropine itself is the most effective and the 1% drops may be used daily. If the effect is excessive then homatropine 1% or 2% should be substituted. The patient may experience poor near vision owing to poor accommodation. Eye drops containing drugs that stimulate the pupil dilator will enhance the dilating action of the atropine types. This group includes phenylephrine and cocaine. These drugs used alone cannot be expected to have a useful effect.