Role of surgery in pulmonary multidrug-resistant tuberculosis

L Peter Ormerod

Feasible in the context of a good national programme in resource-limited settings, but doubts remain over how widely this may be able to be implemented

Multidrug-resistant tuberculosis (MDR-TB) is a form of TB with high level resistance to both isoniazid and rifampicin, with or without associated resistance to other antituberculosis drugs. The spectrum of this form of TB now ranges from ‘basic’ MDR-TB, with resistance only to rifampicin and isoniazid, to XDR-TB where there is additional extensive drug resistance to at least three of the six main classes of second-line antituberculosis drugs. The extent of the problem of MDR-TB has been examined by cross-sectional surveys of drug resistance either in clinical series or in limited settings, but doubts remain over how widely this may be able to be implemented. 

In this issue of Thorax (see p 416) Somocurcio et al. assess the usefulness of resectional surgery for pulmonary MDR-TB as an adjunct to a national TB control programme in the resource-limited setting of Peru. Pulmonary resection for TB largely ceased in the 1950s following the introduction of combination treatment with streptomycin, isoniazid and PAS. With the development of MDR-TB from the late 1970s following the introduction of rifampicin-containing regimens, surgery for highly selected cases in a first-world national centre was shown to be effective. Patient selection was by high-grade drug resistance and disease sufficiently localised to be able to resect most of it. This unit has since reported their experience of 172 patients over 17 years, with a 30 day mortality of 3.3% and a late mortality of 6.8%. Patients received individualised regimens based on their drug susceptibility profiles, continued for up to 24 months after surgery. Smaller studies in South Korea, Turkey, Taiwan, Turkey and South Africa have also shown some benefit of surgery. The selection criteria for some of these studies were similar to those in the USA, but differed in some or were not given, and few were part of a structured national programme for MDR-TB.

HIV-positive patients were excluded in the studies from Turkey, Taiwan, Turkey and South Africa, but the HIV status of the patients in Taiwan and USA is not given. Routine HIV testing was not done in Taiwan. The exclusion of HIV-positive individuals, who in the UK have a nine times higher likelihood of dying of MDR-TB treated mainly medically, will limit the number of cases in sub-Saharan Africa in particular, to whom the possibility of surgery could apply.

Somocurcio et al. show that good results can be achieved in a relatively resource-poor setting. Peru, however, is a middle income country with a strong TB control programme and (as yet) little HIV. Where there is a poor TB control programme, more HIV or a lower national income, such results will not be possible. The irony remains that the distribution of MDR-TB, even more than TB in general, is in resource-poor countries, and less than 1% is in developed countries with the medical and surgical infrastructure to support the systematic and selective management of patients with complex MDR-TB.


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