Report of the WHO Informal Meeting on use of triclabendazole in fascioliasis control

WHO headquarters, Geneva, Switzerland
17–18 October 2006

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Abbreviations

Ab	antibodies
CL1	cathepsyn L1
ELISA	enzyme-linked immunosorbent assay
Fas2	fasciola hepatica cystein proteinase antigen 2
FBT	foodborne trematodiases
FES-Ag	fasciola excretory-secretory antigen
Ig E, Ig G, IgM	immunoglobulins E, G, M
MoH	Ministry of Health
NCP	national control programme
PCR	polymerase chain reaction
TCZ	triclabendazole
WHO	World Health Organization

Summary

Human fascioliasis is a major public health problem in several areas of the world, including the highlands of Bolivia, Ecuador and Peru, the Nile Delta in Egypt, and central Viet Nam. The infection is global in its distribution; it is estimated that at least 2.4 million people are infected, with more than 180 million at risk of infection. While normally an infection of cattle and sheep, environmental modifications and changes in human behaviour are defining new geographical limits and populations at risk for fascioliasis.

Fascioliasis is caused by the liver flukes *Fasciola hepatica and F. gigantica*. Infection occurs when humans consume uncooked aquatic vegetables or drink fresh water contaminated with parasite larvae.

Triclabendazole (TCZ) is the treatment of choice for fascioliasis and is effective at a single dose of 10 mg/kg body weight against the adult parasites in the bile ducts and immature flukes migrating through the liver. TCZ has been used during outbreaks in several countries and for selective treatment of infected individuals in a control programme in the Nile Delta of Egypt. It has not been used in large community-based control programmes because of its limited availability.

Discussions are ongoing to provide a large quantity of TCZ, through the World Health Organization (WHO), for the treatment of human fascioliasis in countries with a high burden of the disease. This will make it possible to scale up treatment at community level. Towards this end, an informal meeting on the use of TCZ in fascioliasis control was convened from 17 to 18 October 2006 at WHO headquarters in Geneva to discuss how such a scale up of fascioliasis control at community level could be implemented, monitored and reported.

The objectives of the meeting were:

1. To determine how TCZ may be used in community-based settings in Bolivia, Egypt, Peru and Viet Nam.
2. To discuss and agree upon a protocol for surveillance of adverse reactions that may arise in community-based use of TCZ.
3. To discuss monitoring the impact of treatment with TCZ on morbidity.

Introduction

Foodborne trematodiases (FBTs), including fascioliasis, are neglected in the international public health arena, even in comparison with other helminthic diseases. Even if they cannot be considered as global public health priorities, FBTs are regional and local health priorities for control in several areas of the world. The anthelminthic drugs recommended by the World Health Organization (WHO) as essential drugs to treat these diseases, namely praziquantel and triclabendazole (TCZ), are effective, safe and simple to administer, making treatment on a community-wide basis, and by non-medical staff where necessary, a recommended control option.

WHO recommends the inclusion of FBTs in the group of helminthic diseases whose control relies on the preventive chemotherapy concept, i.e. early administration of anthelminthic drugs, either alone or in combination, to infected individuals to prevent overt morbidity in later stages of life.

The operational implementation of preventive chemotherapy implies the distribution of anthelminthic drugs to the maximum number of people at risk of developing morbidity by making such drugs available at the peripheral levels of the health system, without the need for individual diagnosis. In many resource-poor settings, referral to a proper diagnostic and treatment centre is not a sustainable option; furthermore, in most cases, referral is not necessary as the recommended anthelminthic drugs are safe, with mild and transitory side-effects mainly attributable to killing of parasites and not to the drugs themselves. In this regard, precautions may be necessary during the first rounds of large-scale interventions distributing drugs in areas where helminthic diseases are highly prevalent (due to the high proportion of high-intensity infections). At subsequent rounds, the overall intensity of infections will have been sufficiently reduced to allow for less strict surveillance measures.

The drug distribution strategy may vary according to prevailing epidemiological, logistic and social conditions. Where infected patients adopt early health-seeking behaviour (for example due to early onset of symptomatology) and the health system works properly, treatment should be included in the routine activities of health centres, through an individual case-management approach. In other settings, where prevalence of infection is relatively low and the health system has the capacity to screen a large number of people, active interventions implementing selective treatment of infected individuals may