Managing a large Outbreak of Trichinellosis in Belgium associated with Consumption of Imported Wild Boar Meat

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Introduction

Trichinellosis is a parasitic zoonosis caused by ingestion of raw or undercooked meat containing larvae of the genus Trichinella (Fig 1). Since the implementation of European Union Directives requiring the examination of wild boar, domestic pig and horse meat for Trichinella species, there was a sharp decline in incidence rates. The last reported outbreak in Belgium occurred in 1979. In November 2014, 16 patients were diagnosed with trichinellosis after consumption of imported wild boar meat in three Belgian restaurants.

Results-1

16 patients were eventually diagnosed with trichinellosis. Two groups could be distinguished: patients who consumed a full dish of slowly roasted wild boar fillet (severe exposure, n=10) and patients who ate small portions of fillet or wild boar stew (mild exposure, n=6). Patients with severe exposure showed a significantly shorter incubation period: mean 10 days (range 6-21 days) versus 22 days (range 19-24 days), p<0.0001. The most frequently reported symptoms included bilateral periorbital edema, fever and muscular tenderness (Fig 2). Muscle biopsies revealed first stage Trichinella larvae, confirmed as T. spiralis by PCR (Fig 3). After a 14 day course of anti-helminthica (mebendazole 900 to 1500mg daily, n=14; albendazole 800mg daily, n=2) with or without prednisolone, most patients had an uneventful recovery. One patient had persisting neurological complaints of tremor and impaired coordination 2 months later.

Conclusions

Despite EU control measures, even in a non-endemic country trichinellosis remains a threat to food chain safety in 2015. An outbreak of trichinellosis should be suspected if patients are clustered and/or have been exposed to wild (boar) meat. This report highlights the importance of local networks and agencies which can take swift action when a food-borne outbreak is detected.