ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD

AD HOC GROUP ON VULNERABLE GROUPS: INTERIM REPORT

Increased incidence of listeria in the UK

Introduction

1. This interim report outlines work undertaken to date by the *ad hoc* Group to consider the apparent change in epidemiology of human *Listeria monocytogenes* infection in the UK characterised by the reported increased incidence of listeriosis from 2001. The terms of reference of the Group and its constitution are shown in Appendix 1.

2. This work was undertaken by the *ad hoc* Group following reports from the Health Protection Agency to ACMSF, which indicated that the incidence of listeriosis in England and Wales remained higher than pre-2001 levels. An increase was also reported in Scotland. The disease occurred predominantly in older patients (over 60 age group) with bacteraemia in the absence of CNS infection. Subsequent updates confirmed that the increase in listeriosis had continued into 2007 in these countries and an increase was also reported in Northern Ireland in 2006/7. Similar increases were also reported in other European countries including France and Germany.

3. Having considered documentary and oral evidence from a wide range of sources, the Group is currently in the process of drawing together its conclusions and recommendations on this issue.

Overview

4. The Group set out several possible areas of activity to try to identify the cause of the change in epidemiology of *L. monocytogenes* infection in the over 60s age group as a series of hypotheses. There were that:

- The rise in cases of listeriosis in compromised people over 60 years of age is an artefact associated with improved case recognition;
- The pathogen, *L. monocytogenes,* has become more virulent and ‘new’ strains are better able to cause bacteraemia;
- The population predominantly affected by the recent increase has become more susceptible to infection with listeria; and
- Levels of exposure have increased.

5. Consideration of these hypotheses by the Group was undertaken within a risk framework, which assessed hazard identification and characterisation, and exposure assessment. To support this work the Group also briefly considered some aspects of risk management.

6. To challenge the hypotheses, the Group considered information on the organism L. *monocytogenes* and disease, including its occurrence, survival, virulence and behaviour in food and the food chain. The epidemiology of the organism was reviewed including transmission and trends in listeriosis in UK, EU and other countries. UK data on human *L. monocytogenes* sub types in relation to food exposure, history and comparison with food isolate typing data were also examined. To assess whether the rise in cases of listeriosis was artefactual, blood culture and sampling trends in the general population, including the elderly were discussed and changes in clinical assessment in the over 60s were considered. Other areas of investigation included listeria surveillance in foods, shelf life, changes in chilled food production and food safety controls. To support this work the Group received a presentation from the Greater Manchester/Lancashire/Preston Public Health Laboratory Liaison group on the findings of a recent survey of the microbiological quality of modified atmosphere packaged cooked meats which included listeria data for ready to eat foods.

7. The Group also examined demographic trends, social and behavioural factors in the over 60s age group including market research data on shopping and consumption patterns, food storage and handling behaviours. Other factors affecting vulnerable groups were explored, including changes in medical practice and vulnerable group care, malnutrition, treatment of dyspepsia and other non-behavioural factors, which might render the elderly at increased risk of listeriosis. Risk factors and underlying assumptions to assess to whether the target population had become more susceptible to listeria were evaluated. UK, and international consumer guidance on the risks posed by listeria was also reviewed.

Outcome

8. Having reviewed the issues regarding the change in epidemiology of human *Listeria monocytogenes* infection in the UK, the Group is satisfied that it has met with key individuals and reviewed sufficient documentary evidence to allow it to inform the development of ACMSF advice to the Food Standards Agency.

9. The Group is currently drafting a full report of the outcome of its deliberations. This Report will be submitted to the ACMSF for consideration at its September 2008 meeting.

***Ad Hoc* Group on Vulnerable Groups**
May 2008

APPENDIX 1

Ad Hoc Group on Vulnerable Groups

Terms of reference

To examine the potential risks to vulnerable groups including the elderly in relation to the microbiological safety of food by

- considering factors that make people vulnerable in order to define vulnerable groups in relation to foodborne disease;
- identifying key hazards for key vulnerable groups for review;
- assessing the impact of changing patterns of food consumption and behaviour on risks to these groups;
- assessing/reviewing the value/adequacy of current advice and controls and whether it is appropriate;
- advising the ACMSF on the need for changes in advice/recommendations on vulnerable groups and identifying gaps/research needs.

Chair
Professor Tom Humphrey (current)
Professor Paul Hunter (April 2007 to December 2007)

Members
Mr John Bassett
Mr Alec Kyriakides
Dr Richard Holliman
Mrs Jenny Morris
Ms Susan Davies (to March 2008)
Professor John Coia
Dr Jim McLauchlin
Ms Ceridwen Roberts
Professor Kevin Kerr

Assessors
Dr Judith Hilton (FSA)
Mr Stephen Wyllie (Defra)

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Miss Sarah Butler