Site News

The months since the August Chicago Symposium have flown by in a flurry of activity. **We are happy to announce that TheCrohnsInfection.org will continue as a permanent site**, not only to house the videos from the Chicago Symposium, but also to provide new information about the role of mycobacteria in Crohn's disease. We envision expanding into the potential role that mycobacteria may play in other diseases such as Multiple Sclerosis, Type 1 Diabetes, Lupus and Rheumatoid Arthritis as new research is published.

2016 promises to be a year of discovery in this field. TheCrohnsInfection.org is dedicated to providing the most up-to-date information in our field to assist patients around the world make informed decisions about their treatment. The "What's New" feature was added to make this easier for our readers. We are grateful for the support of this community and look forward to taking this journey together.

Research Corner

Below we have summarized some recent mycobacterial research articles. While we've simplified the content in an attempt to make it accessible to everyone, we've also provided links if you'd like to view the source and read the full article/abstract. While this is not an exhaustive list, we thought these articles were the most pertinent to the focus of the site.

**Genetic diversity of *Mycobacterium avium* subspecies *paratuberculosis* and the influence of strain type on infection and pathogenesis: a review.** (June 2015)

This article pertains to MAP in the veterinary sense, though some correlations can be instructive for the human population, such as the idea that MAP strain variation influences host response and disease progression. Although researchers have been aware since the 1930's that different strains of MAP exist, the technology to define them based on their DNA has only recently been developed. Understanding these differences leads to better treatment methods for Johne's disease and advances in diagnostic tests and vaccines.

The major groups of MAP are Sheep type and Cattle type. Within these groups there are sub-types generally due to which host the bacteria has infected. In humans, the MAP isolates tend to be closer to the Cattle type. The Cattle type tends to grow more quickly, is easier to isolate, seems to survive outside the host better, is more virulent in some hosts and has been found in non-ruminants. Both types show evidence of interspecies transmission. Vaccines should be effective against both types.


This is an interesting article because it is based on a survey of experts, and reflects their current opinion on the topic of MAP as a health hazard to humans. The article begins,

There is reasonable evidence for a positive association between MAP and Crohn's disease in humans. It has developed pathogenic qualities similar to M. tuberculosis, which enable it to invade and replicate within macrophages of the gastrointestinal tract.

Queries in four major categories asked about (1) the risk of MAP to humans, (2) exposure routes and the direction of future research, (3) existing governmental programs and (4) the allocation of resources.

Only 18.8% believed that MAP posed low or no risk to public health. The majority thought that the most likely exposure route was contact with ruminants and dairy products. 92% thought the government should be allocating resources for MAP research, but 68.4% believed the current governmental interventions were appropriate. Much uncertainty about the role of MAP in humans was found. Not surprisingly, the longer the responder had worked with MAP, the greater the risk to human health they reported.


Mycobacterium avium subspecies hominissuis in Crohn’s disease: a case report. (October 2015)

PZM Diagnostics in West Virginia cultured MAH from the blood of a 21 year old Crohn's disease patient. This is of interest because blood is generally thought to be sterile, and it shows a mycobacterial species (other than MAP) living in the blood of a Crohn's patient. It appears that the researchers were attempting to grow MAP, but instead grew MAH. MAH is a known animal pathogen. This is the first case to be isolated in a human. PCR analysis was negative for the standard MAP IS900 sequence, but positive for the IS1245 MAH sequence.


Clostridium difficile Infection: A Rarity in Patients Receiving Chronic Antibiotic Treatment for Crohn's Disease. (December 2015)

In this abstract, the authors found that C. Diff infections were uncommon in patients receiving long term antibiotic therapy for Crohn's disease. The 100 patients studied were being treated with some form of antibiotic therapy for an average of 40 months, about half taking a non-antibiotic therapy in addition. Only 2% experienced a C. Diff infection. This is considerably lower than patients treated with long term antibiotics for other, non-Crohn's conditions.


Combining infliximab, anti-MAP and hyperbaric oxygen therapy for resistant fistulizing Crohn’s disease. (September 2015)

In this study, nine patients with fistulas that had failed to heal using conventional therapies experienced full healing when the three title treatments were combined. The table in the article details the type of fistula, prior treatments, number of infliximab doses, combination of Anti-MAP therapy and number of HBOT sessions for each patient. "The synergistic effect experienced in these patients may be explained by the differing and potentially complementary actions of these therapies.” Because fistulas respond poorly to available treatments, this small study could yield promising results in a larger population.

The Hruska postulate of Crohn's disease. (December 2015)

In this article, Dr. Gilles R.G. Monif argues that Crohn's disease is an immune mediated disease rather than an automimmune disease. Explained more fully in his recently published book, Dr. Monif explains that Crohn's disease results when the immune system doesn't initially recognize MAP and it's variants as harmful. Upon re-exposure, an ineffective immune response is launched, resulting in disease. For a more detailed historical and scientific discussion of the role of mycobacteria in Crohn's and other disease processes, including a superhypothesis which combines years of published literature, see this 2014 article by Dr. Hruska.


Detection of viable Mycobacterium avium subspecies paratuberculosis in powdered infant formula by phage-PCR and confirmed by culture. (January 2016)

Researchers from Cyprus, the Czech Republic and the United Kingdom used multiple MAP detection methods to test powdered infant formula. The premise of the experiment was that since viable MAP is found in milk, and infant formula is derived from milk, infant formula may also contain viable MAP. 32 samples were tested. Using phage-PCR assay, viable MAP was found in 13% of the infant formula samples. 9% of samples grew MAP in culture. The positive culture samples were also phage-PCR positive. The conclusion was that, "the presence of viable MAP in powdered infant formula is a potential public health concern."


Other News

In September, Giles Monif, MD published The Prevention of Crohn's Disease, a $0.99 e-book discussing MAP and its relation to Crohn's disease. Chapters such as Zoonotic Bridges, Revamping MAP's Natural History and A Voice Within the Dome of Silence sound intriguing.

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