

# Zoonoses and Food Hygiene News

Vol. 18 No. 1 January to March 2012

ISSN: 2091-0932 (Print), 2091-0940 (Online)

Government of Nepal, Registration Number: 148/049/050

***This Issue has been supported by International Development Research Centre (IDRC), Ottawa, Canada***

**Editor-in-Chief**

**Dr. DurgaDatt Joshi**

**Managing Editor**

**Dr. Billy R. Heron, USA.**

**Editorial Panel**

**Prof. Dr. P.N. Mishra**

**Dr. P. R. Bista**

**Ms. Minu Sharma**

**Dr. Bikash Bhattarai**

**Ms. Meena Dahal**

**Email:** [joshi.durgadatt@yahoo.com](mailto:joshi.durgadatt@yahoo.com), [ddjoshi@healthnet.org.np](mailto:ddjoshi@healthnet.org.np),

**Website:** [www.nzfhrc.org.np](http://www.nzfhrc.org.np)

*Zoonoses and Food Hygiene News, published four times a year, provides a medium for disseminating technical information on matters related to zoonoses and food hygiene generated in the world, particularly in Nepal. The editors welcome submissions on these topics with appropriate illustrations and references. The views and opinions expressed in the News are those of the authors.*

## **CONTENTS:**

- ☞ **Review on Bird Flu H5N1 (Avian Influenza – AI) Outbreak in Eastern and Central Parts of Nepal during the year 2012**
- ☞ **Study of Allergy Cases and Autoimmune Diseases in Kathmandu Medical College and Teaching Hospital, Kathmandu, Nepal**
- ☞ **JE Project Activities Reported by NZFHRC**
- ☞ **News**

## **Review on Bird Flu H5N1 (Avian Influenza – AI) Outbreak in Eastern and Central Parts of Nepal during early 2012**

**D. D. Joshi, Executive Chairman, NZFHRC**

Bird flu H5N1 (Avian Influenza, AI) is a viral zoonotic disease. This is highly pathogenic strain of flu virus. According to WHO, AI is fatal in 60% of human cases but it has not been transmitted between humans so far. The possible scare of H5N1 flu virus is regarding the strains produced after mutation which might be very much dangerous for transmission between humans and it has raised a serious concern about the possible risk and misuses in future.

## **First outbreak in Sunsari district was reported, confirmed and declared by the government of Nepal on February 3, 2012:**

The government of Nepal confirmed outbreak of the deadly H5N1 strain of AI at Pathibhara Poultry Farm and the PK Poultry Farm and Suppliers in the Sunsari district. Authorities had suspected outbreak of AI after death of more than 5,000 fowls with unidentified disease in Sunsari. More than 3,000 chickens at Khanar-based Pathibhara poultry farm and over 3,500 chickens at Itahari-based PK poultry farm died owing to the unknown disease. However, the confirmation of H5N1 infection in poultry was made after the report of a lab test performed in UK – based international laboratory. During the same period, some 600 fowls died in Rina's poultry farm and over 500 chickens have died in Satherjhora-8, around 15 km south-west of the two AI outbreak sites in Sunsari, according to the government officials. In total, more than 7,000 poultry birds were victimized because of AI in Sunsari during the first outbreak.

A rapid response team led by Dr. Bol Raj Acharya from the Eastern Regional Veterinary Health Directorate Office, Morang and the

District Livestock Service Office, Sunsari started cleaning and clearing action after the confirmation. Locals at Khanar had obstructed work of the response team for some time citing delay in action. The response team sprayed disinfectants and buried chicken feces and litter at the Pathibhara farm. The team sprinkled lime powder and Virkon-S at each poultry farm and premises from where the infected chickens were found. The response team culled over 2400 poultry birds in the outbreak area and maintained continuous monitoring over the poultry supplies in the district. The government provided Rs.50 for each chicken under 6 weeks and Rs130 for chicken above six months. The Pathibhara and PK poultry farms where avian influenza was confirmed have been sealed for 90 days according to the officials. The district health office of Sunsari also had mobilized health workers at flu infected areas and performed health checkup of suspects.

## **Second outbreak in Ilam and Panchthar was declared and reported on February 5<sup>th</sup> 2012**

After the samples of dead poultry birds sent to London-based International Laboratory tested positive, AI was confirmed in the fowls of Ilam in Phakphok VDC-2 and Panchthar districts. Rapid response team including Dr. Ganesh Raj Pant was involved in AI outbreak area for clearing and cleansing activity. The response team suggested that they need to cull around 1,500 fowls kept by 200 houses nearby. Around 300 chickens have been slaughtered in Ghurbise Panchami, an area along the border of the two districts and one of the AI sites in Ilam. Also, 600 eggs have been destroyed and seven pigeons were also culled in that area. Police deployed along the Mechi-highway also slaughtered 1,200 chickens in Rakse in Ilam that were being taken to the district illegally. Police in Dhankuta also seized 11,500 eggs and 24 chickens that were being taken to the district. The poultry farm owners were given compensation of Rs. 3 per eggs, Rs. 150 to chicken above six months and Rs. 50 to chicken below six months.

## **Third outbreak in Jhapa was reported on February 12, 2012**

Three years after grappling with the country's first AI outbreak, Jhapa district has reported yet another flu scare. The disease that struck Kakadvitta of the district three years ago has hit poultry farms in Pathamari, Arjundhara and Charpane this time as confirmed by Dr. Ram Krishna Khatiwada, program officer at the Directorate of Animal Health under the Ministry of Agriculture and Cooperatives. Authorities slaughtered around 1,300 chickens and ducks on the third AI outbreak sites in Jhapa district. In Jhapa, more than 1,000 crows were found dead in several villages around one week of AI reporting. The reason behind unexpected death of crows is yet to be confirmed. But, looking at the AI outbreak pattern in the country suspicion for sudden death of crows has been attributed to AI again.

## **Fourth outbreak in Sunsari again was confirmed on Feb.13, 2012**

A week after AI was detected in Sunsari, Panchthar and Ilam, authorities again confirmed the outbreak of this disease in three different areas of Sunsari district.

## **Fifth Outbreak in Kathmandu on February 15, 2012**

Fifth outbreak was reported in Kathmandu in crows on February 15, 2012. Although, samples were tested positive by Central Veterinary Laboratory (CVL) and it was confirmed by UK-laboratory a month ago, the government of Nepal did not declare it as an outbreak of AI.

### **Sixth Outbreak in Sunsari again in February 15, 2012**

Authorities in Sunsari district confirmed AI in chickens at a Muslim settlement in Narsingh VDC-8 on February 15, 2012. Outbreak of AI had already been confirmed in two poultry farms in Itahari and Khanar in the district. A day after a team of experts and technicians claimed that AI had been brought under control in Sunsari, Ilam, Panchthar and Jhapa districts, the disease has resurfaced for the third time in Sunsari. Experts suspect that AI might take epidemic proportions in Sunsari due to the frequent outbreak.

### **Seventh Outbreak, Dharke, Dhading in February 17, 2012**

Local farmers claimed that over 20,000 chickens died at various poultry farms at Naubise VDC-1 in Dhading in two weeks in two farms namely Ram-Laxman Poultry farm and Salikram Adhikari's farm in Dharke. Samples from two of the farms were sent to the CVL for the conformation. The results of the samples were known after three days as reported by the CVL.

### **Eight bird flu outbreak in Jhapa again in March 7, 2012**

According to the District Livestock Service Office, Jhapa, the H<sub>5</sub>N1 virus was detected in chickens in the southern parts in the district at Kumarkhod and Tagandubba. This is the second case of AI detection in the district in a month which was confirmed by the CVL. Following the detection of the virus for the second time, the office has taken elaborate measures to control it from spreading.

### **Ninth Outbreak in Dallu, Kathmandu in March 16, 2012**

Directorate of Animal Health confirmed AI at Sheshnarayan VDC-8, Dallu near Kathmandu at Dallu Layer Farm. The Directorate collected samples on March 13 and confirmed AI on March 16.

### **Tenth Outbreak in Pharping, Kathmandu in March 19, 2012**

A total of 15,160 chickens died of AI at poultry farm near Pharping, Kathmandu in the first two weeks of March. According to the AI Control Order under the Natural Disaster Rescue Act, the government has to provide compensation to the farmer for the culled chicken infected with the avian influenza.

### **Eleventh Outbreak in Lalitpur (Sainbu and Bhaisepati simultaneously) in March 26, 2012**

The AI virus was detected in chicken of a poultry farm owned by Dhiren Gurung of Sainbu-5. This was the first AI case in the district. In addition to this, the chicken in a farm of Kamal Ghimire of Sainbu-5 contracted AI again after five days of first outbreak in the district. Simultaneously, the bird flu outbreak was seen in Bhaisepati, another place in the Lalitpur district where around 6,000 AI infected chickens were slaughtered.

Authorities have sprung into action and sealed other farms nearby after the chickens started dying in the areas. The government has mounted surveillance, screening and monitoring in the surrounding areas.

### **Conclusion**

Researchers in the US and Europe studying a potentially more lethal, airborne version of the AI virus have suspended their studies-despite deeming the research crucial to public health—because of concerns the mutant virus could be used as a devastating form of bioterrorism or accidentally escape the lab. The World Health Organization (WHO) said it was "deeply concerned" about research into whether

the H5N1 flu virus could be made more transmissible between humans after mutant strains were produced in labs. The outbreak of avian influenza in different districts of Nepal has feared all sectors. Government of Nepal and all concerned sectors should be highly alert and give much priority for timely management of this disease to prevent further expansion of outbreak.

### **References:**

Kantipur National Daily  
The Kathmandu Post  
Annapurna National Daily  
The Himalayan Times Daily  
The Rising Nepal  
Gorkhapatra National Daily  
Nepal Times  
NZFHRC internal reports

### **Acknowledgement**

I am most grateful to all the media for highlighting bird flu outbreak in times to the general public and consumers. I must thank to all the NZFHRC staffs particularly Ms. Meena Dahal, Dr. Santosh Dhakal and Dr. Anita Ale for working hard for data processing.

---

### **Study of Allergy Cases and Autoimmune Diseases in Kathmandu Medical College and Teaching Hospital, Kathmandu, Nepal**

*Bipin Bista, Young Research Career JE Project  
Medical Student (6<sup>th</sup> Semester), KMC, Sinamangal*

### **INTRODUCTION**

*Allergy* is a hypersensitivity disorder of the immune system. Allergic reactions occur when a person's immune system reacts to normally harmless substances in the environment. A substance that causes a reaction is called an allergen. These reactions are acquired, predictable, and rapid. Allergy is one of four forms of hypersensitivity and is formally called type I (or immediate) hypersensitivity (Mohan, 2010).

### **Common symptoms of allergy**

- *Nose:* swelling of the nasal mucosa (allergic rhinitis)
- *Sinuses:* allergic sinusitis
- *Eyes:* redness and itching of the conjunctiva (allergic conjunctivitis)
- *Airway:* Sneezing, coughing, bronchoconstriction, wheezing and dyspnea, sometimes outright attacks of asthma, in severe cases the airway constrict due to swelling known as laryngeal edema
- *Ears:* feeling of fullness, possibly pain, and impaired hearing due to the lack of eustachian tube drainage.
- *Skin:* rashes, such as eczema and hives (urticaria)
- *Gastrointestinal:* abdominal pain, bloating, vomiting, diarrhea

### **Bronchial Asthma**

*Asthma* was first recognized in ancient Egypt and treatment was inhalation of frankincense. Officially recognized as a specific respiratory problem separate from others was first recognized and named by Hippocrates circa 450 BC. During the 1930s–50s, asthma was considered as being one of the 'holy seven' psychosomatic illnesses (Opolski and Wilson, 2005).

Asthma is a disease which has difficulty in breathing this may affect an asthmatic person in sudden or periodically. The symptoms include chest pain whistling sound and wheezing exhaling. Patients may sometime gasp for air and feel suffocation (Groman, 1994).

## Urticaria

Urticaria is caused by the release of histamine and other mediators of inflammation (cytokines) from cells in the skin. This process could be the result of an allergic or non-allergic reaction, differing in the eliciting mechanism of histamine release. ([http://www.herbalcureandtreatments.com/urticaria\\_herbal\\_cure\\_herbal\\_treatment.html](http://www.herbalcureandtreatments.com/urticaria_herbal_cure_herbal_treatment.html)).

Malla (2002) carried out study in identification of common allergens by skin prick test among the allergy patients attending private clinics. In this study, 641 cases were registered and tested with 290 (45.2%) male and 351 (54.8%) female patients. Out of 641 cases, 62% of cases had nasorespiratory disease and 38% cases had asthma as major problem. Similarly, 99 (15.5%) cases had asthma and rhinitis, 188 (29.4%) cases had rhinitis, 244 (38%) cases had urticaria. 46 (7.2%) cases had allergic pharyngitis and 20 (3.1%) cases had allergy conjunctivitis. Bam (1995) conducted a study during 1980-1994 among 534 adult patients aged between 14 to 45+ years of age. Among them 264 (49.44%) were male and 270 (50.56%) were female. The study indicated that allergic rhinitis and asthma are most common allergic disorders in Nepal. A new district, new house, climate, pollution, damp houses are some of the important risk factors for developing the allergic disease (Bam, 1994). Bista (1996) studied on ocular allergy cases at Geta Eye Hospital, Kailali with 20,848 patients for the different ocular problems during the year 1992. Prevalence of ocular allergy was 3.5%. Joshi (2000) studied asthma and eczema in Butwal. Out of 3,361 patients registered in the study clinic during a period of one year, asthma was noted in 66 (1.96%) and eczema in 23 (0.68%) patients. Sexwise distribution was 34 (51.5%) and 32 (48.4%) in asthma and 15 (65.2%) and 8 (34.7%) among males and females respectively. Eczema was more frequent in the males and there was no significant different in males and females among the Asthmatics. Joshi (1999) studied on allergy cases series study, out of 19 cases 12 (73%) were female and male 7 (37%) cases. Among the age group 15-24 had more allergy cases of which female cases were 26%.

## **OBJECTIVE**

To describe the cases of allergy and autoimmune disease in KMCTH admitted during time interval of April 2009 to October 2011.

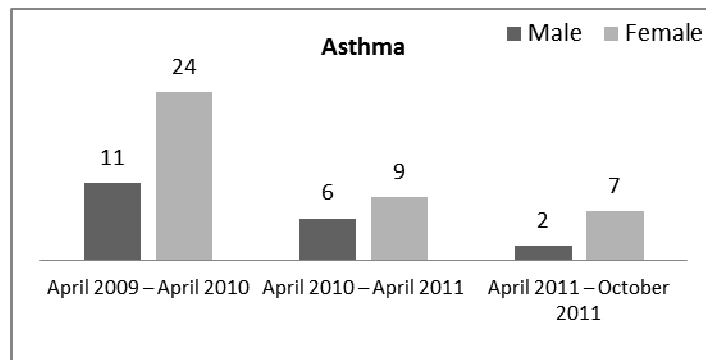
## **METHODOLOGY**

Data were collected from inpatients of Medicine Department of Kathmandu Medical College Teaching Hospital (KMCTH) for the period of April, 2009 to October, 2011 month-wise medical chart reviews. AIHA was confirmed by standard laboratory protocol method at KMCTH lab.

## **RESULTS**

During the study period total allergy and autoimmune cases due to different causes were studied. A total of 37 cases were recorded from April 2009 to April 2010, 17 cases were from April 2010 to April 2011 and 9 cases were from April 2011 to October 2011.

## Asthma



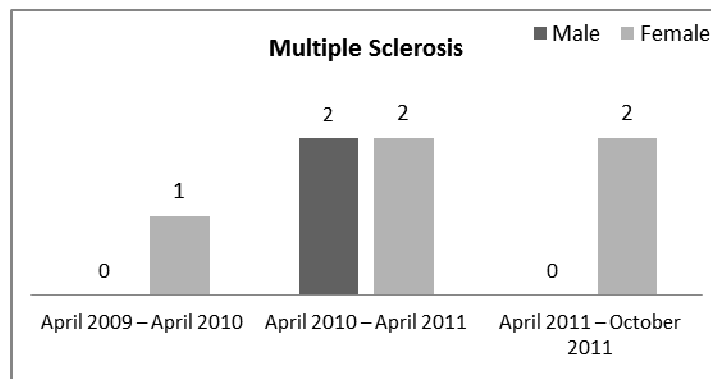
**Figure 1: Sex-wise asthma cases in inpatient of KMCTH during April 2009 to October 2011**

## Autoimmune hemolytic anemia

Autoimmune hemolytic anemia (AIHA) has occurred generally when antibodies directed against the person's own red blood cells (RBCs) which has caused them to burst (lyse), this has to lead for insufficient plasma concentration in the circulation.

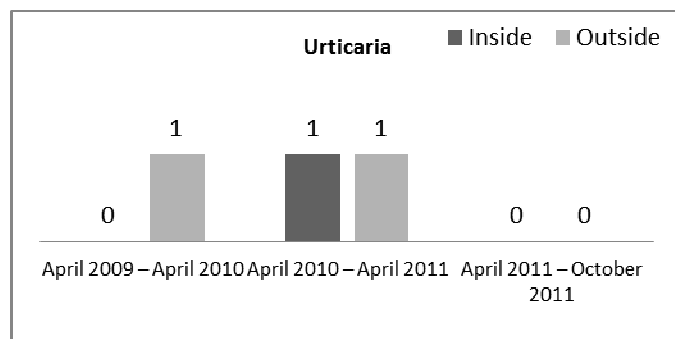
## Multiple Sclerosis

Sex wise multiple sclerosis cases were confirmed at the histopathology lab by using standard protocol test method for multiple sclerosis which is presented in Figure2. Multiple sclerosis cases were seen higher in female than male during the year 2009 to 2011.



**Figure 2: Sexwise multiple sclerosis cases in inpatient of KMCTH during April, 2009 to October, 2011**

Urticaria cases from inside and outside the Kathmandu valley are presented in Figure3.



**Figure 3: Urticaria cases from inside and outside Kathmandu valley in inpatient of KMCTH during April, 2009 to October, 2011**

**CONCLUSION:**

It has been found that majority of cases are of bronchial asthma. However, other autoimmune cases like SLE, Autoimmune hemolytic anemia are also present in KMCTH admitted patient. These findings demonstrate the need of more studies in allergy and related autoimmune diseases in KMCTH.

**ACKNOWLEDGEMENT:**

I would like to acknowledge KDMA Research Trust for giving me this opportunity to study allergy cases and autoimmune disease in KMCTH. I am also grateful to Dr. D.D Joshi, Executive Chairman, KDMA Research Trust. Mrs. Minu Sharma, Program Officer for their continuous encouragement to do research. I would also like to thank all the staff of NZFHRC particularly Mrs. Meena Dahal for paper-writing. Last but not the least I would like to thank my Father Dr. Padam Raj Bista and Mother Mrs. Kanti Bista without whom this writing wouldn't have been possible.

**REFERENCE:**

Bam. D. S. (1995): Allergic Rhinitis and Asthma are most common Allergic disorders in Nepal, published by KDMA, Tahachal, Kathmandu, Nepal.

Bam. D. S.(1994): Allergy Problem in Nepal, Published K.D.M.A. Research Trust 1997, Kathmandu, Nepal.

Bista P. R. Common Ocular Diseases at Geta Eye Hospital, Kailali. Journal of the Institute of Medicine 1996; 8: 19-25.

Bista, P. R (1996): Ocular Allergy Cases in Geta Eye Hospital in Geta Eye Hospital, Published by KDMA Research Trust, Tahachal, Kathmandu.

Groman, J. (1994): The World book Encyclopedia. World Book International, USA. Vol. I; 704-705

Joshi, M. (1999): Allergy – Case Series Study in Butwal Polyclinic published by KDMA Research Trust, Tahachal, Kathmandu.

Joshi, M.(2000): Asthma and Eczema Two Faces of Allergy in Butwal Polyclinic. Published by KDMA Research Trust, Tahachal, Kathmandu.

Malla P.(2002). Identification of Common Allergens by Skin Prick Test among the Allergy Patients Attending Private Clinics. Himal Hospital and Research Centre, Gyaneshwar Kathmandu, pp.1-5.

Mohan, H. (2010) Ed.: Textbook of Pathology. Jaypee Brothers, Medical Publishers, India.

Opolski M, Wilson I. 2005. Asthma and depression: a pragmatic review of the literature and recommendations for future research. Clin Pract Epidemiol Ment Health 1: 18.

Sharma A. P. and Shrestha G. (1997): A preliminary study of allergens produced by *Alternaria* sp. and *Aspergillus fumigatus* in Kathmandu valley Published by KDMA Research Trust, Tahachal, Kathmandu.

www.herbalcureandtreatments.com/urticaria\_herbal\_cure\_herbal\_treatment.html).

**JE Project Activities Reported by NZFHRC**

- Pig farmer survey in Kathmandu JE project area was completed and report had been prepared with titled "Assessment of Pig Farmers Attributes in Kathmandu Focusing Japanese Encephalitis Risk Factors"
- NZFHRC laboratory staff completed their training on JE serology (Human) in Sanjay Gandhi Post Graduate Institute of Medical Science, Raebarelli, Lucknow, India. Dr. Tapan Dhole, Microbiology Department Head of this institute had given to this opportunity to our staff and established future collaboration on JE research.
- Household survey conducted in selected JE Project area.
- Mass awareness training was conducted for three days.

**News:**

Dr. Durga Datt Joshi, Executive Chairman, participated on the "Ecohealth Emerging Infectious Disease (Eco-EID) Inception workshop" which was held in Vientiane, Lao PDR between 12th and 16<sup>th</sup> March 2012 at Vansana Riverside Hotel, hosted by National Institute of Public Health (NIOPH) in collaboration with International Development Research Centre (IDRC), Canada. The aim of this workshop was to formally launch the Eco-EID projects and create a forum to facilitate the exchange of ideas and information in relation to ecohealth approaches in the prevention and control of emerging and re-emerging infectious diseases in Southeast Asia.

Dr. Joshi presented a paper on "Journey to Urban Ecosystem Health in Two Butcher Wards of Kathmandu, Nepal" in this inception workshop.

**KDMA Research Award Awarded for the year 2010:**

KDMA research award for the year 2067 B.S. (2010) was awarded to Mr. Bipin Bista, Young Research Career, JE Project, Medical Student (6<sup>th</sup> Semester), KMC, Sinamangal for his research work titled "Study of Allergy Cases and Autoimmune Diseases in Kathmandu Medical College and Teaching Hospital, Kathmandu, Nepal".

**K.D.M.A. Research Award:**

*Please kindly submit your research work paper on allergy award for the year 2011 for the consideration by the end of December 2012 to KDMART office Chagal, G.P.O. Box 1885, Kathmandu, Nepal, Phone: 4270667, 4274928 and Fax 4272694. This award was established by Dr. D.D. Joshi in 2049 B.S. (1992) on the memory of his wife, the late Mrs. Kaushilya Devi Joshi. The award includes a grant of NCRs. 10,001 with certificate.*

---

---

**From: Zoonoses & Food Hygiene News, NZFHRC  
P.O. Box 1885, Chagal, Kathmandu, Nepal.**

**TO:**  
**Dr/Mr/Ms .....**

.....  
.....

