

النشرة الوبائية السعودية

تصدرها وزارة الصحة

الوكالة المساعدة للطب الوقائي و برنامج الوبائيات الحقلية

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Chickenpox Outbreak Among Laborers In A Com- pany Compound North Of Riyadh, 2001, Saudi Arabia.

On Friday August 10th, 2001, a notification from the Saudi Red Crescent to Riyadh Regional Health affairs reported cases of an unknown disease among laborers in a company compound north of Riyadh. The Field Epidemiology Training Program (FETP) was assigned to investigate this outbreak. Primary inspection identified 23 male patients complaining of fever and rashes all over their body of different durations, among a total of 350 laborers living in the compound. Twenty-three cases of chickenpox were identified, four were confirmed by laboratory. Investigation aimed to determine the size of the problem, possible cause of the outbreak, and development of measures to prevent similar situations in the future.

A case control study was conducted, a case was defined as any person from this company compound with rash, fever or blisters in his body, from 13/7/2001 to 22/8/2001. A list of laborers names was provided by the company, from which we randomly selected healthy individuals living at the same compound to be controls. A standard questionnaire was developed. All cases and controls were interviewed face to face by the help of translators provided by the company. Information collected included demographic information, duration of being in Saudi Arabia, whether he spent his vacation at his home country and date of arrival from vacation, history of direct contact with a chickenpox case or a person who developed symptoms of chickenpox, personal hygiene measures, and past history of chickenpox. Crowding at the camp was also investigated.

A total of 23 cases and 78 controls were interviewed, all were male laborers from Bangladesh. The mean age of cases was 26 ± 6 (range 18-38) years. Those who did not have previous history of chickenpox had 16 times the risk of infection than those who did (O.R=16, P-value=0.0008), which was the main risk fac-

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Chickenpox Outbreak In A Company Compound North Of Riyadh.

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tor. Exchanging clothes between laborers played a very important role in transmission of the disease (AR=50%, OR= 4.5, p-value= 0,006), in addition to contact with a diseased individual (AR=65%, OR=3.6, p-value= 0.014).

The compound was composed of four one-floor buildings. Three of these buildings were composed of 20 rooms, four toilets, four bathing areas, and two kitchens. Each room size was 2 x 3.5 m², with one window (1 m²) that was always closed. The air-conditioning was not working efficiently. The fourth building was divided into a mosque and two rooms. Each room in the compound was shared by 6 laborers.

The first case appeared on 18/7/2001, and might have been the index case and source of the outbreak. The second case appeared on 23/7/2001. The number of cases increased because of the high density of individuals in small rooms and non-proper isolation of the patients. The peak of the outbreak was recorded on 1/8/2001. Until the 10th of August 2001 all patients had been isolated in the compound, where they were still able to contact unaffected individuals and share the same facilities. Proper preventive measures were taken on 10/8/2001, when the company arranged a separate isolation flat for the patients. The epidemic curve (Figure 1) represents the spread of the disease and the effect of proper isolation. All cases had identical signs and symptoms of chickenpox, however none of our study patients developed any symptoms of respiratory infection or other complication and none needed to be admitted into hospital.

— Reported by: Dr. Hassan A. Al-Tuhami, Dr. Adel M. Turkistani, Dr. Randa M. Nooh (Field Epidemiology Training Program).

Editorial note: Chickenpox is a highly contagious viral illness caused by Varicella zoster virus, with secondary attack rates in susceptible house-

hold contacts of up to 90%.¹⁻³ Its incubation period may be as short as 7 days or prolonged up to 21 days in a normal individual. The period of communicability extends from one to two days before the onset of rash through the first five to six days after rash.

Chickenpox is a childhood disease in non-tropical countries, where children between the age of five and nine are most commonly affected, accounting for 50% of all cases. Ten percent of cases are seen in young adults where complications tend to be more serious.^{1,2} There are no race or sex differences in either susceptibility to, or expression of, the disease.² In most cases the older the child, the more severe the attack.¹ However, the epidemiology of chickenpox in tropical regions is different than that of temperate areas, and is poorly understood. Varicella infection appears to be more common among adults living in the tropics than among those living in temperate areas, suggesting that there is decreased transmission in younger age groups. The reasons for this difference in the age-specific epidemiology of Varicella, including the possible roles of population size, population density, crowding, and higher ambient temperatures in the tropics, are not clear.⁴

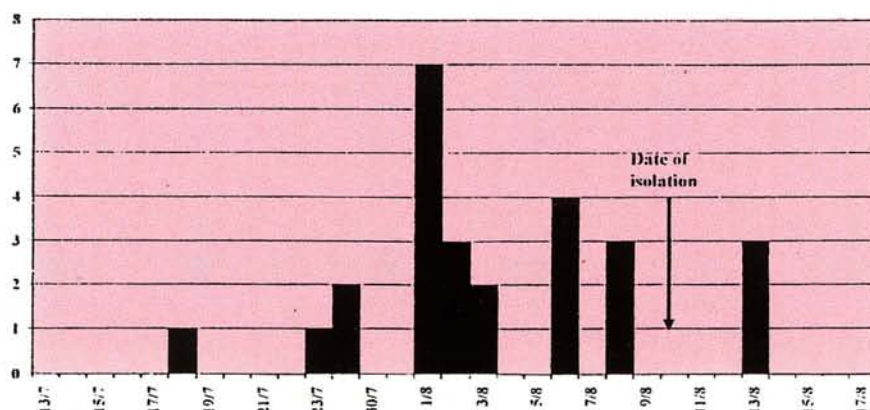
Humans are the reservoir of Varicella zoster. It can be transmitted from person to person by direct contact, droplet, and airborne spread of secretions from the respiratory tract of cases or from the vesicle fluid of patients. In case of direct contact, infection occurs through articles freshly soiled by discharge from vesicles of infected persons.^{1,4}

In this outbreak, it is noted that all the patients were adults, living in a high-density compound and were all having the first attack of chickenpox. Chickenpox infection, therefore, is not restricted to a specific age if the person is not immune. However, Chickenpox infection in adults is more severe and has a higher risk of complications than in children.^{1,4} Although less than 2% of reported cases are in persons under 20 years of age, this accounts for approximately 25% of mortality. The case fatality rate in children is approximately 1/100,000; in infants approximately 6/100,000 and in adults is approximately 12/100,000. The majority of deaths occur in normal individuals (children and non-immunocompromised).^{4,5}

The study result was similar to other studies reporting susceptibility of infection among a non-immunized

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Figure 1. Epidemic Curve of Chickenpox Outbreak



Seropositivity in Clinical Influenza Cases Among Pilgrims During Hajj, 1421 H.

Influenza is a major health problem, whether measured by its morbidity, mortality or economic impact. Detection of influenza infection in Hajj can be difficult since the clinical presentation is atypical, and other pathogens also cause influenza-like illnesses. The use of laboratory tests for detection of influenza in conjunction with acceptable case definitions leads to recognition of seropositive cases aiming to reduce transmission and initiation of infection control measures.

This study was conducted using a cross-sectional method. An Influenza case was defined as any person aged over 15 years old with fever, and at least two of the following; headache, myalgia, cough, sore throat or coryza. The study population was Hajjis affected with flu attending the outpatient clinics of hospitals in Makkah and Mina during the period from 5/12/1421 to 12/12/1421. Sample size was calculated assuming that the occurrence of flu among pilgrims was 12% (+4%). The number of patients required for the study was estimated at 254 patients at the 95% confidence level. To recruit the study sample the 3 major General Hospitals in Makkah; namely King Abdul Aziz Hospital, King Faisal Hospital, and Ajiad Hospital, and the 2 General Hospitals in Mina; namely Mina General Hospital and Mina Bridge Hospital, were included in the study. A systematic random sample 1 to 5 was selected among flu patients attending the outpatient clinics of the selected hospitals. Data was collected from 5th to 12th/12/1421 H.

A questionnaire was completed by interviewing selected patients, inquiring about personal information, clinical manifestations, past medical history, habits and environmental factors. After obtaining consent, 10ml of venous blood was collected from each patient for testing. Each specimen was divided into 2 portions; the first was tested for the presence of the influenza virus, and the second for the type of virus in positive specimens. Serotyping of the virus was done using ELISA Test.

The total number of patients meeting our clinical case definition from whom samples were obtained were 305 pilgrims; 45 of them were seropositive (14.8%). Among seropositive cases, 60% were influenza type B, 27% were type A, and the rest were positive for both types A and B. Males constituted 90% of the sample, 15.3% were seropositive compared to 9.6% of females. Hajjee characteristics and sero-prevalence of Flu Virus are demonstrated in Table 1.

Seropositivity appeared to fall with increasing age. American, European and Australian pilgrims had the highest positive rate, followed by South East Asians with statistical significance. There was no difference in seropositivity on the basis of clinical presentation, but was not statistically significant. Smokers were twice as likely to be seropositive. A room density of 6-10 persons per room had the highest prevalence, but the association was not statistically significant. Regarding history of contact with other flu cases, the association between contact and seropositivity was not statistically significant. The risk of seropositivity was 53% lower among those vaccinated, however, vaccination status was not statistically significant.

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Editorial notes: Influenza is an infection of the respiratory tract caused by the influenza virus, and, compared with other viral respiratory infections, often causes a more severe illness.¹ The Center of Disease Control & Prevention (CDC), Atlanta, U.S.A. defines flu as illness characterized by a rise in temperature of at least 37.8°C, in combination with either cough or sore throat.¹ Two important features give Influenza special

significance: its high rate of pulmonary complications and deaths, and the epidemic nature of the disease. As a result, many countries have developed influenza surveillance systems to make it possible for early detection of epidemics, and to provide estimates of the disease burden.²

Influenza viruses are of three antigenic subtypes A, B and C.^{1,3} Type A has been associated with widespread epidemics and pandemics, while Type B has been infrequently associated with epidemics. Type C usually causes either a very mild respiratory illness or no symptoms at all, it does not cause epidemics and does not have the severe public health impact that influenza types A and B do. Efforts to control the impact of influenza are aimed at types A and B.^{1,3}

Humans are the primary reservoirs of influenza. The virus spreads from person to person primarily through coughing and sneezing of infected persons. Transmission may also occur by direct contact. Airborne spread predominates among crowded populations. Its incubation period is 1-4 days with an average of 2 days. Persons can be infectious from the day before symptoms begin through approximately 5 days after onset of illness.⁴

Influenza and its complications are responsible for 150,000 excess hospitalizations and 10,000 to 40,000 deaths annually in the USA, with 80-90% of these deaths occurring among individuals 65 years and older.⁵ During major epidemics, which typically occur during winter months, severe illness and death occur, primarily among high risk groups.^{2,4,5} Clinical attack rates during epidemics range from 10-20% in the general community, to over 50% in closed populations such as boarding schools or nursing homes. High mortality is associated with pandemics, which occur at variable intervals of 10 or more years.²

Each year over 2,000,000 muslim pilgrims assemble in Makkah, Saudia Arabia, to complete the Hajj, one of the five pillars of Islam. The close contact among pilgrims and high

Seropositivity in Clinical Influenza Cases Among Pilgrims During Hajj, 1421 H, cont...

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population density aggravates spread of infection. An influenza outbreak in such conditions could have significant consequences. The prevalence of Influenza reported in this study corresponds with a previous study that contributed 56% of influenza infection to type A and 44% to type B.⁶

Based on the results of this study, Influenza vaccination may not be mandatory for pilgrims at this stage until further studies are conducted to identify serotypes and the role of vaccination in decreasing its prevalence and severity of infection among pilgrims. High risk pilgrims, such as those of older age groups or heart disease, should be vaccinated in their home countries before arrival to Saudi Arabia to perform either Hajj or Umra.

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Table 1: Hajjee characteristics and Sero-prevalence of Flu Virus, 1421 H.

	Total	Positive Serology		
		No.	%	
Age Group				
15 – 19	4	0	0.0	$X^2 = 7.73$ $P = 0.052$
20 – 39	167	33	19.8	
40 – 59	105	10	9.5	
60 +	29	2	6.9	
Gender				
Male	274	42	15.3	OR =1.69 95% CI=0.49-9.06
Female	31	3	9.6	
Nationality				
GCC	19	3	15.3	$X^2 = 14.99$ $P = 0.02$
Other Arab States	134	18	13.4	
South East Asia	6	2	33.3	
Indian Subcontinent	106	15	14.1	
America, Europe, Australia	11	5	45.4	
Iran	22	0	0.0	
Sub-Saharan Africa	7	2	28.6	
Education				
Illiterate	106	9	8.5	$X^2 = 6.29$ $P = 0.09$
Primary	74	12	16.2	
Secondary	58	13	22.4	
University and Above	67	11	16.4	
Smoking				
Yes	55	13	23.6	OR = 2.64 95% CI=1.20-5.73
No	250	32	12.8	
Use others utensils				
Yes	43	8	18.6	OR = 1.39 95% CI=0.55-3.43
No	262	37	14.1	
Method of Arrival				
Air	153	23	15.0	$X^2 = 0.06$ $P = 0.97$
Sea	30	4	13.3	
Land	122	18	14.8	
Residence				
Street	117	14	12.0	OR = 0.69 95% CI=0.33-1.42
Housing	188	31	16.4	
Room Density (person/room)				
≤5	69	7	10.1	$X^2 = 5.63$ $P = 0.06$
6-10	85	20	23.5	
>10	34	4	12.0	
Contact Status				
No Contact History	113	18	16.0	$X^2 = 1.86$ $P = 0.39$
Contact in Saudi	165	21	12.7	
Contact outside Saudi	27	6	22.2	
Vaccination Status				
Vaccinated	13	1	7.7	OR = 0.47 95% CI=0.01–3.33
Not Vaccinated	292	44	15.1	

Risk Factors of Bacterial Meningitis in Makkah during Hajj 1421 H: A Pilot Study.

Annually, more than two million pilgrims gather in Saudi Arabia to perform Hajj. The aim of this study was to investigate the risk factors of meningitis in Makkah during the Hajj season of 1421 H. The study was conducted using a case control approach, in Makkah hospitals during the period from 1–15 Dull Hijjah, 1421 H. Four controls were selected for each case, from the same hospital, matched for age (within five years), sex and hajj status (either hajji or not). Data were collected using a pre-structured questionnaire by interview with cases and controls. All clinically diagnosed and laboratory confirmed cases of meningitis reported to the Health Department in Makkah were included.

During the study period, 23 cases of meningitis (all types) were diagnosed in Makkah hospitals; 92 controls were selected. Among cases there were 8 males (34.8%) and 15 females (65.2%), and among controls there were 32 males and 60 females. Age of cases ranged from one to 70 years with a mean of 34.27 (± 25.3) years.

Overcrowding, expressed as room density, was significantly associated with meningitis (Table 1). A significant effect of nationality was also noted, such that those from the Indian Subcontinent had the highest risk of acquiring meningitis. No Hajjees from Sub-Saharan Africa developed meningitis during the study period. Other factors, including smoking, vaccination, chemoprophylaxis, place of residence in Makkah, type of accommodation, joining Hamla and socio-economic factors were not statistically significant.

— Reported by: Dr. Saleh S. Al Tamami, Dr. Khaled R. Bajiri, Dr. Adel M. Turkistani, Dr. Abdullah M. AlRabeah (Field Epidemiology Training Program), Dr. Ashry G. Mohammed (King Saud University).

Editorial note: Meningococcal disease is a major health problem in both developing and developed countries.¹ Neisseria meningitidis is one of the most common causes of bacterial meningitis worldwide.^{2,3} During Hajj,

it causes considerable morbidity and mortality.^{4,5}

Overcrowding is an important risk factor^{2,3}, which was confirmed in this study. Meningococcal meningitis occurs more commonly among newly aggregated adults under crowded living conditions such as in barracks, institutions, and at mass gatherings³, such as during "Hajj" and "Umrah".

The present study did not show a significant association between smoking and meningitis, however, active and passive smoking are known risk factors.⁶ While the study revealed that overcrowding and nationality are significant risk factors of meningitis, it was unable to detect the effect of some of the known risk factors. This may be attributed to the small number of cases. However, this study could be considered as a pilot study and further studies are recommended.

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Table 1: Risk Factors of meningitis in Makkah, 1421 H

	Cases No (%)	Controls No (%)	OR	95% CI
Marital status				
Single	11 (47.8)	38 (41.3)	1.3	0.6–2.56
Married	12 (52.2)	54 (58.7)		
Nationality*				
Arab	5 (21.7)	50 (54.3)	1	
South East Asia	3 (13.0)	10 (10.9)	3	0.39-18.21
Indian Subcontinent	13 (56.5)	17 (18.4)	7.65	2.11-30.76
Other	2 (8.7)	15 (16.3)	1.33	0.12-9.19
Hamla joining				
Yes	12 (52.2)	50 (54.3)	0.92	0.33 – 2.51
No	11 (47.8)	42 (45.7)		
Smoking				
Yes	2 (8.7)	4 (4.3)	2.1	0.18 – 15.6
No	21 (91.3)	88 (95.7)		
Vaccination status				
Yes	13 (56.5)	59 (64.0)	0.73	0.26 – 2.03
No	10 (43.5)	33 (36.0)		
Chemoprophylaxis				
Yes	1 (4.4)	6 (6.5)	0.65	0.01 – 5.84
No	22 (95.6)	86 (93.5)		
Room density				
Mean (SD)	0.48 (0.21)	0.33 (0.21)		P = 0.003
Total	23 (100)	92 (100)		
* χ^2 Linear trend = 4.223, P = 0.04				

ملخص باللغة العربية

و منى في موسم حج عام ١٤٢١هـ حيث تمت مقابلة الحجاج الذين ينطبق عليهم تعريف الحالة و أخذ معلوماتهم في إستبانة ترجمت لعدة لغات، حيث احتوت الإستبانة على المعلومات الشخصية و الأعراض السريرية و التاريخ المرضي و التمنيعي للحجاج مع التعرف على العوامل البيئية و العادات الشخصية. بعد أخذ موافقة المريض الشفوية تم سحب ١٠ مل من الدم الوريدي لغرض الفحص المخبري لوجود فيروس الإنفلونزا. بلغ حجم العينة المختارة للدراسة ٣٠٥ حالة من الحجاج، كانت منهم ٤٥ حالة إيجابية بالفحص المخبري (١٤,٨%) كانت منهم نسبة ٦٠% حالات إيجابية الإنفلونزا نوع (ب) و ٢٩% حالات إيجابية الإنفلونزا نوع (أ)، بينما كانت الحالات الإيجابية المتبقية بنسبة ١١% حالات مشتركة لكلا النوعين.

أظهرت الدراسة أن الإيجابية تتناقص مع الزيادة في العمر، كما أن النسبة الإيجابية أعلى في الرجال (١٥,٣%) منها في النساء (٩,٦%). كانت الحالات الإيجابية بين الحجاج من أمريكا و أوروبا و أستراليا أكثر منها بين حجاج جنوب شرق آسيا و بالتالي أكثر من بقية الجنسيات المختلفة الأخرى للفتنيتين السابقتين وذلك بدلالة إحصائية عالية. كما أنه لم يكن هناك فرق إحصائي بين الحالات الإيجابية المراجعة للمستشفيات المختلفة في منى و مكة. كما أنه لم يتضح أن النتائج المخبرية الإيجابية كانت ذات فرق إحصائي قوي بين مختلف الأعراض السريرية التي ظهرت بها الحالات.

و كما هو متوقع بلغت النتائج الإيجابية لفيروس الإنفلونزا ما يزيد عن الضعف بين الحجاج المدخنين عن غير المدخنين، كما أن النتائج الإيجابية لدى الحجاج المحصنين ضد الإنفلونزا بلغت ٨% مقابل ١٥% بين الحجاج غير المحصنين.

و أوصت الدراسة بتبني الاستقصاء الوبائي لحالات الإنفلونزا حيث يفيد في التوقع لنسب الحالات المرضية و تعداد الوفيات و التكلفة الاقتصادية لتأثير حالات الإنفلونزا و الأمراض التي تشابهها، كما أوصت بعمل دراسات وبائية أخرى بين الحجاج لمعرفة سرعة و معدل انتشار الإنفلونزا بين الحجاج. كما أوصت بالتطعيم ضد الإنفلونزا للمجموعات المعرضة للإصابة أكثر من غيرها حسب توصيات منظمة الصحة العالمية لحين استكمال دراسات أخرى بهذه الخصوص تكون خاصة بالحجاج.

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الإصابة بالمرض إلا أن معامل الثقة لم يكن ذو دلالة إحصائية (OR=1.5, P-value=0.4).

الحالة الأولى المكتشفة في المجمع السكني للشركة قد تكون هي مصدر العدوى لبقية الحالات التي ظهرت بعد ذلك. و الفيروس شديد العدوى بين المخالطين حيث تبلغ ٩٠% في بعض الأحيان. وبالرغم أن الجديري المائي مرض يصيب الأطفال و المناعة المكتسبة تكون دائمة، إلا أن العدوى لا تتوقف عند سن معين مادام الشخص لم يصب بالمرض من قبل.

غالبًا ما تحدث أوبئة في أماكن التجمعات السكنية و خصوصًا بين الذين لم يسبق لهم الإصابة بأمراض الطفولة. و بسبب اكتظاظ العمال في غرف صغيرة سيئة التهوية و النظافة فقد سهل علي الفيروس السريع العدوى الانتقال بين العمال. وقد ساعدت عملية العزل الأولى داخل السكن و السماح للمصابين بمخالطة الأصحاء في غرفهم و سكنهم إلى انتشار المرض.

تم التوصية على توعية العمالة عن أهمية النظافة الشخصية، و عدم تبادل الثياب فيما بينهم. كما يجب تقليل عدد الأشخاص المقيمين في الغرفة الواحدة و تحسين عملية تهوية الغرف، إضافة إلى الزيارات المفاجئة لمعسكرات العمال من الجهات المتخصصة للتأكد من الالتزام بالضوابط و الشروط. كما يجب أن يكون الطبيب المعالج على علم بأهمية الوقاية و العزل الصحيح في الوقت المناسب. كما أنه في حالة اكتشافه لمرض معدٍ فيجب عليه إبلاغ الشؤون الصحية. كما تمت التوصية بضرورة إعادة تحصين القاطنين في المجمعات السكنية لرفع درجة المناعة لديهم.

اعداد: د. حسن علي التهامي، د. عادل محمد تركستاني، د. راندة محمد نوح (برنامج الوبائيات الحقلية).

دراسة عن إيجابية فحوصات الدم المخبرية في حالات الإنفلونزا في حج عام ١٤٢١هـ

تعتبر الإنفلونزا مشكلة صحية من حيث مرضيتها و عدد وفياتها و تأثيرها الاقتصادي. إن اكتشاف حالات العدوى بفيروس الإنفلونزا قد يكون صعبًا في موسم الحج لأن الأعراض السريرية قد تكون غير تقليدية (مألوفة) كما أن هناك مسببات أخرى لأمراض الجهاز التنفسي العلوي تظهر أعراضًا مرضية سريرية مشابهة لما تحدثه الإنفلونزا. لذلك فإن استخدام الفحوصات المخبرية مع وجود تعريف مقبول لحالات الإنفلونزا سيؤدي لتشخيص الحالات الإيجابية و سيساعد على العمل على تقليص انتشار المرض و السيطرة عليه.

أجريت هذه الدراسة المقطعية على مجموعة مختارة من حالات الإنفلونزا بين الحجاج المرشحين لبعض المستشفيات في مكة المكرمة

تقرير عن حالات الجديري المائي المكتشفة ضمن عمال شركة بشمال مدينة الرياض، ١٤٢٢هـ

في يوم السبت الموافق ١٠/٨/٢٠٠١م تم الإبلاغ عن وجود ٢٣ حالة جديري مائي في إحدى المجمعات السكنية للعمال بشمال مدينة الرياض. و قد قام فريق من برنامج الوبائيات الحقلية بعمل التفصي الوبائي لهذه الحادثة.

قام الفريق بزيارة موقع عزل العمال المصابين و مقابلتهم، و معاينة مكان العزل، كما قام الفريق بزيارة سكن العمال و أخذ عينه ضابطة بطريقه عشوائية من بين العمال المخالطين. تم وضع استبيان يتضمن البيانات الشخصية، الأعراض المرضية، تاريخ ظهور الأعراض، و تاريخ العزل، كما تناول الإصابة السابقة بالمرض و أسئلة حول النظافة و العناية الشخصية.

بلغ عدد العمال القاطنين بالمجمع (٣٥٠) عمالًا، جميعهم من الذكور، من الجنسية البنجلاديشية من فئة العمال الغير حرفيين. ويتكون المجمع السكني من أربعة عنابر أحدها مقسم إلى جزئين (مسجد و غرفتان للسكن). كل عنبر من العنابر الثلاثة الأخرى مكون من ٢٠ غرفة (٢ × ٣,٥م) بكل غرفة ٦ عمال. معظم الغرف بها شبك واحد (١م) مفلق طوال الوقت، و التهوية سيئة. معظم العمال وصلوا المملكة في فترة لا تتجاوز السبعة أشهر. في البداية تم عزل المرضى داخل السكن نفسه، لكن بناءً على توصيات إدارة الطب الوقائي بالشؤون الصحية قامت الشركة بعد ذلك بتخصيص شقة بعمارة عزل المرضى في ١٠/٨/٢٠٠١م.

قام فريق البحث بمقابلة جميع الحالات (٢٤ حالة، معدل الإصابة في المجمع ٦,٩%) و ٧٣ عينة ضابطة. بلغ متوسط أعمار الحالات ٢٦ ± ٢ سنة (١٨-٣٨ سنة) بينما بلغ المتوسط العمري للعينة الضابطة ٢٦ ± ٢ سنة (١٨-٤٢ سنة). أول حالة ظهرت عليها الأعراض كان بتاريخ ١٨/٧/٢٠٠١م و ظهرت الحالة الثانية بعدها بخمسة أيام. وكان أعلى معدل للحالات بتاريخ ١/٨/٢٠٠١م، و سجلت آخر الحالات بتاريخ ١٣/٨/٢٠٠١م.

الأعراض التي ظهرت على الحالات كانت حمى (١٠٠%)، طفح جلدي (١٠٠%)، و صداع (٩٧%). كل المصابين المكتشفين كانوا من الأشخاص الذين لم يصابوا بالجديري المائي من قبل، الأشخاص الذين لم يسبق لهم الإصابة بمرض الجديري المائي كانوا أكثر عرضة للإصابة ستة عشر مرة (OR=16)، بمعامل ثقة ذو دلالة إحصائية (P-Value = 0.0008). كما تبين أن تبادل الملابس بين العمال من المرضى و غير المرضى يمثل أكبر عامل مساعد لانتقال المرض (OR=4.5, P-value= 0.006)، يلي ذلك مخالطة المرضى (OR=3.6, P-value=0.01). أما الزيارات للعمال من خارج المجمع فقد تكون من العوامل التي تؤدي إلى

Chickenpox Outbreak, cont...

(Continued from page 26)

population. Epidemics usually occur in such gathering accommodations and camps, especially among those who have not been exposed to pediatric disease, which makes them more susceptible. Absence of immunity among the laborers was the main risk factor for acquiring the infection. However, late isolation and low hygienic standards helped in dissemination of the disease among the closed and highly crowded population.

Laborers were educated on the importance of personal hygiene. Physicians working at accommodation compounds should apply accurate prevention measures to prevent spread of contagious diseases if they occur. Isolation should always be established as the first prevention measure. Companies should be instructed on the number of the laborers that should occupy each room with the improvement of ventilation. Those living in camps i.e. laborers, students, soldiers, should be re-immunized.

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Mark your calendar . . .

Inside the Kingdom

September 15-17, 2002: RKH Paediatric Symposium.

Host organisation and Location: RKH, Riyadh, Saudi Arabia.
Contact: Dr. S. Al-Mohaimed, Tel: 00-96-655-150-202, Fax: 00-96-614-025-109. E-Mail: smohaimed@hotmail.com

September 16-18, 2002: Clinical Trials: A Scientific Pathway to Better Patient Care.

Host organisation and Location: King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia. Contact: Academic Affairs & Postgraduate Education, King Faisal Specialist Hospital & Research Centre, P.O.Box 3354, MBC 36, Riyadh 11211, KSA. Tel: 966 1 4427238. Fax: 966 1 4427237. Conference information is available at <http://www.kfshrc.edu.sa/symposia>
E-mail: web_symposia@kfshrc.edu.sa

Outside the Kingdom

August 18-22, 2002: XVI IEA World Congress of Epidemiology.

Location: Montreal, Quebec, Canada.
Contact: IEA 2002 Congress Secretariat, c/o Events International Meeting Planners, 759 Victoria Square, Suite 300, Montreal, Quebec, Canada H2Y 2J7, Tel: 1-514-2860855, Fax: 1-514-2866066. Conference information is available at <http://www.iea2002.com>
E-mail: iea2002@eventsintl.com

Errata: The Editor-in-Chief regrets the unintentional drop of the name of Dr. Mohammed Al Mazrou, one of the authors of the article entitled "Health Status of Non-organized Hajjees during 1420 H, Hajj Season" that appeared in Issue 2 of Volume 8 of *SEB*. Also we would like to inform readers that in Issue 3 of Volume 8, in the article entitled "Three Cases of Blood Transfusion Malaria in Riyadh City, 2000", Mrs. Shadia Al Sudani is the second author, and the title of Dr. Hind Al Zoman appeared incorrectly as Mrs.

The *Saudi Epidemiology Bulletin* welcomes reports from the regions. Please send your reports to the address shown. Thank you.

Send correspondence, comments, calendar listings, or articles to:

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Selected notifiable diseases by region, Oct – Dec 2001

	Riyadh	Makkah	Jeddah	Taif	Madinah	Qassim	Eastern	Hasa	Hafr AlBahir	Asir	Bisha	Tabuk	Hail	Al Shamal	Jizan	Najran	Baha	Al Jouf	Goriat	Gonfuda	Total	
Measles	4	13	8	0	3	4	0	2	1	0	0	0	0	0	5	0	0	0	0	0	0	40
Mumps	31	10	35	4	25	32	21	19	20	14	5	14	9	6	6	5	0	3	0	0	0	259
Rubella	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Varicella	1853	91	600	164	184	1283	853	530	676	532	193	308	169	89	90	129	50	165	26	51	8036	
Brucellosis	82	12	1	26	16	236	55	9	38	209	50	3	62	7	34	34	5	9	5	4	897	
Meningitis	6	8	13	2	4	2	2	0	0	1	0	0	0	0	2	0	0	0	0	0	0	40
mening.																						
Meningitis, other	34	14	21	9	16	10	5	12	3	9	3	3	1	1	11	0	0	0	0	0	0	152
Hepatitis A	74	10	17	0	45	61	33	17	40	59	3	31	6	14	10	39	3	33	21	4	520	
Hepatitis B	185	68	235	8	56	60	124	17	5	61	8	30	2	13	10	9	36	2	0	4	933	
Hepatitis C	126	61	248	2	23	28	85	11	0	17	13	13	2	0	3	6	25	4	1	1	669	
Hepatitis, unspecified	35	14	17	0	0	0	0	1	0	35	0	39	11	0	133	0	0	0	0	0	285	
Typhoid & paratyphoid	7	24	1	0	1	2	4	3	1	8	20	4	6	11	1	0	0	0	0	1	94	
Amoebic dysentery	8	2	280	12	6	12	19	1	15	107	16	0	18	0	53	10	8	0	2	1	570	
Shigellosis	37	0	6	0	4	6	27	5	3	0	0	8	0	7	1	13	0	0	3	0	120	
Salmonellosis	95	0	44	0	2	1	272	34	19	15	1	18	4	0	0	18	3	0	1	0	527	
Syphilis	2	0	3	0	0	0	7	9	0	0	2	0	2	1	0	0	4	0	0	1	31	
VD, other	11	1	19	0	0	0	10	25	0	5	2	0	0	0	11	0	0	0	0	0	84	

Comparisons of selected notifiable diseases, Oct-Dec 2000-2001

	Oct-Dec 2001	Oct-Dec 2000	Change %	Jan-Dec 2001	Jan-Dec 2000		Oct-Dec 2001	Oct-Dec 2000	Change %	Jan-Dec 2001	Jan-Dec 2000
Diphtheria	0	0	0	0	0	Meningitis, other	180	196	-8	632	753
Pertussis	3	7	-57	32	21	Hepatitis A	520	597	-13	2985	2250
Tetanus, neonatal	7	8	-13	27	13	Hepatitis B	933	794	18	3035	3361
Tetanus, other	6	2	200	8	10	Hepatitis C	669	524	28	3600	2134
Poliomyelitis	0	0	0	0	0	Hepatitis, Unspec.	285	238	20	1414	1041
Measles	40	117	-66	134	617	Typhoid/paratyph	94	120	-22	366	420
Mumps	259	382	-32	974	1388	Amoebic dysentery	570	895	-36	3160	3244
Rubella	3	52	-94	38	202	Shigellosis	120	187	-36	586	501
Varicella	8036	5429	48	32584	20076	Salmonellosis	527	604	-13	1925	2045
Brucellosis	897	849	6	4860	5320	Syphilis	31	49	-37	138	165
Meningitis, Men.	40	29	38	309	337	VD, other	84	101	-17	395	428

Diseases of low frequency, Oct – Dec 2001

Yellow fever, Plague, Diphtheria, Poliomyelitis, Rabies, Puerperal sepsis, Hemolytic Uremic Syndrome: No cases

Pertussis: 3 (Riyadh 1, Madinah 1, Eastern 1)

Tetanus neonatal: 7 (Makkah 6, Jeddah 1)

Echinococcosis: 6 (Riyadh 3, H.Batin 1, Bisha 2)

Guillain-Barre syndrome: 24 (Riyadh 8, Madinah 4, Taif 4, Jeddah 1, Eastern 1, Hasa 1, Shamal 1, Baha 1, Gonfuda 1, Hail 1, Goriat 1)