Head-shaving practices of barbers and pilgrims to Makkah, 1998

Head-shaving is potentially a risk factor for transferring infections, especially bloodborne diseases. Hundreds of thousands of pilgrims (Hajjees) have their heads shaved within hours in a well-defined area. Conceivably, the hygienic behavior of Hajjees and the practices of barbers could make head shaving during the pilgrimage to Makkah (Hajj) an optimum focal setting for the worldwide spread of serious bloodborne diseases such as hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV). We studied the head-shaving practices of barbers and Hajjees to identify unsafe practices and to determine what steps are necessary to prevent or reduce the transmission of bloodborne diseases among Hajjees.

We observed 23 nationalities to determine the percentage who had completely shaved their heads. We used a two-stage cluster sampling to select and interview 298 Hajjees who had their heads shaved with razor blades, and visually checked their scalps for visible cut wounds. We covertly observed 196 illegal barbers as they worked (Figure 1). Then, according to a standard checklist, asked them about infectious diseases that could be transmitted by head shaving. We also inspected their hands for visible cut wounds.

The proportion of Hajjees who had their heads shaved exceeded 90% among those from Eritrea, Egypt, Mauritania and Pakistan, whereas the proportion of head-shaving Hajjees was quite low among those from Tunisia and Syria. About 61% (95% Confidence Interval [CI] 55-66) of Hajjees had cuts to the scalp (a mean of 2.6 per Hajjee, maximum of 18 cuts). Of all Hajjees, 1.3% indicated they had a history of hepatitis. Out of 196 barbers observed, 23% (95% CI 17-30) had uncovered hand wounds, 21% (95% CI 16-28) used the same blade for more than one shave, and 82% (95% CI 76-87) threw at least one used blade on the ground. The mean (+SD) time for a single head shave was 5±1.8 minutes (range 2-10 minutes).

Seventy-four percent of Hajjees (95% CI 66-77) and 20% of barbers (95% CI 6-15) were not aware of any health problems that could be caused by shaving with used razor blades. Head-shaving practices of Hajjees did not vary with their

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educational level. About one-fourth of Hajjees from western countries and sub-Saharan Africa were relatively more aware of potential transmission of HIV/AIDS by barbers, compared with only 4-12% of Hajjees from other countries. Hajjees aged 50 years or younger were relatively more concerned with transmission of HIV, whereas older Hajjees were more concerned about transmission of skin diseases.

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Editorial note: There is no place on earth where hundreds of thousands of people have their heads shaved within a few hours in a very limited geographical area as during Hajj. Similarly, every year large numbers of Muslims perform Umra, worship in Haram, the Holy Mosque. The uncertainty of disease profiles of the unequivocally diverse population of Hajjees, the poor hygienic behavior of Hajjees, and the practices of barbers shown in this study are disturbing. There is an obvious increased potential risk for bloodborne diseases among Hajjees as well as between Hajjees and barbers.

A further risk is presented with the data on the fate of used razor blades, showing that 82% of the barbers threw used blades on the ground after shaving rather than using garbage cans. This presents the hazard of foot injury to Hajjees, as many of the them lose their slippers in the crowds that form after finishing Al Jamarat (pebble throwing).

The Saudi Ministry of Health (MOH) is aware of the public health consequences of unsafe head-shaving practices, and has spared no effort to constantly upgrade the facilities available to the Hajjees in order to provide adequate health care for them. Included in MOH plans for a safe Hajj is the wide distribution of illustrated, health education materials translated into 10 main languages. About 700 barber chairs were placed around the Al Jamarat area (Figure 2). Nevertheless, the difficulty in communicating with Hajjees makes it very difficult obviously to ensure that all Hajjees practice head-shaving safety as only 14% of the Hajjees actually asked the barber to change the blade before shaving.

An appropriate intervention should be fourfold: availability of safe razor blades, health education, presence of affordable head-shaving services, and close supervision of barbers. Hajjees need to be educated to treat razor blades used for head shaving as if they were using disposable syringes.

It is recommended to have each razor blade and its holder packed in a plastic bag. Each Hajjee should be told to make sure the plastic bag is

Glossary of terms

Hajj- Islamic pilgrimage to Makkah
Hajjee- Muslim pilgrims
Hijiran calendar- The Muslim lunar year of 12 months calculated from the actual sighting of the moon.
1418H (Hijiran)=1998G (Gregorian)
10 Duhl Hijja- the Feast of Sacrifice Day (April 7, 1998)
Ramadan- The Muslim Holy Month of fasting
Hajj season- 4-month period between Ramadan and Duhl Hijja
Hamilah- Organized pilgrim group
Haram- The Holy Mosque, Makkah
Umra- Traveling to worship in Haram
Zamzam- The Holy Well, Makkah
Muwalif- Saudi Muslim guide
Al Jamarat- Area near Makkah used for pebble throwing
Masha'ar- The holy city of Makkah and related holy places of Mina, Arafat and Muzdalifa
Malaria among pilgrims to Makkah, 1998

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the northwest regions and accounts for over 50% of the malaria cases; whereas, *P. malariae* is scarce and constitutes 1-2% of all malaria cases in KSA (2).

The governmental malaria control project in KSA was initiated in 1952 with assistance from WHO, mainly for the protection of the pilgrimage routes. Hajjees are neither screened for malaria at the entry ports of the Kingdom, nor given suppressive doses of anti-malarial treatment. Currently, most areas are virtually free from malaria with the exception of the southwestern areas. Central KSA is non-malarious and only occasional imported cases are reported every year. Transmission of malaria has been halted in the eastern and northern parts of KSA. However, in western KSA, there is low incidence of malaria (1-3 per 1,000 per year) and in Tihama, the coastal plains along the Red Sea in southern and southwestern KSA, medium or high incidence of malaria (more than 3 per 1,000 per year) is reported (2). The peak of malaria transmission occurs between October and April and coincides with the rainy season (70-550 mm/year). There is a noticeable decline in incidence of malaria during the summer months (2).

All malaria cases diagnosed during the Hajj period admitted recent travel history to, or arrival from malaria areas within KSA in the 2 weeks that preceded the onset of symptoms. The people traveled to malarious areas such as Al-Leith, Al-Confedah, or Jizan to visit their relatives during a school vacation or to work in their farms in the affected valleys. This movement of peoples to and from endemic areas poses the threat of imported malaria also in Kuwait (3).

The majority of non-Saudi cases of malaria came from East Africa, the Indian subcontinent and Yemen, where malaria is known to be endemic. Diagnosis of malaria cases among Hajjees during Hajj season does not imply local transmission of malaria in the city of Makkah and surrounding holy places. Interruption of malaria transmission in these areas could be explained by the intensive environmental malaria control efforts and strict malaria control measures instituted just before Hajj season, in the holy places, along the road, and the adjacent valleys that lie between Jeddah, the main port of entry of pilgrims (Hajjees), and the city of Makkah (4).

Despite successful efforts made to interrupt local malaria transmission during the Hajj season in the city of Makkah and the neighboring holy places, the continuous influx of religious visitors and expatriate workers remains a potential source for introduction of malaria. The role of illegal aliens in reintroducing malaria into this area cannot be ruled out; an influx of a large number of illegal immigrants changed the epidemiology of malaria and other diseases in Kuala Lumpur, Malaysia (5). It is probable that the unusual heavy and prolonged rainfall in the last 2 years, during these 4 months, favored increased breeding of the *Anopheles* vector and greater transmission of the parasite in endemic areas around Makkah.

Risk factors for hip fractures

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tions to improve environmental conditions have greatly reduced the incidence of falls, the prime cause of hip fractures.

References:


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opened in front of him. Used razor blades should be considered potentially infective and must be handled with extraordinary care to prevent unintentional injuries. They must be placed into puncture-resistant containers located as close as practical to the area in which they are used (1).

We also recommend establishing an official shaving area at each camp with qualified barbers and a group of Hajjees (*Hamlah*) responsible for ensuring hygiene and good practice.

References: