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Original Article

Kite related injuries during Basant season

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ABSTRACT

Objectives

To asses the pattern of kite related injuries during Bassant season and the burden on health system with financial implications on society.

Patients and Methods

This descriptive study was conducted in the Departments of General and Neurosurgery District Head Quarter Hospital Rawalpindi from 1st January 2007 to 31st December 2007. 170 patients due to kite related injuries were admitted in the different departments of hospital who volunteered for the study were given a questionnaire including presenting complaints, mechanism of injury, timing of injury, time elapsed between injury and reaching the emergency department, mode of transfer to the hospital and whether the patient was directly involved in kite flying or not. Duration of stay in the hospital with any operative procedure like amputation was noted.

Results

During the study period, 8542 patients were attended in the emergency department. Out of these, 170 patients had kite related injuries. Other patients who had minor injuries like

cuts, stabs, and head injuries were managed in the casualty department and discharged within 24 hours. Six patients had irreversible injuries like amputation of limbs, nephrectomy and complicated contractures due to electric burns.

Conclusion

Though it is a relatively small number of patients but all of them were children and young adults with mean age of 15. These types of injuries were causing 5-6 permanent disabled in one city of Pakistan per year to otherwise useful citizens. Thus, kite related injuries are not only causing extra burden on the health system but also resulting in negative impact on the society. Fortunately, we can prevent most of these injuries by taking administrative steps. (Rawal Med J 2006;36:218-220).

Key Words

Kite related injuries, head injury, PTSD.

INTRODUCTION

Kites date back to as far as 3000 years ago from China. Based on their interpretation of cave paintings on Muna Island off Sulawesi, Clive Hart and Tal Streeter hold that leaf kites existed far before that time in what is now Indonesia.[1] In 19th century kites were used for different scientific experiments. Later in 20th century, kites were used for military purpose. Kite flying is still very popular in China, Thailand, Nepal, Japan, India and Pakistan. Kites were also used for political purpose in Pakistan where kites were designed to show flags and slogans of different political parties. Kites towed behind boats can lift passengers[2] which have had useful military applications in the past.[3] Some kites were fitted with strings and whistles to make musical sounds while flying.[4-6] Stories of kites were brought to Europe by Marco Polo towards the end of the 13th century and kites were brought back by sailors from Japan and Malaysia in the 16th and 17th centuries.[7] In 1750, Benjamin Franklin published a proposal for an experiment to prove that lightning is electricity by flying a kite in a storm that appeared capable of becoming a lightning storm.[8] It is not known whether Franklin ever performed his experiment [8,9] but in 1752, Thomas François Dalibard of France conducted a similar experiment (using a 40-foot iron rod instead of a kite) and extracted electrical sparks from a cloud.[8.]

Basant, the Festival of spring is also famous for kite flying. The festival is usually celebrated on the last Sunday of February. Though it is more popular in cities of central Punjab like Lahore and Kasur, electric break downs and kite related injuries were noted in almost every city of Pakistan causing not only financial loss but tremendous burden on the health system of public sector. Another important aspect of kite related injuries is these types of injuries can result in permanent disability like amputation of limbs with all the social implications on society and psychiatric problems in the patient as well as the family for the rest of their lives.

PATIENTS AND METHODS

The study was conducted in the Departments of General and Neurosurgery District Head Quarter Hospital Rawalpindi from 1st January 2007 to 31st December 2007. All patients due to kite related injuries who volunteered for the study were given a questionnaire including presenting complaints, mechanism of injury, timing of injury, time elapsed between injury & reaching the emergency department, mode of transfer to the hospital and whether the patient directly involved in kite flying or not. Duration of stay in the hospital with any operative procedure like amputation which can result in permanent disability was noted.

RESULTS

In the year 2007, 8542 patients attended the emergency department of District Headquarter hospital Rawalpindi. Out of these, 462 patients presented with history of trauma related to kite flying and 170 patients required admission in the different departments.

Table. Different type of injuries.

Kite related injuries	170
Neurosurgery	70
Fractures	18
Cut throats	6
Blunt injury abdomen	16
Major Amputations	5
Nephrectomy	1
Miscellaneous	54

Other patients who had minor injuries like cuts, stabs, and head injuries were managed in the casualty department and discharged within 24 hours.

Fig 1. Motorcyclist had cut throat due to kite string.

Six patients ended up with irreversible injuries like amputation of limbs, nephrectomy and complicated contractures due to electric burns (Table). Six patients had throat injuries (Fig 1).

DISCUSSION

Roughly an estimated sum of Rupees 200 million rupees is spent on every Basant on strings, kites and Basant parties.[17,18] In 2003, there were 50 break downs in electricity in Lahore with mean duration of one hour. Short circuits caused frequent blackouts in Lahore antiquated electrical supply and repairs would run to as much as 3 million rupees. If there are 50 one-hour breakdowns, it costs us 2.5 million rupees. (roughly 300,000/ week in the Basant season).[9] Damage to electrical home appliances may cost billions. In year 2003, 59 people died due to kite related injuries, 45 in the first 6 months.[10] Out of 59, 14 children had died after metal wires cut their throats during Basant. In year 2004, officials at Mayo Hospital Lahore reported that 142 children and 60 adults had been treated for injuries due to kite flying.

At District Headquarters Hospital Rawalpindi, total of 168 patients were treated in 2004 due to kite related injuries. Out of these, 67 were treated by neurosurgery department. 60 patients were admitted for head injuries while 7 patients were treated for cervical spine injuries. 28 patients had skull fracture on X-rays. More than 100 were treated by general surgery department for various other injuries. Fortunately, we can prevent most of these injuries by taking administrative steps like ban on metallic and chemical strings used for kite flying. There are associations of kite flyers who formulated a set of rules and regulations to avoid these injuries.[11] In long term, psychological as well social problems are more trouble some than physical disability. Quality of life is lower as compared to general population. The person has low self esteem, difficulties in social interactions, disfigurement following burns and scars, injuries like amputations and is socially with drawn.[12]

The physical injuries like amputation of limbs and burns leads to patient's reaction such as sense of deprivation of limbs, role change, and stigma of being handicapped leading to loss of job. He has feeling of guilt, blames himself for the act which he could have avoided and feels sorry for the disability.[13] The negative impact of physical disability can provoke various psychiatric disorders like depression, post traumatic stress and anxiety disorder (PTSD). Some studies found these disorders in one third of patients[14] while others showed prevalence of major depressive disorder of 25-50% in patients following serious traumatic accidents.[15] PTSD is commonly associated with anxiety, mood and

sleep disorders, conduct and attention problems.[16] There is greater need of comprehensive assessment, screening for psychiatric problems in people exposed to physical trauma such as kite injury.[17]

CONCLUSION

Most kite related injuries affected children and young adults with mean age of 15. These injuries caused 5-6 permanent disabilities in one hospital of one city of Pakistan. Kite related injuries are not only causing extra burden on the health system but also resulting in negative impact on the society. Serious efforts should be made to prevent these injuries by taking administrative steps.

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