

Frequency of Kite String Cut Throat in Neck Injury

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ABSTRACT: OBJECTIVE: The purpose of study was to evaluate and document frequency of kite string cut throat cases brought at trauma center of tertiary care hospital. **MATERIAL AND METHOD:** Twenty six cases of accidental cut throat injury were brought to trauma center of Abbasi Shaheed hospital in a period of one year. The various contribution factors were assessed and presented in the form of table and chart. **PLACE AND DURATION:** This study was done in Abbasi Shaheed Hospital from 1/9/2012 to 10/09/2013. **RESULT:** Twenty Six cases came with accidental cut throat and neck injuries were included in this study. Significant number of victims of cut throat due to kite string i.e 19 cases 73.07% with male predominates i.e.12 cases (63.15%). Highest number of incidence found between the ages of 21-30 years i.e. 8 cases (42.1%). Highest incidence of accidental cut throat was occurred in the month of July i.e. 9 cases (47.36%). Zone II of neck was the commonest involved site, 13 cases (68.42%) followed by zone III which was 4 cases (21.05%). **CONCLUSION:** The special string used in kite flying, which is coated with fine glass particles of metallic nature is responsible for a significant number of various degree cut throat injuries which may be life threatening.

KEY WORDS : Kite string (manja), Cut throat, Accidental injury.

INTRODUCTION : Cut throat may be defined as an "injury inflicted by cutting or stabbing with a sharp instrument"¹. These injuries may be open incised or incised looking injury in the neck due to sharp objects which may be superficial or penetrating in nature^{2,3}. WHO report revealed that 5 million people around the world die as a result cut throat injury. WHO report estimated that for an every death 10-20 injured victims gets hospitalized and 50-100 receives emergency care^{4,5}. For neck injuries, basic knowledge of the anatomy of the neck is essential for the assessment of injury and management⁶. Neck is divided into three zones. Zone I extends from thoracic outlet and clavicle to cricoid cartilage. Zone II extends from cricoid to angle of mandible. Zone III from angle of mandible to skull base^{7,8}. Risk of injuries are different in three zone^{3,9}. In Subcontinent of Indo-Pak, kite flying is a popular game. To fly the kite, a special string, coated with combination of ground glass¹⁰ and water soluble glue is used which is called Manja. Manja sharply cuts the skin and underlying structures when comes in contact. Every case of cut throat injury needs multidisciplinary approach. This requires otorhinolaryngologist, anesthetic and psychiatrist¹¹. Anesthetic secures compromised airway. Otorhinolaryngologist assesses the injuries and repairs the injury. Surgical repair of the injured tissue is the treatment option¹². After repair of the wound psychiatrist opinion plays an important role to overcome the trauma. Cut throat injuries and associated death are very common in our society¹³. Such incidence is increasing day by day. Unfortunately, limited study was done previously regarding cut throat injuries.

METHODOLOGY : This prospective study was conducted in department of E.N.T, Head and Neck

Surgery, Abbasi Shaheed Hospital and Karachi Medical and Dental College during the period of 1/9/2012 to 10/09/2013. During this period, total number of patients received with cut throat was 42 out of which 26 cases were selected. All patients who came with cut throat injury underwent complete examination and radio-imaging investigation (in selected cases). Repair of compromised airway and control of massive hemorrhage under general anesthesia after taking consent from patient and attendant, was the first priority. After assessment of the injury, repair of wound was done. Direct laryngoscopic examination was done. All events were recorded / noted in the predesign performa for the study. Relevant investigations were done where needed. Later on Psychiatry treatment was done.

INCLUSION CRITERIA: All patients who came with accidental cut throat included in this study.

EXCLUSION CRITERIA: Cases of cut throat other than accidental causes.

RESULTS : Total number of patients included in this study were 26. Table no. 1 shows comparison of accidental cut throat due to (kite string) manja and other cause. Cut throat due to kite string (manja) were 19 cases (73.07%) while other cause were 7 cases (26.92%). Pie chart 01 shows gender difference of cut throat due to kite string (manja). Male were 12 (63.15%) while females were 7 (36.84%). Male female ratio was 1.71:1. Bar chart shows incidence of cut throat due to kite string (manja), highest incidence of cut throat was noted between the ages of 21-30 years of age which was 8 cases (42.1%) followed by less than 10 years of age which was 6 (31.57%). No case was noted above the age of 61-years. Line graph shows number of cases according to month, maximum number

Cut throat due to kite string (manja)	19 (73.07%)
Cut throat other than kite string (manja)	7 (26.92%)

Table-1 : Accidental cut throat (n=26)

Zone I	2 (10.52%)
Zone II	13 (68.42%)
Zone III	4 (21.05%)

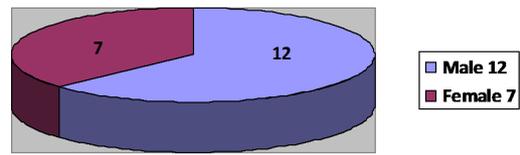
Table-2 : Zone involvement (n=19)

of patients was in July and August, 9 (47.36%) and 6 (31.57%) respectively. Table no. 2 shows injury according to zone of neck. Zone II of neck was the commonest involved site, 13 cases (68.42%) followed by zone III which was 4 cases (21.05%).

DISCUSSION : Cut throat injuries are life threatening because of air embolism due to breach airway, profuse bleeding due to damaged major vessel, respiratory distress which may result even in death¹⁴. Cut throat injury may be homicidal, suicidal and accidental in nature¹⁵. The cause of accidental cut throat injuries are kite flying, road traffic accident, sports/game etc. Kite flying is the popular game among children¹⁶ and adults. In kite flying, participants use string to fly their kite and this string is also used to cut the string of the other kite. For this purpose, abrasive material is used on the string of the kite to increase its ability to cut other string^{12,17}. Various injuries can occur from kite string (manja) like electrical injuries, falls that occur during game and or injuries caused to pedestrians or those riding motor cycles or bicycles^{18,19}. Kites are flown by razor sharp manja from roof tops to cut other kite string (manja). Now a days motorcycles have significantly increased in number. These people are high risk to injuries during kite flying. Injuries due kite string (manja) depend upon the contact between the manja and human skin, it can lacerate the skin and the deep fascia of the neck and vital structures in which include carotid arteries, jugular veins, larynx and trachea. In our country, there is no wide study available about the cut injury due to kite flying. In this study, 26 patients came in emergency department with accidental cut throat injury. In accidental cut throat, kite string (manja) was the major cause of these injury 19 cases (73.07%), while other causes were 7 cases (26.92%). A large number of people every year have their cut throat by manja¹⁰. Road traffic accident is the major cause of accidental cut injury and mostly due to broken glass or sharp projection of the metallic part of the vehicle²⁰. Ozdemir etal. showed male predominates in accidental cut throat injury²¹.

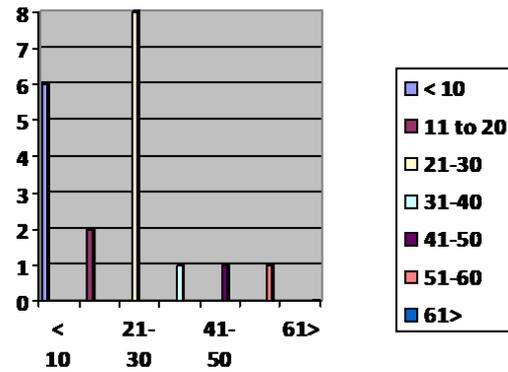
Current study also showed male predominates in cut throat injury due to kite string (manja). 12 cases were male (63.15%) and female were 7 (36.84%). Male female ratio was 1.71:1). Highest incidence of cut throat due to kite string (manja) was noted between the ages of 21-30 years of age 8 cases (42.1%) followed by less than 10 years of age, 6 cases (31.57%). These were the most active group; no patient was above the age of 61-

PIE CHART 01



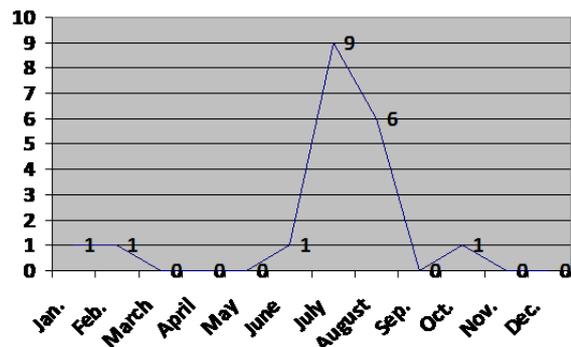
GENDER
Cut throat due to Manja (n=19)

BAR CHART



AGE (n=19)

LINE GRAPH



Number of cases in each month (n=19)

years. Maximum number of patients came in the month of July 09 (47.36%) and August 06 (31.57%) respectively. This was the month of Holy Ramzan. In the month of Ramzam Mubarak, children and adults enjoy kite flying especially before the iftar time to spend their fasting period. So, number of incidence increased during this period. Neck zone II was the commonest involved and reported site in accidental cut throat/neck injury^{13,20} Current study shows zone II injury in 68.42% cases with kite string neck injury, followed by Zone III which was 4 cases (21.05%). In zone I only 02 cases were reported (10.52%). In zone II vital structures are present, includes carotid and vertebral arteries, jugular veins, pharynx, larynx, oesophagus and trachea. Kite flying is a high risk activity. For kite flying manja is used. Manja is an abrasive material which is made up of glue, color and

is coated with powdered glass in order to fly the kite²². This manja claims many lives and severe life threatening injuries in Pakistan, Bangladesh and India¹². Severity of injuries depends on the abrasive material which is used on the string (manja) of the kite¹⁵. Kite flying is one of the popular games but it may cause lethal injuries. These injuries are preventable by increasing the awareness programs of its hazards and safety precautions like flying kite in safe location, avoid abrasive material in string (manja). Laws should be placed which prohibit the preparation and sale of kite string (manja). In Sao Paula, after implementation of law that prohibits the preparation and sale of manja, dramatic fall in the number of injuries related to kite flying in the metropolitan area of Campinas was noticed. If kite related injuries occur, early recognition, accurate evaluation and proper treatment may prevent the un-necessary complication.

CONCLUSION : Kite flying is the popular game especially in Indo-Pak region. But, this may cause lethal injuries. Kite flying should be banned in public places and awareness programmed should be started. Special care should be taken particularly during the month of Ramadan to prevent the lethal injuries.

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